

# **MML BAY STATE VARIABLE LIFE SEPARATE ACCOUNT I**

# FORM 485BPOS

(Post-Effective Amendment (investment company, rule 485(b)))

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**FORM N-6**

**REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

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and/or

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Amendment No. 49  
(Check appropriate box or boxes.)

**MML Bay State Variable Life Separate Account I**

(Exact Name of Registrant)

**MML Bay State Life Insurance Company**  
(Name of Depositor)

**1295 State Street, Springfield, Massachusetts 01111-0001**  
(Address of Depositor's Principal Executive Offices)

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(Name and Address of Agent for Service)

Approximate Date of Proposed Public Offering: **Continuous**

It is proposed that this filing will become effective (check appropriate box)

immediately upon filing pursuant to paragraph (b) of Rule 485  
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 on \_\_\_\_\_ pursuant to paragraph (a)(1) of Rule 485

If appropriate, check the following box:

This post-effective amendment designates a new effective date for a previously filed post-effective amendment.

Title of Securities Being Registered: **Units of Interest in Variable Life Select (VLS), an individual, flexible premium, variable life insurance policy.**

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# Variable Life Select (VLS)

*Issued by MML Bay State Life Insurance Company*

## MML Bay State Variable Life Separate Account I

This prospectus describes an individual, flexible premium, variable life insurance policy (policy) issued by MML Bay State Life Insurance Company (MML Bay State, Company, we, us, or our). MML Bay State is a wholly owned life insurance subsidiary of C.M. Life Insurance Company (C.M. Life) and an indirect subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual®). While the policy is In Force, it provides lifetime insurance protection on the Insured. The policy is not a way to invest in mutual funds and is not suitable for short-term investment. The Owner (you or your) should consider the policy in conjunction with other life insurance you own. Replacing any existing life insurance policy with this policy or financing the purchase or maintenance of the policy through a loan or through withdrawals from another policy may not be to your advantage.

**The policy is no longer available for sale. However, we continue to administer existing policies.**

The policy has a number of investment choices, including a Guaranteed Principal Account (GPA) and one or more variable investment divisions (Separate Account Divisions) offered through our separate account, MML Bay State Variable Life Separate Account I (Separate Account). Each Separate Account Division, in turn, invests in the Funds listed in Appendix A to this prospectus.

You bear the investment risks of any premium allocated to these Separate Account Divisions. The death benefit may vary and the Cash Surrender Value will vary, depending on the investment performance of the Funds.

The policy is not (1) a bank or credit union deposit or obligation; (2) FDIC or NCUA insured; (3) insured by any federal government agency or (4) guaranteed by any bank or credit union. The policy may go down in value and provides guarantees that are subject to our financial strength and claims-paying ability.

This prospectus is not an offer to sell the policy in any jurisdiction where it is illegal to offer the policy nor is it an offer to sell the policy to anyone to whom it is illegal to offer the policy. The policy is no longer offered for sale. Owners may, however, continue to make premium payments under existing policies.

**YOU MAY CANCEL YOUR POLICY WITHIN 10 DAYS OF RECEIVING IT WITHOUT PAYING FEES OR PENALTIES.**

In some states, this cancellation period may be longer. Upon cancellation, you will receive either a full refund of the premiums you paid less any withdrawals and any Policy Debt or your Account Value less any withdrawals and any Policy Debt. You should review this prospectus, or consult with your investment professional, for additional information about the specific cancellation terms that apply.

Additional information about certain investment products, including variable life insurance policies, has been prepared by the Securities and Exchange Commission staff and is available at [www.investor.gov](http://www.investor.gov).

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**The SEC has not approved or disapproved the policy or determined that this prospectus is accurate or complete. Any representation that it has is a criminal offense.**

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**Please read this prospectus before investing. You should keep it for future reference.**

Effective April 29, 2024

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# Glossary

We have tried to make this prospectus as readable and understandable for you as possible. By the very nature of the policy, however, certain technical words or terms are unavoidable. We have identified the following as some of these words or terms.

**Account Value.** The value of your investment in the Separate Account Divisions and the GPA.

**Accumulation Unit.** A unit of measure that we use to determine the value in each Separate Account Division.

**Administrative Office.** MassMutual Customer Service Center, PO Box 1865, Springfield, MA 01102-1865, (800) 272-2216, (Fax) (866) 329-4527, [www.MassMutual.com](http://www.MassMutual.com)

**Attained Age.** The Insured's age on the Issue Date plus the number of completed Policy Years.

**Cash Surrender Value.** Account Value less any surrender charges and Policy Debt.

**Free Look.** Your right to cancel the policy and receive a refund.

**Fund(s).** The investment entities in which the Separate Account Divisions invest.

**Good Order.** The actual receipt by our Administrative Office of the instructions related to a request or transaction in writing (or, when permitted, by telephone, fax, website, or other electronic means), within the time limits, if any, along with all forms, information and supporting legal documentation we require to effect the request or transaction. This information includes, to the extent applicable: the completed application or instruction form; your policy number; the transaction amount (in dollars or percentage terms); the names and allocations to and/or from the Separate Account Divisions affected by the request or transaction; the signatures of all Owners; if necessary, Social Security Number or Tax Identification number; tax certification; and any other information or supporting documentation we may require including consents, certifications and guarantees. Instructions must be complete and sufficiently clear so that we do not need to exercise any discretion to follow such instructions. We may, in our sole discretion, determine whether any particular request or transaction is in Good Order, and we reserve the right to change or waive any Good Order requirements at any time. If you have any questions, you may contact our Administrative Office before submitting the form or request.

**Grace Period.** A period that begins when the Account Value less Policy Debt is not sufficient to cover the monthly charges due and your policy stays In Force, during which you can pay the amount of premium needed to avoid termination.

**In Force.** Your policy has not terminated.

**Initial Selected Face Amount.** The Selected Face Amount on the Policy Date.

**Insurance Risk.** The difference between the death benefit and the Account Value.

**Insured.** The person on whose life the policy is issued.

**Issue Date.** The date we issue the policy. The Issue Date starts the contestability and suicide periods.

**Minimum Face Amount.** The minimum face amount needed for the policy to qualify as life insurance under Section 7702 of the Internal Revenue Code of 1986, as amended.

**Modified Endowment Contract (MEC).** A special type of life insurance under federal income tax law. Specifically, the law prescribes a test that is intended to differentiate between policies that are purchased primarily for certain tax advantages, versus policies that are purchased primarily for death protection. MECs are still life insurance and offer tax-free death benefits and tax-deferred cash value accumulation. However, pre-death distributions (including loans) are taxed as "income first" (not cost basis first), meaning they are taxable to the extent of gain in the policy. In addition, distributions may be subject to a 10% additional tax.

**Monthly Calculation Date.** The Policy Date and the same day of each succeeding calendar month.

**Net Premium.** A premium payment received in Good Order minus the premium expense charge.

**Planned Premium.** The amount selected by you to be paid on a periodic basis to keep your policy In Force.

**Policy Anniversary.** The anniversary of the Policy Date.

**Policy Date.** The starting point for determining the Policy Anniversaries, Policy Years, and Monthly Calculation Dates. It is also the day we first deduct monthly charges under the policy.

**Policy Debt.** All outstanding loans plus accrued interest.

**Policy Debt Limit.** When total Policy Debt exceeds the Account Value less surrender charges.

**Policy Termination.** An event where your policy is no longer In Force due to the Account Value less any Policy Debt becoming too low to support your policy's monthly charges, or if the total Policy Debt exceeds the Account Value less any surrender charges.

**Policy Year.** The twelve-month period beginning with the Policy Date, and each successive twelve-month period thereafter.

**Selected Face Amount.** An amount used to determine the insurance coverage the policy provides while it is In Force.

**Separate Account Division.** A variable investment division offered through our Separate Account that invests in the corresponding underlying Fund.

**Valuation Date.** Any day on which the net asset value of the units of each division of the Separate Account is determined. Generally, this is any date the New York Stock Exchange (NYSE), or its successor, is open for trading. A Valuation Date ends when the NYSE closes (usually 4 p.m. Eastern Time).

**Written Request.** A written or electronic communication or instruction in Good Order sent by you to us at our Administrative Office.

# Important Information You Should Consider About the Policy

	FEES AND EXPENSES	LOCATION IN PROSPECTUS
<b>Charges for Early Withdrawals</b>	<p>If you surrender the policy, decrease the Selected Face Amount, or the policy lapses in the first 15 Policy Years or the first 15 years following an increase in Selected Face Amount, a surrender charge may apply. For the Initial Selected Face Amount, rates are based on the Insured's issue age, gender, risk class, and coverage year. For each increase in the Selected Face Amount, rates are based on the Insured's Attained Age, gender, risk class on the effective date of the increase, and coverage year. The surrender charge is the sum of surrender charges for the Initial Selected Face Amount and all Selected Face Amount increases.</p> <p>For a 35-year-old male Insured, non-tobacco user, in the standard risk classification, with an initial premium of \$100,000, \$1,000,000 Selected Face Amount and no increases in Selected Face Amount, upon surrender in the first Policy Year, a charge of up to \$8,369.40 could be assessed.</p>	Fee Tables – Transaction Fees – Surrender Charges Charges and Deductions – Transaction Fees – Surrender Charges Death Benefit – Right to Change the Selected Face Amount
<b>Transaction Charges</b>	<p>In addition to surrender charges, you also may be charged for other transactions.</p> <p><b>Premium Expense Charge.</b> We deduct a premium expense charge from each premium you pay. The current premium expense charge is 4% of each premium during Policy Years 1 - 20. There is currently no premium expense charge for Policy Years 21 and beyond. The maximum charge is 4% of each premium in all Policy Years.</p> <p><b>Withdrawal Fee.</b> If you withdraw a portion of your Account Value, we can assess a withdrawal fee. We have waived the current fee. The maximum withdrawal fee we can assess is the lesser of \$25 per withdrawal or 2% of the amount withdrawn.</p> <p><b>Rider Processing Fee.</b> We assess a one-time processing fee of up to \$250 (less in some states) when you exercise the Accelerated Death Benefit Rider for Terminal Illness and a fee of \$75 when you exercise the Right to Exchange Insured Endorsement.</p>	Fee Tables – Transaction Fees Fee Tables – Periodic Charges Other than Annual Fund Operating Expenses Charges and Deductions – Transaction Fees

FEES AND EXPENSES		LOCATION IN PROSPECTUS
<b>Ongoing Fees and Expenses</b>	<p>In addition to surrender charges and transaction charges, an investment in the policy is subject to certain ongoing fees and expenses. Some of these fees and expenses, such as the insurance charge and the cost of certain optional riders, are set based on characteristics of the Insured (e.g., age, sex, and risk classification). You should view the policy's specifications pages for rates applicable to your policy.</p> <p>You also will bear fees and expenses associated with the Funds you choose, as shown below.</p>	Fee Tables – Periodic Charges Other than Annual Fund Operating Expenses Charges and Deductions – Monthly Charges Against the Account Value Appendix A

(1) As a percentage of Fund assets.

RISKS		LOCATION IN PROSPECTUS
<b>Risk of Loss</b>	You can lose money by investing in this policy.	Principal Risks – Investment Risks General Information about the Company, the Separate Account and the Underlying Funds – Underlying Funds
<b>Not a Short-Term Investment</b>	This policy is not a short-term investment and is not appropriate for an investor who needs ready access to cash. Surrender charges apply for the first 15 Policy Years and the first 15 years following an increase in Selected Face Amount. These charges will reduce the amount payable to you if you surrender the policy during those times.	Overview of the Policy – What is the policy, and what is it designed to do? Principal Risks – Suitability
<b>Risks Associated with Investment Options</b>	An investment in this policy is subject to the risk of poor investment performance and can vary depending upon the performance of the underlying Funds you choose. Each investment option (including any fixed account investment option) has its own unique risks. You should review the prospectuses for the available Funds before making an investment decision.	Principal Risks – Investment Risks General Information about the Company, the Separate Account and the Underlying Funds – Underlying Funds
<b>Insurance Company Risks</b>	An investment in the policy is subject to the risks related to the Depositor (MML Bay State). Any obligations (including under any fixed account investment option), guarantees, or benefits of the policy are subject to the claims-paying ability of MML Bay State. If MML Bay State experiences financial distress, it may not be able to meet its obligations to you. More information about MML Bay State, including its financial strength ratings, is available at <a href="http://www.MassMutual.com/ratings">www.MassMutual.com/ratings</a> .	General Information About the Company, the Separate Account, and the Underlying Funds – The Guaranteed Principal Account (GPA)
<b>Policy Lapse</b>	Your policy could terminate (or lapse) if the Account Value less any Policy Debt becomes too low to support the policy's monthly charges, or if total Policy Debt exceeds the Account Value less any surrender charges. Factors that may cause your policy to lapse include: insufficient premium payments, poor investment performance, withdrawals, and unpaid loans or loan interest. If your policy lapses, you may be able to reinstate it. To reinstate your policy, you must provide us certain written materials we require as well as a premium payment sufficient to keep the policy In Force for three months after reinstatement. The death benefit will not be paid if the policy has lapsed.	Principal Risks – Policy Termination Policy Termination and Reinstatement

	RESTRICTIONS	LOCATION IN PROSPECTUS
<b>Investments</b>	<p>Generally, you may transfer Account Value among the Separate Account Divisions and the GPA, subject to certain limitations. We also offer an automated transfer program, Dollar Cost Averaging.</p> <p>Transfers of the policy's Account Value are subject to the following conditions:</p> <ul style="list-style-type: none"><li>• Transfers from the GPA are limited to one per Policy Year and may not exceed 25% of your Account Value in the GPA (less any Policy Debt). There is one exception to this rule. If you have transferred 25% of the GPA Value (less any Policy Debt) for three consecutive years and you have not added any Net Premiums or transferred amounts to the GPA during these three consecutive years, you may transfer the remainder of the GPA Value (less any Policy Debt) out of the GPA in the succeeding Policy Year.</li><li>• Transfers are not permitted during the Free Look period for those policies in which we refund the premium paid less withdrawals and Policy Debt.</li><li>• Transfers (including transfers through automated programs) cannot be processed during a Grace Period.</li></ul> <p>In addition, we reserve the right to reject or restrict transfers if we determine the transfers reflect frequent trading or a market timing strategy, or we are required to reject or restrict by the applicable Fund.</p> <p>MML Bay State also reserves the right to remove or substitute Funds as investment options that are available under the policy.</p>	<p>Transfers</p> <p>General Information About the Company, the Separate Account and the Underlying Funds – Underlying Funds – Addition, Removal, Closure, or Substitution of Funds</p>
<b>Optional Benefits</b>	<p>Optional benefits, such as riders, may alter the benefits or charges under your policy. Rider availability and benefits may vary by state of issue, and their election may have tax consequences. Riders may have restrictions or limitations. If you elect a particular rider, it may restrict or enhance the terms of your policy, or restrict the availability or terms of other riders.</p>	<p>Other Benefits Available Under the Policy</p>

		TAXES	LOCATION IN PROSPECTUS
<b>Tax Implications</b>	<ul style="list-style-type: none"><li>• You should consult with a tax professional to determine the tax implications of an investment in and payments received under the policy.</li><li>• If you purchase the policy through a qualified retirement plan, you do not receive any additional tax deferral.</li><li>• Withdrawals and partial surrenders are taxed as recovery of cost basis first and income second. Loans and collateral assignments are not taxable when taken. Any gain on your policy is taxed as ordinary income.</li><li>• If your policy becomes a Modified Endowment Contract or MEC, loans, collateral assignments, withdrawals, and other pre-death distributions will be taxed as income first and recovery of cost basis second. You may have to pay a penalty tax if you take a distribution before you attain age 59½.</li></ul>		Federal Income Tax Considerations
CONFLICTS OF INTEREST			
<b>Investment Professional Compensation</b>	<p>Your registered representative may receive compensation in the form of commissions for selling the policy to you. If your registered representative is also a MassMutual insurance agent, they are also eligible for certain cash and non-cash benefits from us. Cash compensation includes bonuses and allowances based on factors such as sales, productivity and persistency (policy retention). Non-cash compensation includes various recognition items such as prizes and awards as well as attendance at, and payment of the costs associated with attendance at, conferences, seminars and recognition trips, and also includes contributions to certain individual plans such as pension and medical plans. Sales of the policy may help these registered representatives and their supervisors qualify for such benefits.</p> <p>This conflict of interest may influence your registered representative to offer or recommend this policy over another investment.</p>		Other Information – Distribution
<b>Exchanges</b>	<p>Because the policy is no longer sold, you would not be affected by a scenario in which you are asked to replace an existing life insurance policy you own with a new purchase of this policy. However, in general, you should be aware that some investment professionals may have a financial incentive to offer you a new policy in place of the one you already own. Thus, in general, you should only exchange your life insurance policy if you determine, after comparing the features, fees, and risks of both policies, that it is preferable for you to purchase the new life insurance policy rather than continue to own the existing policy.</p>		Other Benefits Available Under the Policy – Right to Exchange

# Overview of the Policy

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## What is the policy, and what is it designed to do?

The policy is a variable life insurance policy that provides a death benefit. It is designed to allow you to fund your life insurance needs through investment in a Guaranteed Principal Account (GPA) and one or more of the variable investment divisions of the Massachusetts Mutual Variable Life Separate Account I (Separate Account). The policy allows you to allocate your Net Premiums and Account Value among the various investment choices. Your Account Value will vary based on performance of the investment choices you select and the fees and charges under the policy.

In exchange for your premium payments, we will pay the beneficiary a death benefit when the Insured dies while the policy is In Force. You can select one of the two death benefit options available under the policy. Subject to certain limitations, you can change the death benefit option you selected.

This policy does not mature or provide an endowment in a specific Policy Year except as follows: Policies issued in Texas will mature when the Insured reaches Attained Age 100. Any Cash Surrender Value the policy has on the maturity date will be paid to the Owner.

Variable life insurance is designed to help meet long-term insurance needs. It is not suitable as a vehicle for short-term savings. You should not purchase the policy if you will need the premium payments in a short period of time. The policy is not intended for people who need to take early or frequent withdrawals or who intend to engage in frequent trading among the Separate Account Divisions. You should consider your need for cash, time horizon for investment and financial goals before submitting an application to purchase the policy. You may want to consult your financial or tax adviser.

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## How are premium payments treated under the policy?

When you apply for the policy, you select (within certain limitations) the Planned Premium amount and the payment frequency (annual, semiannual, quarterly, or monthly). The Planned Premium amount is based on a number of factors, including, but not limited to, the Selected Face Amount, the Insured's issue age, gender and risk classification. Generally, you determine the first premium you want to pay for the policy, but it must be at least equal to the Minimum Initial Premium. The Minimum Initial Premium depends on the premium frequency you choose, the policy's Initial Selected Face Amount and death benefit option, the Insured's age, gender and risk classification, and whether the policy has any riders.

After the first premium has been paid, the policy offers premium flexibility, which allows subsequent premium payments to be paid in any amount and at any time, within certain limits. Although you must maintain sufficient Account Value to keep the policy In Force, there is no required schedule for premium payments. You should review the Premium Flexibility section of the prospectus for additional important information.

When a premium payment is received in Good Order, we deduct a premium expense charge to generally cover taxes and acquisition expenses, and the remaining amount, known as the Net Premium, is allocated among the Separate Account Divisions and the GPA according to your current allocation instructions. Depending on the state in which we issue the policy, we may hold your initial Net Premium payments in the money market division until the Free Look period is completed.

Investments in your policy's Separate Account Divisions are held in an account separate from the general assets of the Company. We have established a segment within the Separate Account to receive and invest premium payments for the Variable Life Select policies. Currently, the Variable Life Select segment is divided into 13 Separate Account Divisions. Each Separate Account Division purchases shares in a corresponding Fund. Information about each corresponding Fund is provided at the back of this prospectus. Please see "Appendix A – Funds Available Under the Policy."

Net Premium and Account Value allocated to the GPA become part of the Company's General Investment Account, which supports life insurance and annuity obligations, and are dependent on the Company's financial strength and claims-paying ability. You do not participate in the investment performance of the assets in our General Investment Account. Instead, we guarantee that amounts allocated to the GPA, in excess of Policy Debt, will earn interest at a minimum rate of 3% per year. We may credit a higher rate at our discretion.

Payment of insufficient premiums may result in the policy lapsing. There is no guarantee that the policy will remain In Force as a result of making Planned Premium payments.

Federal law, such as the Internal Revenue Code of 1986, as amended (IRC), places restrictions on the amount of money you may put into a life insurance contract and still meet the definition of life insurance for tax purposes. In order for your policy to meet the IRC's guidelines, we follow the Cash Value Accumulation Test. Under this test, any premium payment that would exceed its limits may only be accepted if the Insured provides us with satisfactory evidence of insurability.

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### What are the primary features and options that the policy offers?

- **Choice of Death Benefit Options.** The policy offers a choice of one of two death benefit options—a Level Option and Return of Account Value Option. Please see the “Death Benefit” section for more information.
- **Selected Face Amount Changes.** You may request an increase or decrease in the Selected Face Amount. If you change your Selected Face Amount, your policy charges, including surrender charges, will change accordingly. If the policy's Account Value (or Cash Surrender Value if there is Policy Debt) cannot keep the policy In Force with the requested change in Selected Face Amount, a premium payment may be required.
- **Investment Options.** You can choose to allocate your Net Premium payments and Account Value among various investment choices. Your choices include the Separate Account Divisions, each of which invests in an underlying Fund, and the Guaranteed Principal Account (GPA).
- **Surrenders and Withdrawals.** You may surrender your policy, and we will pay you its Cash Surrender Value (Account Value less any surrender charges and Policy Debt). You may also withdraw a part of the Cash Surrender Value. A withdrawal reduces the policy values, may reduce the Selected Face Amount of the policy, and may increase the risk that the policy will terminate or lapse. Surrenders and withdrawals may have adverse tax consequences.
- **Loans.** You may take a loan on the policy once your Account Value exceeds the total of any surrender charges. The policy secures the loan. Taking a loan may have adverse tax consequences and will increase the risk that your policy may terminate or lapse. Interest charges will apply.
- **Transfers.** Generally, you may transfer funds among the Separate Account Divisions and the GPA, subject to certain limitations. We also offer an automated transfer program, Dollar Cost Averaging.
- **Assignability.** You may generally assign the policy as collateral for a loan or other obligation.
- **Tax Treatment.** You are generally not taxed on the policy's earnings until you withdraw Account Value from your policy. This is known as tax deferral.
- **Additional Rider Benefits.** There are additional benefits you may add to your policy by way of riders. An additional charge may apply if you elect a rider. The riders available with this policy are listed in the “Other Benefits Available Under the Policy” section.

## Fee Tables

The following tables describe the fees and expenses that you will pay when buying, owning, surrendering or making withdrawals from the policy. Please refer to your policy's specification pages for information about the specific fees you will pay each year based on the options you have elected.

**The first table describes the fees and expenses that you will pay at the time you buy the policy, surrender the policy, take Account Value out of the policy, or exercise certain rider options.**

Transaction Fees										
Charge	When Charge is Deducted	Amount Deducted								
<b>Premium Expense Charge</b>	When you pay premium	<p><b>Maximum:</b> 4.00% of each premium payment</p> <p><b>Current:</b></p> <table> <tr> <td>Coverage Years 1-20</td><td>4.00% of each premium payment</td></tr> <tr> <td>Coverage Years 21+</td><td>0.00% of each premium payment</td></tr> </table>	Coverage Years 1-20	4.00% of each premium payment	Coverage Years 21+	0.00% of each premium payment				
Coverage Years 1-20	4.00% of each premium payment									
Coverage Years 21+	0.00% of each premium payment									
<b>Surrender Charges<sup>(1)(2)(3)</sup></b> <i>Surrender charges generally apply for the first 15 Policy Years and the first 15 years following an increase in Selected Face Amount.</i>	Upon surrender, at the time of an elected decrease in Selected Face Amount, or policy lapse.	<p><b>Maximum:</b></p> <table> <tr> <td>Coverage Years 1-15:</td><td>Administrative Surrender Charge: \$0 - \$5 per \$1,000 of Selected Face Amount; plus Sales Load</td></tr> <tr> <td>Coverage Years 16+:</td><td>Surrender Charge: 0% - 26% of premiums paid</td></tr> </table> <p><b>Current:</b></p> <table> <tr> <td>Coverage Years 1-15:</td><td>Administrative Surrender Charge: \$0 - \$5 per \$1,000 of Selected Face Amount; plus Sales Load</td></tr> <tr> <td>Coverage Years 16+:</td><td>Surrender Charge: 0% - 26% of premiums paid</td></tr> </table> <p><b>Representative Insured:</b> <b>Male, Age 35, Non-Tobacco, Standard Risk<sup>(1)</sup></b> <sup>(2)(3)(4)</sup></p>	Coverage Years 1-15:	Administrative Surrender Charge: \$0 - \$5 per \$1,000 of Selected Face Amount; plus Sales Load	Coverage Years 16+:	Surrender Charge: 0% - 26% of premiums paid	Coverage Years 1-15:	Administrative Surrender Charge: \$0 - \$5 per \$1,000 of Selected Face Amount; plus Sales Load	Coverage Years 16+:	Surrender Charge: 0% - 26% of premiums paid
Coverage Years 1-15:	Administrative Surrender Charge: \$0 - \$5 per \$1,000 of Selected Face Amount; plus Sales Load									
Coverage Years 16+:	Surrender Charge: 0% - 26% of premiums paid									
Coverage Years 1-15:	Administrative Surrender Charge: \$0 - \$5 per \$1,000 of Selected Face Amount; plus Sales Load									
Coverage Years 16+:	Surrender Charge: 0% - 26% of premiums paid									
<b>Accelerated Death Benefit Rider for Terminal Illness<sup>(5)</sup></b> <i>This rider is no longer issued.</i>	When you elect an accelerated death benefit payment	<p><b>Maximum:</b> \$250</p> <p><b>Current:</b> \$150-\$250</p>								

Processing Fees		
Charge	When Charge is Deducted	Amount Deducted
<b>Withdrawal Fee</b>	When you withdraw a portion of your Account Value from the policy.	<b>Maximum:</b> The lesser of \$25 per withdrawal or 2% of the amount withdrawn <b>Current:</b> \$0
<b>Increase in Selected Face Amount Charge</b>	When you increase your Selected Face Amount	<b>Maximum:</b> \$75 <b>Current:</b> \$0
<b>Change from Death Benefit Option 1 to Death Benefit Option 2</b>	When you change from Death Benefit Option 1	<b>Maximum:</b> \$75 <b>Current:</b> \$0

(1) For the Initial Selected Face Amount, the rates vary by the Insured's gender, issue age, and year of coverage. For each increase in the Selected Face Amount, the rates are based on the Attained Age and gender of the Insured on the effective date of the increase and the year of coverage. The surrender charge is shown in the policy's specifications pages. The rates in this table may not be representative of the charge that a particular Owner will pay. If you would like information on the surrender charge rates for your particular situation, you can request a personalized illustration from your registered representative or by calling our Administrative Office at (800) 272-2216.

(2) Under certain circumstances, the surrender charge may not apply when exchanging this policy for a qualifying non-variable life insurance policy offered by MassMutual or one of its subsidiaries. Please see "Adjustment to Surrender Charges Endorsement (for internal replacements)" in the "Additional Benefits" sub-section of the "Other Benefits Available Under the Policy" section for additional information.

(3) Surrender charges generally apply for the first 15 Policy Years and the first 15 years following an increase in Selected Face Amount. The administrative surrender charge remains level for years one through five and then decreases by 1.6666% each month during years six through ten. The administrative surrender charge is zero in years eleven and beyond. The sales load surrender charge is a percentage of premiums paid. The percentage remains level for the first ten years, then decreases starting in year eleven, reaching zero by the end of the fifteenth year.

(4) The rates shown for the "representative insured" are first year rates only.

(5) The fee we deduct may vary by state, but will not exceed \$250.

The next table describes the fees and expenses that you will pay periodically during the time that you own the policy, other than Fund fees and expenses.

Periodic Charges Other than Annual Fund Operating Expenses		
Charge	When Charge is Deducted	Amount Deducted
<b>Base Contract Charge:</b>		
<b>Mortality Charge<sup>(1)</sup></b>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b> \$83.33 per \$1,000 of Insurance Risk <b>Minimum:</b> \$0.01688 per \$1,000 of Insurance Risk <b>Current:</b> \$0.01688-\$63.89 per \$1,000 of Insurance Risk <b>Representative Insured:</b> <b>Male, Age 35, Non-Tobacco, Standard Risk<sup>(1)</sup></b> <sup>(2)</sup>
<b>Substandard Risk Charge<sup>(3)</sup></b>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b> \$83.33 per \$1,000 of Insurance Risk \$83.33 per \$1,000 of Selected Face Amount (applies to flat extra charges) <b>Current:</b> \$0.0042-\$83.33 per \$1,000 of Insurance Risk \$0.08-\$83.33 per \$1,000 of Selected Face Amount (applies to flat extra charges)
<b>Administrative Charge</b>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b> \$9 per policy <b>Current:</b> \$6 per policy
<b>Mortality &amp; Expense Risk Charge</b>	Daily	<b>Maximum:</b> 0.90% of the policy's average daily net assets in the Separate Account <b>Current:</b> 0.55% of the policy's average daily net assets in the Separate Account
<b>Loan Interest Rate Expense Charge<sup>(4)</sup></b>	Daily, if there is Policy Debt.	<b>Maximum:</b> 2.00% annually as a percentage of loaned amount <b>Current:</b> 0.90% annually as a percentage of loaned amount

Periodic Charges Other than Annual Fund Operating Expenses			
Charge	When Charge is Deducted	Amount Deducted	
<b>Optional Benefit Charges:</b>			
<b>Accidental Death Benefit Rider<sup>(6)</sup></b> <i>This rider is no longer issued.</i>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b>  <b>Current:</b>  <b>Representative Insured:</b> <b>Male, Age 35, Non-Tobacco, Standard Risk</b>	\$0.06591-\$0.12929 per \$1,000 of Rider Face Amount  \$0.06591-\$0.12929 per \$1,000 of Rider Face Amount  \$0.06591 per \$1,000 of Rider Face Amount
<b>Death Benefit Guarantee Rider</b> <i>This rider is no longer issued.</i>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b>  <b>Current:</b>	\$0.01 per \$1,000 of Selected Face Amount  \$0.01 per \$1,000 of Selected Face Amount
<b>Disability Benefit Rider<sup>(6)(7)</sup></b> <sup>(8)</sup> <i>This rider is no longer issued.</i>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b>  <b>Current:</b>  <b>Representative Insured:</b> <b>Male, Age 35, Non-Tobacco, Standard Risk</b>  <small>(2)(6)(7)(8)</small>	\$0.041-\$0.266 per \$1 of Monthly Deduction <sup>(6)</sup> plus \$0.009-\$0.149 per \$1 of Specified Premium  \$0.041-\$0.266 per \$1 of Monthly Deduction <sup>(6)</sup> plus \$0.009-\$0.149 per \$1 of Specified Premium  \$0.056 per \$1 of Monthly Deduction <sup>(6)</sup> plus \$0.015 per \$1 of Specified Premium
<b>Insurability Protection Rider<sup>(9)</sup></b> <i>This rider is no longer issued.</i>	Monthly, on the policy's Monthly Calculation Date	<b>Maximum:</b>  <b>Current:</b>  <b>Representative Insured:</b> <b>Male, Age 35, Non-Tobacco, Standard Risk<sup>(9)</sup></b>	\$0.043-\$0.179 per \$1,000 of Rider Face Amount  \$0.043-\$0.179 per \$1,000 of Rider Face Amount  \$0.154 per \$1,000 of Rider Face Amount
<b>Right to Exchange Insured Endorsement</b> <i>This endorsement is no longer issued.</i>	When you elect to exchange the policy for a new policy on a substitute Insured.	<b>Maximum:</b>  <b>Current:</b>	\$75  \$75

(1) The rates vary by a number of factors including, but not limited to, the Insured's gender, issue age, risk classification, and year of coverage. The rates may not be representative of the charge that a particular Owner will pay. If you would like information on the mortality charge rates for your particular situation, you can request a personalized illustration from your registered representative or by calling our Administrative Office at (800) 272-2216.

The mortality charge rates reflected in this table are for standard risks. The maximum mortality charge rates are based on the 1980 Commissioners' Standard Ordinary (1980 CSO) Tables. Insurance Risk is a liability of the insurance company and is equal to the difference between the death benefit and the Account Value.

- (2) The rates shown for the "representative insured" are first year rates only.
- (3) Additional mortality fees may be assessed for risks associated with certain health conditions, occupations, aviation, avocations or driving history (i.e., substandard risks). These fees can be in the form of higher rates known as table ratings and/or flat extra charges. Table ratings and flat extra charges are components in the calculation of the mortality charges for the base policy and any applicable monthly rider mortality charges. Substandard risk charges only apply if certain factors result in an Insured having a substandard rating and will be shown in the policy's specifications pages. Note that the mortality charges, including any table ratings and/or flat extra charges, will not exceed \$83.33 per \$1,000 of Insurance Risk or Selected Face Amount. For additional information, refer to the "Monthly Charges Against the Account Value" sub-section of the "Charges and Deductions" section of this prospectus.
- (4) We charge interest on policy loans, but we also credit interest on the cash value we hold as collateral on policy loans. The Loan Interest Rate Expense Charge represents the difference (cost) between the loan interest rate charged and the interest credited on loaned amounts.
- (5) The rates vary by the Insured's Attained Age.
- (6) The rates vary by the Insured's gender and Attained Age. The policy's "monthly deduction" is the sum of the following current monthly charges: (a) administrative charge; (b) insurance charge; and (c) any applicable rider charges.
- (7) For substandard risks, the rates may be increased by a multiple of 0.5, 1 or 2 times the standard rate shown.
- (8) The rates shown are for standard risks and vary by the Insured's gender and Attained Age. The rates in this table may not be representative of the charge that a particular Owner will pay. If you would like information on the rates for your particular situation, you can request a personalized illustration from your registered representative or by calling our Administrative Office at (800) 272-2216.
- (9) The rates vary by the Insured's issue age.

All of the monthly charges listed in the table above are deducted proportionately from the then current Account Values in the Separate Account and the GPA (unless you direct us to deduct monthly charges from one Separate Account Division or from the GPA). The mortality and expense risk charge is deducted from the assets of the Separate Account only.

**The next table shows the minimum and maximum total operating expenses charged by any of the Funds in which your Separate Account Divisions invest that you may pay periodically during the time that you own the policy. A complete list of Funds in which the Separate Account Divisions invest, including their annual expenses, may be found at the back of this document in Appendix A. More detail concerning each Fund's fees and expenses is contained in the prospectus for each Fund.<sup>(1)</sup>**

- (1) The Fund expenses used to prepare this table were provided to us by the Funds. We have not independently verified such information provided to us by Funds that are not affiliated with us.

Annual Fund Operating Expenses	Minimum	Maximum
(expenses are deducted from Fund assets, including management fees, distribution, and/or 12b-1 fees, and other expenses)	0.28%	0.93%

# Principal Risks

## Investment Risks

The value of your policy will fluctuate with the performance of the Separate Account Divisions you select. Your Separate Account Divisions may decline in value or they may not perform to your expectations. You bear the investment risk of any Account Value invested in the Separate Account Divisions. It is possible you could lose your entire investment.

The type of investments that a Fund company makes will also create risk. A comprehensive discussion of the risks of each of the Funds underlying the Separate Account Divisions may be found in that Fund's prospectus. You should read the Fund's prospectus carefully before investing.

## Suitability

Variable life insurance is designed to help meet long-term financial goals. It is not suitable as a vehicle for short-term savings. You should not purchase the policy if you will need the premium payment in a short period of time. We may restrict short-term investment strategies.

## Early Surrender

If you surrender your policy, you will be subject to surrender charges during the first 15 Policy Years and during the first 15 years after an increase in the policy's Selected Face Amount. The surrender charge will reduce the proceeds payable to you. In some situations, it is possible that there will be little or no value in the policy after the surrender charges are deducted. An early surrender can also result in adverse tax consequences.

## Withdrawals

A withdrawal will reduce your policy's Account Value by the amount withdrawn. If the policy's Account Value is reduced to a point where it cannot meet a monthly deduction, your policy may terminate. A withdrawal may also reduce your policy's Selected Face Amount and may have adverse tax consequences.

## Loans

Taking a loan from your policy has several risks: (1) it may increase the risk that your policy will terminate; (2) it will have a permanent effect on your policy's Cash Surrender Value; (3) it may increase the amount of premium needed to keep the policy In Force; (4) it will reduce the death benefit proceeds; and (5) it may have adverse tax consequences.

## Policy Termination

Your policy could terminate if the Account Value of the policy becomes too low to support the policy's monthly charges. In addition, the policy could terminate if the total Policy Debt Limit is reached (i.e., when Policy Debt equals or exceeds the Account Value less any surrender charges that apply: (1) on a Monthly Calculation Date or (2) on the Valuation Date a premium payment is received, if the policy is in the Grace Period). Factors that may cause your policy to terminate include: insufficient premium payments, poor investment performance, withdrawals, and unpaid loans or loan interest. Poor investment performance of the Funds selected by the Owner and the deduction of policy fees and monthly charges may result in termination of the policy even if all Planned Premiums are timely paid. No death benefit or other benefits under the policy will be paid once the policy terminates.

## Limitations on Access to Cash Value

- Withdrawals were not available in the first Policy Year.
- We may not allow a withdrawal if it would reduce the Selected Face Amount to less than the policy's Minimum Face Amount.
- The minimum withdrawal is \$100 and the maximum withdrawal is 75% of the Cash Surrender Value.
- There may be little to no cash value available for loans and withdrawals in the policy's early years.



## **Insurance Company Insolvency**

It is possible that we could experience financial difficulty in the future and even become insolvent, and therefore unable to provide all of the guarantees and benefits that we promise that exceed the value of the assets in the Separate Account.

## **Adverse Tax Consequences**

Certain transactions (including, but not limited to, withdrawals, surrenders and loans) may lead to a taxable event. Under certain circumstances (usually if your premium payments in the first seven years or less exceed specified limits), your policy may become a "Modified Endowment Contract" (MEC). Under federal tax law, loans, collateral assignments, withdrawals, and other pre-death distributions received from a MEC are taxed as income first and recovery of cost basis second. Also, distributions includable in income received before you attain age 59½ may be subject to a 10% penalty tax.

Existing tax laws that benefit this policy may change at any time.

## **Policy Charge Increase**

We have the right to increase certain policy and rider charges; however, the charges will not exceed the maximum charges identified in the fee tables. If we increase a policy or rider charge, you may need to increase the amount and/or frequency of your premiums to keep your policy In Force. We will notify the Owner of any such changes through a prospectus supplement.

## **Cybersecurity and Certain Business Continuity Risks**

The Company relies on its parent, MassMutual, for various operating and administrative services including computer systems. MassMutual's operations support complex transactions and are highly dependent on the proper functioning of information technology and communication systems. Any failure of or gap in the systems and processes necessary to support complex transactions and avoid systems failure, fraud, information security failures, processing errors, cyber intrusion, loss of data and breaches of regulation may lead to a materially adverse effect on MassMutual's results of operations and corporate reputation. In addition, MassMutual must commit significant resources to maintain and enhance its existing systems in order to keep pace with applicable regulatory requirements, industry standards and customer preferences. If MassMutual fails to maintain secure and well-functioning information systems, it may not be able to rely on information for product pricing, compliance obligations, risk management and underwriting decisions. In addition, MassMutual cannot assure investors or consumers that interruptions, failures or breaches in security of these processes and systems will not occur, or if they do occur, that they can be timely detected and remediated. The occurrence of any of these events may have a materially adverse effect on MassMutual's businesses, results of operations and financial condition. For additional detail regarding cybersecurity and related risks, please see "Other Information – Computer System, Cybersecurity, and Service Disruption Risks" in this prospectus.

# General Information about the Company, the Separate Account and the Underlying Funds

## The Company

MML Bay State is a wholly owned stock life insurance subsidiary of C.M. Life and an indirect subsidiary of MassMutual. MML Bay State provides life insurance and annuities to individuals and group life insurance to institutions. MassMutual and its domestic life insurance subsidiaries provide individual and group life insurance, disability insurance, individual and group annuities and guaranteed interest contracts to individual and institutional customers in all 50 states of the U.S., the District of Columbia and Puerto Rico. Products and services are offered primarily through MassMutual's distribution channels: MassMutual Financial Advisors, MassMutual Strategic Distributors, Institutional Solutions and Worksite.

MassMutual is organized as a mutual life insurance company domiciled in the Commonwealth of Massachusetts. MML Bay State's home office is located at 200 Great Pond Drive, Suite 150, Windsor, Connecticut 06095.

## The Guaranteed Principal Account

Net Premium and Account Value you allocate to the GPA become part of the General Investment Account of the Company. Subject to applicable law, the Company has sole discretion over the assets in its General Investment Account. The assets of our General Investment Account support our insurance and annuity obligations and are subject to our general liabilities from our business operations and to claims by our creditors. We use General Investment Account assets for many purposes including to pay death benefits, withdrawals, surrenders, policy loans, and transfers from the GPA as well as to pay amounts we provide to you through elected additional features and guarantees that are in excess of your Variable Account Value allocated to the Separate Account. We refer to our ability to meet any contractual obligations as our claims-paying ability.

It is important to note that there is no guarantee that we will always be able to meet our claims-paying obligations, and as with any insurance product, there are risks to purchasing this policy. For this reason, when purchasing a policy and making investment decisions, you should consider our financial strength and claims-paying ability to meet our obligations under the policy.

The General Investment Account has not been registered under the Securities Act of 1933 (1933 Act) or the Investment Company Act of 1940 (1940 Act) because of exemptive and exclusionary provisions. Accordingly, neither the General Investment Account nor any interests therein are generally subject to the provisions of the 1933 Act or the 1940 Act. Disclosures regarding the GPA or the General Investment Account, however, are subject to certain generally applicable provisions of the federal securities laws relating to the accuracy and completeness of statements made in this prospectus.

You do not participate in the investment performance of the assets in our General Investment Account. Instead, we guarantee that amounts allocated to the GPA, in excess of Policy Debt, will earn interest at a minimum rate of 3% per year. We may credit a higher rate of interest at our discretion. The interest rate is declared monthly and becomes effective on the first of each calendar month. You bear the risk that no higher rates of interest will be credited.

For amounts in the GPA equal to any Policy Debt, the guaranteed minimum interest rate per year is the greater of:

- 3%; or
- the policy loan rate less the maximum loan interest rate expense charge.

You may obtain interest rate information for the GPA, including the loaned portion and the non-loaned portion, by calling our Administrative Office.

## The Separate Account

The part of your premium that you invest in your policy's Separate Account Divisions is held in an account that is separate from the general assets of the Company. This account is called the MML Bay State Variable Life Separate Account I. In this prospectus we will refer to it simply as the "Separate Account."

We established the Separate Account on June 9, 1982, according to the laws of the State of Connecticut. We registered it with the SEC as a unit investment trust under the 1940 Act.

The Separate Account exists to keep your life insurance assets separate from our other Company assets. As such, any income, gains, and losses credited to, or charged against, the Separate Account reflect only the Separate Account's own investment experience. At no



time will the Separate Account reflect the investment experience of the Company's other assets. The Company owns the assets in the Separate Account. The Separate Account is divided into divisions, each of which purchases shares in a corresponding underlying Fund. Any death benefits, withdrawals, surrenders, policy loans, or transfers of Account Value from the Separate Account Divisions will be redeemed from the corresponding Funds.

We may not use the assets in the Separate Account to pay any liabilities of the Company other than those arising from the policies. We may, however, transfer to our General Investment Account any assets that exceed anticipated obligations of the Separate Account. We are required to pay, from our general assets, if necessary, all amounts promised under the VLS policies. In the event that the assets in the Separate Account exceed the liabilities, the Company may only withdraw seed capital and earned fees and charges.

We have established a segment within the Separate Account to receive and invest premium payments for the VLS policies. Currently, the VLS segment is divided into 13 Separate Account Divisions. The underlying Funds are listed in Appendix A. Please see "Appendix A – Funds Available Under the Policy."

Some of the underlying Funds offered are similar to mutual funds offered in the retail marketplace. They may have the same investment objectives and portfolio managers as the retail funds. The Funds offered in the VLS policy, however, are set up exclusively for variable annuity and variable life insurance products. *Their shares are not offered for sale to the general public, and their performance results will differ from the performance of the retail funds.*

We reserve the right, subject to compliance with applicable federal securities laws and regulations and any other federal or state law, to create separate accounts and to make certain material changes to the structure and operation of the Separate Account, including, among other things to:

- create new Separate Account Divisions;
- create new segments of the Separate Account for any new variable life insurance products we create in the future;
- eliminate Separate Account Divisions;
- close existing Separate Account Divisions to allocations of new premium payments by current or new policy owners;
- combine the Separate Account or any Separate Account Divisions with one or more different separate accounts or Separate Account Divisions;
- transfer the assets of the Separate Account or any division of the Separate Account that we may determine to be associated with the class of contracts to which the policy belongs to another separate account or Separate Account Division;
- operate the Separate Account as a management investment company under the 1940 Act or in any other form permitted by law;
- de-register the Separate Account under the 1940 Act in the event such registration is no longer required; and
- change the name of the Separate Account.

## **Underlying Funds**

We do not recommend or endorse any particular Fund and we do not provide investment advice. You are responsible for choosing the Funds, and the amounts allocated to each, that are appropriate for your own individual circumstances and your investment goals, financial situation, and risk tolerance. Since investment risk is borne by you, decisions regarding investment allocations should be carefully considered. Information regarding each Fund, including (i) its name; (ii) its type (e.g., money market fund, bond fund, balanced fund, etc.); (iii) its investment adviser and any sub-investment adviser; (iv) current expenses; and (v) performance is available in Appendix A to this prospectus. Please see "Appendix A – Funds Available Under the Policy." In making your investment selections, we encourage you to thoroughly investigate all of the information regarding the Funds that is available to you. Each Fund has issued a prospectus that contains more detailed information about the Fund.

After you select Funds for your initial premium, you should monitor and periodically re-evaluate your allocations to determine if they are still appropriate.

You bear the risk of any decline in your policy Account Value resulting from the performance of the Funds you have chosen. You can find the prospectuses and other information about the Funds online at [www.MassMutual.com/VLS](http://www.MassMutual.com/VLS). You can also request this information at no cost by calling (800) 272-2216 or sending an email request to [MassMutualServiceCenter@MassMutual.com](mailto:MassMutualServiceCenter@MassMutual.com).

## **Addition, Removal, Closure, or Substitution of Funds**

We do not guarantee that each Fund will always be available for investment through the policy. We have the right to change the Funds offered through the policy, but only as permitted by law. If the law requires, we will also get your approval and the approval of any

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appropriate regulatory authorities. Changes may only impact certain Owners. Examples of possible changes include: adding new Funds or Fund classes, removing existing Funds or Fund classes, closing existing Funds or Fund classes, or substituting a Fund with a different Fund. New or substitute Funds may have different fees and expenses. We will not add, remove, close, or substitute any shares attributable to your interest in a Separate Account Division without notice to you and prior approval of the SEC, to the extent required by applicable law. We reserve the right to transfer Separate Account assets to another separate account that we determine to be associated with the class of policies to which your policy belongs.

## **Conflicts of Interest**

The Funds available with this policy may also be available to registered separate accounts offering variable annuity and variable life products of other affiliated and unaffiliated insurance companies, as well as to the Separate Account and other separate accounts of MML Bay State. Although we do not anticipate any disadvantages to these arrangements, it is possible that a material conflict may arise between the interests of the Separate Account and one or more of the other separate accounts participating in the Funds. A conflict may occur, for example, as a result of a change in law affecting the operations of variable life and variable annuity separate accounts, differences in the voting instructions of the owners and payees and those of other insurance companies, or some other reason. In the event of a conflict of interest, we will take steps necessary to protect owners and payees, including withdrawing the Separate Account from participation in the Funds involved in the conflict or substituting shares of other Funds.

## **Compensation We Receive from Funds, Advisers and Sub-Advisers**

### **Compensation We Receive from Funds**

We and certain of our insurance affiliates receive compensation from certain Funds pursuant to Rule 12b-1 under the 1940 Act. This compensation is paid out of a Fund's assets and may be as much as 0.25% of the average net assets of an underlying Fund that are attributable to the variable annuity and variable life insurance products issued by us and certain of our insurance affiliates that offer the particular Fund (MassMutual's variable contracts). An investment in a Fund with a 12b-1 fee will increase the cost of your investment in this policy.

### **Compensation We Receive from Advisers and Sub-Advisers**

We and certain of our insurance affiliates also receive compensation from the advisers and sub-advisers to some of the Funds. We may use this compensation to pay expenses that we incur in promoting, issuing, distributing and administering the policy, and providing services on behalf of the Funds in our role as intermediary to the Funds. The amount of this compensation is determined by multiplying a specified annual percentage rate by the average net assets held in that Fund that are attributable to the variable annuity or variable life insurance products offered by us and certain of our insurance affiliates. These percentage rates differ, but currently do not exceed 0.25%. Some advisers and sub-advisers pay us more than others; some advisers and sub-advisers do not pay us any such compensation.

The compensation may not be reflected in a Fund's expenses because this compensation may not be paid directly out of a Fund's assets. These payments also may be derived, in whole or in part, from the advisory fee deducted from Fund assets. Owners, through their indirect investment in the Funds, bear the costs of these advisory fees (please see the Funds' prospectuses for additional information).

In addition, we may receive fixed dollar payments from the advisers and sub-advisers to certain Funds so that the adviser and sub-adviser can participate in sales meetings conducted by us. Attending such meetings provides advisers and sub-advisers with opportunities to discuss and promote their Funds.

**For a list of the Funds whose advisers currently pay such compensation, visit [www.MassMutual.com/privacy-policy/compensation-arrangements](http://www.MassMutual.com/privacy-policy/compensation-arrangements) or call our Administrative Office.**

### **Compensation and Fund Selection**

When selecting the Funds that will be available with the policy, we consider each Fund's investment strategy, asset class, manager's reputation, and performance. We also consider the amount of compensation that we receive from the Funds, their advisers, sub-advisers, or their distributors. The compensation that we receive may be significant, and we may profit from this compensation. Additionally, we offer certain Funds through the policy at least in part because they are managed by an affiliate.

## **Voting Rights**

We are the legal owner of the Fund shares. However, you have the right to instruct us how to vote on questions submitted to the shareholders of the Funds supporting the policy. This right is limited to the extent you are invested in those Separate Account Divisions on the record date. We vote shares for which we do not receive instructions in the same proportion as the shares for which we do receive instructions. The shares held in the name of the Company and its affiliates will also be proportionally voted. This process may result in a small number of Owners controlling the vote. There is no minimum number of votes required. If we determine that we are no longer required to comply with the above, we will vote the shares in our own right.

Your right to instruct us is based on the number of shares of the Funds attributable to your policy. The number of shares of any Fund, attributable to your policy, is determined by dividing the Account Value held in that Separate Account Division by \$100. Fractional votes are counted.

We will send you or, if permitted by law, make available electronically, proxy material and a form to complete giving us voting instructions.

We may, when required by state insurance regulatory authorities, disregard voting instructions, if such instructions would require shares to be voted so as to cause a change in the sub-classification or investment objective of a Fund or to approve or disapprove an investment advisory contract for the Fund. In addition, we may disregard voting instructions that would require a change in the investment policy or investment adviser of one or more of the available Funds. Our disapproval of such change must be reasonable and based on a good faith determination that the change would be contrary to state law or otherwise inappropriate, considering the Fund's objectives and purpose. If we disregard Owner voting instructions, we will advise Owners of our action and the reasons for such action.

## **Charges and Deductions**

This section describes the charges and deductions we make under the policy to compensate us for the services and benefits we provide, costs and expenses we incur, and risks we assume. We may profit from the charges deducted, and we may use any such profits for any purpose, including payment of distribution expenses.

In addition, the Funds pay operating expenses that are deducted from the assets of the Funds. For more information about these expenses, please see the individual Fund prospectuses.

### **Transaction Fees**

#### **Premium Expense Charge**

We deduct a premium expense charge from each premium payment you make. The premium expense charge is generally used to cover taxes assessed by a state and/or other governmental agency as well as acquisition expenses.

The current premium expense charge we deduct is 4% of premium during Policy Years 1 through 20 and 0% in Policy Years 21 and beyond. The maximum premium expense charge we can deduct is 4% of premium in all Policy Years.

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#### **Example:**

Premium payment is \$1,000. The maximum premium expense charge is 4%. Premium expense charge is \$40 (4% X \$1,000).

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#### **Increase in Selected Face Amount Charge**

We do not currently charge you to increase your Selected Face Amount; however, we reserve the right to do so in the future. The maximum fee we would charge is \$75. This charge will reimburse us for the underwriting and administrative costs associated with the change.

#### **Change from Death Benefit Option 1 to Death Benefit Option 2**

We do not currently charge you to change your death benefit option; however, we reserve the right to do so in the future. The maximum fee we would charge is \$75. This charge will reimburse us for the underwriting and administrative costs associated with the change.

## Surrender Charges

There is a charge if you fully surrender your policy or if you decrease the Selected Face Amount. Generally, these charges will apply during:

- the first 15 years of coverage; and
- the first 15 years after each increase in Selected Face Amount.

However, in no event will we deduct surrender charges after the Insured's Attained Age 99.

The surrender charge has two parts:

(1) Administrative Surrender Charge

The administrative component of the surrender charge applies during the first 10 Policy Years of each segment. This charge reimburses us for expenses incurred in issuing the policy and Selected Face Amount increases. The administrative surrender charge remains level for years one through five and then decreases by 1.6666% each month during years six through ten. It is zero in years eleven and beyond. In no case, however, will the administrative surrender charge ever exceed \$5 per \$1,000 of Selected Face Amount.

(2) Sales Load Surrender Charge

The sales load component of the surrender charge is a percentage of the premium paid and applies during the first 15 Policy Years of each segment. The charge reimburses us for acquisition costs. The sales load surrender charge percentage remains level for years one through ten and decreases in years eleven through fifteen. The sales load surrender charge is zero in years sixteen and beyond. The sales load surrender charge will increase if the premium paid increases but, in no case, will the charge ever exceed 26% of the premiums paid for the coverage up to the surrender charge band, plus 4% of premiums paid in excess of the surrender charge band.

The surrender charge band is set forth in the policy. It is based on the Selected Face Amount and varies by the Insured's issue age and gender.

This surrender charge is also sometimes called a "deferred sales load." The charge compensates us for expenses incurred in issuing the policy's Initial Selected Face Amount, issuing Selected Face Amount increases, and for the recovery of acquisition costs.

The surrender charge is a charge against the Account Value of the policy. The deduction is taken from the Separate Account Divisions and the non-loaned portion of the GPA in proportion to the values in each on the effective date of the surrender or decrease in Selected Face Amount or lapse.

We calculate surrender charges separately for the Initial Selected Face Amount and for each increase in the Selected Face Amount. For the Initial Selected Face Amount, the rates are based on the Insured's issue age, gender, risk classification, and coverage year. For each increase in the Selected Face Amount, the rates are based on the Insured's gender, Attained Age, risk classification on the effective date of the increase, and coverage year. The surrender charge for the policy is the sum of the surrender charges for the Initial Selected Face Amount and all Selected Face Amount increases.

## Surrender Charges for Decreases in Selected Face Amount

If you decrease your policy's Selected Face Amount, we cancel all or a part of your Selected Face Amount segment(s) and charge a pro-rata surrender charge that will not exceed the surrender charge associated with each decreased or cancelled segment multiplied by the proportion of that segment that is decreased.

After a Selected Face Amount decrease, the surrender charge for a decreased segment that remains In Force is decreased proportionately. This charge provides us with a proportional compensation for expenses incurred in issuing the policy and Selected Face Amount increases, and for the recovery of acquisition costs.

## Rider Processing Fee

We will assess a one-time processing fee at the time you exercise either the Accelerated Death Benefit Rider for Terminal Illness or the Right to Exchange Insured Endorsement. The maximum processing fee for the Accelerated Death Benefit Rider for Terminal Illness is \$250 (the fee may vary by state, but will not exceed \$250) and \$75 for the Right to Exchange Insured Endorsement. Payment is due upon request to exercise the Right to Exchange Insured Endorsement; however, the fee for the Accelerated Death Benefit Rider for Terminal Illness is deducted from the accelerated benefit payment and will reduce the amount you receive.

## Periodic Charges

### Loan Interest Rate Expense Charge

We assess a loan interest rate expense charge against policies with outstanding loan balances. This charge, which reimburses us for the ongoing expenses of administering the loan, represents the difference between the interest we charge on policy loans and the interest we credit on the cash value we hold as collateral for policy loans. The loan interest rate minus the loan interest expense charge is the interest rate we use to credit interest to the loaned portion of the GPA.

The maximum loan interest rate expense charge is 2%. The current loan interest rate expense charge is 0.90% for all Policy Years. We reserve the right to increase the loan interest rate expense charge in order to ensure your loan is not treated as a taxable distribution under federal income tax rules, which may change over time.

## Monthly Charges Against the Account Value

The following charges are deducted from the Account Value on each Monthly Calculation Date. The Monthly Calculation Date is the date on which monthly charges for the policy are due. The first Monthly Calculation Date was the Policy Date, and subsequent Monthly Calculation Dates are on the same day of each succeeding calendar month.

Monthly charges are deducted from the Separate Account Division(s) and the GPA in proportion to the non-loaned values in each on the date the deduction is taken.

### Administrative Charge

The administrative charge reimburses us for issuing and administering the policy, and for such activities as processing claims, maintaining records and communicating with you.

The current administrative charge is \$6 per policy, per month.

### Mortality Charge

The mortality charge reimburses us for providing you with life insurance protection. We deduct a mortality charge based on your policy's Insurance Risk. Insurance Risk is equal to the difference between the death benefit (discounted one month at the guaranteed minimum interest rate for the GPA) and the Account Value. These deductions are made by deducting Accumulation Units, proportionately, from each Separate Account Division in which you have an Account Value and the GPA.

The maximum mortality charge rates associated with your policy are shown in the policy's specification pages. These rates are calculated using the 1980 Commissioners' Standard Ordinary Mortality Tables, or, for unisex rates, the 1980 Commissioners' Ordinary Mortality Table B. The rates are also based on a number of factors, including, but not limited to, the age, gender (unless the unisex rates are used), and risk classification of the person insured by the policy.

We may charge less than the maximum monthly mortality charges shown in the table(s). In this case, the monthly mortality charge rates will be based on a number of factors including, but not limited to, our expectations for future mortality, investment earnings, persistency, expense and tax results, capital and reserve requirements, and profits. The expense component of these rates is used to offset sales and issue expenses, which decrease over time. Any change in these charges will apply to all individuals in the same class.

Mortality charges for the policy will not be the same for all Owners. Your policy's actual or current mortality charge rates are based on a number of factors including, but not limited to, the Insured's issue age (and age at increase, if applicable), risk classification, and gender (unless unisex rates are used). These rates generally increase as the Insured's Attained Age increases. The rates will vary with the number of years the coverage has been In Force and with the Total Selected Face Amount of the policy.

## How the Mortality Charge is Calculated

### (1) If the Minimum Face Amount is not in effect:

We calculate the mortality charge on each Monthly Calculation Date by multiplying the current mortality charge rate by a discounted Insurance Risk.

The Insurance Risk is the difference between:

- the amount of benefit available on that date, under the death benefit option in effect, discounted by the monthly equivalent of 3% per year; and
- the Account Value at the beginning of the policy month before the monthly mortality charge is due.

The following three steps describe how we calculate the mortality charge for your policy:

Step 1: We calculate the total Insurance Risk for your policy:

- (a) We divide the amount of benefit under the death benefit option in effect that would be available at the beginning of the policy month by 1.0024662698 (which is the monthly equivalent of 3%); and
- (b) We subtract your policy's Account Value at the beginning of the policy month from the amount we calculated in Step 1(a) above.

Step 2: We allocate the Insurance Risk in proportion to the Selected Face Amount of each segment and each increase that is In Force as of your Monthly Calculation Date.

Step 3: We multiply the amount of each allocated Insurance Risk by the mortality charge rate for each coverage segment. The sum of these amounts is your mortality charge.

### (2) If the Minimum Face Amount is in effect:

We also calculate the mortality charge on each Monthly Calculation Date. However, in Step 1 we calculate the total Insurance Risk for your policy, as described in (1) above:

- (i) assuming the Minimum Face Amount is in effect; and then
- (ii) assuming the Minimum Face Amount is not in effect.

Step 2: We allocate the Insurance Risk:

- (a) calculated for (ii) in proportion to the Selected Face Amount of each segment and each increase that is In Force as of your Monthly Calculation Date; and
- (b) we subtract the risk calculated for (ii) from the risk calculated for (i) and allocate that amount to the last underwritten segment.

Step 3: We multiply the amount of each allocated Insurance Risk by the mortality charge rate for each coverage segment. The sum of these amounts is your mortality charge.

## Additional Information about the Mortality Charge

We will apply any changes in the mortality charges uniformly for all Insureds of the same issue age, gender, risk classification, and whose coverage has been In Force for the same length of time. No change in insurance class or cost will occur on account of deterioration of the Insured's health after we issue the policy. We do not offer special underwriting programs for this product such as guaranteed issue or simplified issue underwriting; therefore, individuals of similar health will be classified similarly.

Because your Account Value and death benefit may vary from month to month, your mortality charge may also vary on each Monthly Calculation Date. The cost of your insurance depends on the amount of Insurance Risk on your policy. Factors that may affect the Insurance Risk include:

- the amount and timing of premium payments;
- investment performance;

- fees and charges assessed;
- the addition or deletion of certain riders;
- rider charges;
- withdrawals;

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- policy loans;
- changes to the Selected Face Amount; and
- changes to the death benefit option.

## Substandard Risk Charge

Additional mortality fees may be assessed for risks associated with certain health conditions, occupations, aviation, avocations or driving history (i.e., substandard risks). These fees can be in the form of higher rates known as table ratings and/or flat extra charges. Table ratings and flat extra charges are components in the calculation of the mortality charges for the base policy and any applicable monthly rider mortality charges. Substandard risk charges only apply if certain factors result in an Insured having a substandard rating and will be shown in the policy's specifications pages. Note that the mortality charges, including any table ratings and/or flat extra charges, will not exceed \$83.33 per \$1,000 of Insurance Risk or Selected Face Amount.

## Rider Charges

The charges for the following riders are deducted from the Account Value on each Monthly Calculation Date: Accidental Death Benefit Rider, Death Benefit Guarantee Rider, Disability Benefit Rider, and Insurability Protection Rider.

The rates for the Accidental Death Benefit Rider vary by the Insured's Attained Age. Current rates range from \$0.06591 to \$0.12929 per \$1,000 of rider face amount. The monthly charges for this rider will continue up to, but not including, the Policy Anniversary date on which the Insured's Attained Age becomes 70.

The current rate for the Death Benefit Guarantee Rider is \$0.01 per \$1,000 of Selected Face Amount. The monthly charges for this rider will continue up to, but not including, the Policy Anniversary date on which the Insured's Attained Age becomes 70 or for a period of 40 years, whichever is less.

The rates for the Disability Benefit Rider vary by the Insured's gender and Attained Age. Charges for the Disability Benefit Rider have two components. A portion of the charge is based on current rates ranging from \$0.041 to \$0.266 per \$1 of monthly deductions. The remainder of the charge is based on current rates ranging from \$0.009 to \$0.149 per \$1 of specified premium. The monthly charges for this rider will continue up to, but not including, the Policy Anniversary date on which the Insured's Attained Age becomes 65.

The rates for the Insurability Protection Rider vary by the Insured's issue age. Current rates range from \$0.043 to \$0.179 per \$1,000 of rider face amount. The monthly charges for this rider will continue up to, but not including, the Policy Anniversary date on which the Insured's Attained Age becomes 43.

## Daily Charges Against the Separate Account

The following charge is deducted daily from the Separate Account.

## Mortality and Expense Risk Charge

The mortality and expense risk charge imposed is a percentage of the policy's average daily net assets held in the Separate Account. The maximum annual percentage is 0.90% in all Policy Years. The current annual percentage is 0.55% in all Policy Years.

This charge compensates us for mortality and expense risks we assume under the policies and for acquisition costs. The mortality risk assumed is that the mortality charges will be insufficient to meet actual claims. The expense risk assumed is that the expenses incurred in issuing, distributing, and administering the policies will exceed the administrative charges collected.

If the mortality and expense risk charge is not sufficient to cover the mortality and expense risk, we will bear the loss. If the amount of the charge is more than sufficient to cover those risks and expenses, we will make a profit on the charge. We may use this profit for any purpose, including the payment of marketing and distribution expenses for the policy.

## Fund Expenses

The Separate Account purchases shares of the Funds at net asset value. The net asset value of each Fund reflects expenses already deducted from the assets of the Fund. Such expenses include investment management fees and other expenses and may include acquired Fund fees and expenses. For some Funds, expenses will also include 12b-1 fees to cover distribution and/or certain service expenses. When you elect a Fund as an investment choice, that Fund's expenses will increase the cost of your investment in the policy. Please see each Fund's prospectus for more information regarding these expenses.

## Special Circumstances

There may be special circumstances that result in sales or administrative expenses or Insurance Risks that are different than those normally associated with this policy. Under such circumstances, we may vary the charges and other terms of the policies; however, the charges will not exceed the maximum charges identified in the fee tables. We will make these variations only in accordance with uniform rules we establish.

# Owner, Insured, Beneficiary

## Owner

The Owner is the person who will generally make the choices that determine how the policy operates while it is In Force. You name the Owner in the application. However, the Owner may be changed by Written Request received in Good Order at our Administrative Office while the policy is In Force; therefore, the Owner is the person we have listed as such in our records. Generally, the change of Owner will take effect as of the date the Written Request is signed. However, in certain states you may not change Owners without our approval. We will refuse or accept any requested change of Owner on a non-discriminatory basis. Please see your policy. Each change will be subject to any payment we made or other action we took before receiving the owner designation form in Good Order. When we use the terms "you" or "your," in this prospectus, we are referring to the Owner.

The sale of your policy to an unrelated investor, sometimes called a viatical or a life settlement, typically has transaction costs that may reduce the value of your estate. Discuss the benefits and risks of selling your life insurance policy with your registered representative and estate planner before you enter into a life settlement. Such a sale may also have adverse tax consequences. Please see "Sales to Third Parties" in the "Federal Income Tax Considerations" section for additional information.

## Insured

The Insured is the person on whose life the policy is issued. The Owner must have an insurable interest in the life of the Insured in order for the policy to be valid under state law and for the policy to be considered life insurance for income tax purposes. If the policy does not comply with the insurable interest requirements of the issue state at the time of issue, the policy may be deemed void from the beginning. As a result, the policy would not provide the intended benefits. It is the responsibility of the Owner to determine whether proper insurable interest exists at the time of policy issuance.

You named the Insured in the application for the policy. We did not issue a policy for an Insured who was age 80 or older. Before issuing a policy, we required evidence to determine the insurability of the Insured. This usually required a medical examination.

## Beneficiary

The beneficiary is the person you named in the application to receive any death benefit. You may name different classes of beneficiaries, such as primary and secondary. These classes will set the order of payment. There may be more than one beneficiary in a class.

Unless an irrevocable beneficiary has been named, you can change the beneficiary at any time before the Insured dies by sending a Written Request in Good Order to our Administrative Office. The Owner must have the consent of an irrevocable beneficiary to change the beneficiary. Generally, the change will take effect as of the date your request is signed. Each change will be subject to any payment we made or other action we took before receiving the Written Request in Good Order.

If no beneficiary is living or in existence when the Insured dies, we will pay you the death benefit unless the policy states otherwise. If you are deceased, the death benefit will be paid to your estate.

# Purchasing a Policy

## Purchasing a Policy

The policy is no longer offered for sale. Owners may, however, continue to make premium payments under existing policies. To purchase a policy, you had to send us a completed application. The minimum Initial Selected Face Amount of a policy was \$50,000. The Owner selected, within our limits, the policy's Selected Face Amount. The Selected Face Amount is used to determine the amount of insurance coverage the policy provides while it is In Force. The Initial Selected Face Amount is the Selected Face Amount on the Policy Date. It is on the first page of your policy.

We determined whether to accept or reject the application for the policy and the Insured's risk classification. Coverage under the policy generally became effective on the policy's Issue Date. However, if we did not receive the first premium and all documents necessary to process the premium by the Issue Date, then coverage began on the date those items were received in Good Order at our Administrative Office.

Policies generally were issued with rates that vary based on a number of factors including, but not limited to, the gender of the Insured. In some situations, however, we may have issued unisex policies (policies whose rates do not vary by the gender of the Insured). Policies issued in Montana and Massachusetts are unisex, and policies issued as part of an employee benefit plan may be unisex. References in this prospectus to sex-distinct policy values are not applicable to unisex policies.

## Your Right to Return the Policy

You had the right to examine your policy. If you changed your mind about owning it, generally, you could have cancelled it (Free Look) within ten calendar days after you received it, or ten calendar days after you received a written notice of withdrawal right, or 45 days after you signed Part 1 of your Application, whichever was latest. You may also cancel increase in Selected Face Amount under the same time limitations.

If you cancelled the policy, we issued you a refund. The Free Look period and the amount refunded vary. Please see your policy for the refund that applies in your state of issue; however, the following information will give you a general understanding of our refund procedures if you cancelled your policy.

In most states we refunded the policy's Account Value less any withdrawals and any Policy Debt. In these states, if your premium was received in Good Order, it was allocated to your investment choices on the day after the policy's Issue Date.

In certain other states we refunded the premium paid less withdrawals and Policy Debt. In those states your premium payment was held in the money market division of the Separate Account during the Free Look period.

To cancel the policy, you had to return it to us at our Administrative Office, to the registered representative who sold the policy, or to one of our agency offices.

## Sending Requests in Good Order

From time to time you may want to submit a Written Request for a change of beneficiary, a transfer, or some other action. A Written Request is a written or electronic communication or instruction in Good Order sent by the Owner to, and received by, MML Bay State at our Administrative Office. We may allow requests to be submitted by telephone, fax, website, or other electronic media for certain transactions. Telephone, fax, email, or internet transactions may not always be available. Telephone, fax, and computer systems can experience outages or slowdowns for a variety of reasons. These outages or slowdowns may prevent or delay our receipt of your request. We may make these additional methods available at our discretion. They may be suspended or discontinued at any time without notice. Not all transaction types can be requested by telephone, website, or other electronic media.

# Premiums

The Planned Premium amount you pay is based on a number of factors including, but not limited to:

- the Selected Face Amount;
- the Insured's gender;
- the Insured's issue age;
- the Insured's risk classification;
- policy charges;
- premium frequency;
- the death benefit option; and
- whether or not any riders apply to the policy.

## First Premium

Generally, you determined the first premium you wanted to pay for the policy, but it must have been at least equal to the Minimum Initial Premium. The Minimum Initial Premium depended on:

- your chosen premium frequency;
- the policy's Initial Selected Face Amount and death benefit option;
- the issue age, gender, and risk classification of the Insured; and
- any riders on the policy.

## Planned Premiums

When applying for the policy, you selected (within the policy limitations) the Planned Premium and payment frequency (annual, semiannual, quarterly, or monthly).

We will send premium notices for the Planned Premium based on the payment frequency in effect. If a Planned Premium payment is not made, the policy will not necessarily terminate. Conversely, making Planned Premium payments does not necessarily guarantee the policy will remain In Force. To keep the policy In Force, it must have sufficient Account Value. Please see the "Policy Termination and Reinstatement" section. We will send a notice of any premium needed to prevent termination of the policy.

Before making any changes to the timing or frequency of premium payments, you should speak to your registered representative to determine the impact on your policy.

To change the amount and frequency of Planned Premiums, you may contact our Administrative Office.

If you change the frequency of your Planned Premiums, your policy may be at risk of lapsing because we do not bill for fractional payment periods.

Example:

Your Policy Anniversary is on January 2 and the planned quarterly premium payments are made. We have been sending a bill each quarter for the applicable premium. In June, we receive notification to change the Planned Premium from quarterly payments to annual payments. In this situation, we would have sent bills for the first and second quarterly payments of that year. After receiving notification, however, we would not send a bill for the last two quarterly payments of that year. We will send the next bill approximately 30 days prior to the next Policy Anniversary (January 2). If a premium payment is not made between July and January 2, your policy may lapse before the next bill is received. For more information on what happens if

your policy lapses, please see the "Policy Termination and Reinstatement" section.

## **Subsequent Premium Payments**

We will apply your subsequent premium payment on the Valuation Date that it is received in Good Order. If we receive your payment in Good Order on a non-Valuation Date or after the end of a Valuation Date, we will apply your payment on the next Valuation Date. If a payment is dishonored by your bank after we have applied the premium payment to your policy, the transaction will be deemed void and your payment will be reversed.

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If mailing a subsequent premium payment, it must be sent to the appropriate lockbox (premium payment processing service). Premium payments sent to an incorrect lockbox will be considered not in Good Order. We will reroute the payment and apply it on the Valuation Date when it is determined to be in Good Order. Please see below for lockbox address details.

If you or the premium payer receives a single bill for multiple insurance policies, subsequent premium payments must be sent to:

Regular Mail:

MassMutual  
APM Payment Processing Center  
PO Box 92485  
Chicago, IL 60675-2485

Overnight Mail

MassMutual  
5450 N. Cumberland Ave.  
Suite 100  
Lockbox 92485  
Chicago, IL 60656

For all other policies, subsequent premium payments must be sent to the appropriate address:

Regular Mail:

MassMutual  
PO Box 92483  
Chicago, IL 60675-2483

Overnight Mail

MassMutual  
5450 N. Cumberland Ave.  
Suite 100  
Lockbox 92483  
Chicago, IL 60656

## Electronic Premium Payments

We also offer options to allow you to pay premiums through electronic means. You may authorize the Company to draft the initial premium electronically for this policy from your bank account by completing the appropriate administrative form.

You may also initiate single or recurring premium payments for your In Force policy through our secure website ([www.MassMutual.com](http://www.MassMutual.com)) or by calling our Administrative Office and authorizing an electronic draft from your bank account. Requests to initiate electronic payments are effective on the Valuation Date that you submit the request in Good Order. If you wish to cancel an electronic payment, you must call our Administrative Office at (800) 272-2216 before the end of the Valuation Date (generally 4:00 p.m. Eastern Time).

If a bank draft is dishonored by your bank after we have applied the payment to your policy, the transaction will be deemed void and your payment will be reversed. In addition, if you have established recurring electronic payments and we are unable to obtain payment from your bank account, we will discontinue the recurring payments. You may re-establish recurring electronic payments through our website.

Premium payments may also be made by wire transfer. For instructions on how to make a premium payment by wire transfer, please call our Administrative Office at (800) 272-2216.

## Premium Payment Plan

For recurring withdrawals from a bank account, you may elect to pay premiums by pre-authorized check. Under this procedure, we automatically deduct premium payments each month from a designated bank account. We will not send a bill for these automatic payments. The pre-authorized check service may commence at any time, unless your policy has entered its Grace Period. This service can be discontinued by contacting our Administrative Office.

This pre-authorized check (PAC) service may be initiated or updated by visiting [www.MassMutual.com](http://www.MassMutual.com) or by submitting a completed PAC form.

We must receive notification of account changes at our Administrative Office at least seven business days before the next draft. Withdrawals from the designated bank account may be selected for any date between the 1<sup>st</sup> and the 28<sup>th</sup> of the month. If a date is not

specified, we will select a date and send notice in advance of the first draft. We may discontinue the pre-authorized check service for your policy and automatically switch to quarterly billing if:

- your policy has insufficient value to cover the monthly charges due and the elected premium is below the current monthly deductions; or
- we are unable to obtain the premium payment from the bank account; or
- your policy has exceeded a MEC or premium limitation and we are unable to apply your payment.

## Premium Flexibility

After the first premium has been paid, within limits, any amount of premium may be paid at any time while the Insured is living. Although you must maintain sufficient Account Value to keep the policy In Force, there is no required schedule for premium payments.

We reserve the right to return any premium payment under \$10.

In some cases, applying a subsequent premium payment in a Policy Year could result in your policy becoming a MEC. We will not credit any amount of premium to your policy that will exceed MEC limits unless we have written authorization from the Owner to allow MEC status. For more information on MECs, please see the "Federal Income Tax Considerations" section.

Additionally, we will follow these procedures:

- If we receive a subsequent premium that will cause the policy to become a MEC, we will apply to your policy the portion of the payment that will not cause the policy to become a MEC, and we will refund the balance to the premium payer, except under the circumstances described below. The portion of the payment that is credited to the policy will be credited as of the Valuation Date the payment was determined to be in Good Order.
- If the Policy Anniversary is within 14 calendar days of the date the premium is received, and applying the entire payment on the Policy Anniversary will not cause the policy to become a MEC, we will hold the payment without interest until the Policy Anniversary and credit the entire payment as of the Policy Anniversary date. If the anniversary date is not a Valuation Date, the payment will be credited as of the next Valuation Date following the Policy Anniversary.
- We will notify the Owner of any premium that is held or refunded in order to prevent the policy from becoming a MEC. You may also contact us to provide different instructions regarding how to apply your premium payment.

The procedures above may not apply if there has been a material change to your policy that impacts the 7-pay limit or 7-pay period because the start of the 7-pay period may no longer coincide with your Policy Anniversary. Please see "Modified Endowment Contracts" in the "Federal Income Tax Considerations" section for additional information.

## Premium Limitations

The Internal Revenue Code of 1986, as amended (IRC), has limits on the amount of money you may put into a life insurance contract and still meet the definition of life insurance for tax purposes.

The maximum premium you can pay each Policy Year is the greatest of:

- an amount equal to \$100 plus double the annual basic premium for the policy;
- the amount of premium paid in the preceding Policy Year;
- the highest premium payment amount that would not increase the Insurance Risk; or
- the minimum annual premium under the Death Benefit Guarantee Rider, if included with the policy.

We will refund the portion of any payment that will exceed the maximum premium limit. If we did not refund the excess premium, the policy may no longer qualify as life insurance under federal tax law. In the event of a refund of excess premium, no premium notices will be generated until the next Policy Anniversary.

For more information on the test, please see the "Minimum Face Amount" sub-section in the "Death Benefit" section.

Certain policy changes (including but not limited to a change in Selected Face Amount, a change in risk classification, or the addition or removal of a rider) may cause a recalculation of your maximum premium limit. If a policy change results in a decrease to your premium limit, we may be required to distribute funds from your policy to maintain its compliance with the adjusted premium limit. The distribution will be taken from the Separate Account Division(s) and the GPA in proportion to the non-loaned values in each.



## How and When Your Premium is Allocated

### Net Premium

Net Premium is a premium payment received in Good Order minus the premium expense charge. Please see "Premium Expense Charge" in the "Transaction Fees" sub-section of the "Charges and Deductions" section.

Premiums that would cause the policy to be a MEC may not be considered to be in Good Order, depending on when they are received.

The Net Premium is allocated among the Separate Account Divisions and the GPA according to your current instructions we have on record.

### Net Premium Allocation

When applying for the policy, you indicated how you wanted Net Premiums allocated among the Separate Account Divisions and the GPA. Net Premium allocations must be whole-number percentages that add up to 100%.

You may change your Net Premium allocation at any time by sending a Net Premium Allocation Request form to us at our Administrative Office. You may also change your Net Premium allocation by telephone or fax transmission, subject to certain restrictions. To help protect against unauthorized or fraudulent telephone instructions, we will take reasonable steps to confirm that telephone instructions given to us are genuine. We may record all telephone conversations.

When accompanied by a premium payment, a request to change your Net Premium allocation will become effective on the Valuation Date we receive your request, in Good Order, at our Administrative Office. If we receive your request in Good Order on a non-Valuation Date or after the end of a Valuation Date, the change will become effective on the next Valuation Date.

### When Net Premium is Allocated

The Policy Date, Issue Date, and Register Date of your policy may affect the allocation of your Net Premiums. This, in turn, can affect the investment earnings and interest credited on your policy Account Value.

The Issue Date is the date we actually issued the policy. The Policy Date normally is the same date as the Issue Date. However, you may have requested in your application that we set the Policy Date to be a specific date earlier than the Issue Date. In this case, monthly charges were deducted as of the requested Policy Date. These deductions covered a period of time during which the policy was not in effect.

The Register Date is the first date premiums were allocated. It is the Valuation Date that was on the latest of:

- the Policy Date;
- the day we received your completed Part 1 of the application for the policy; or
- the day we received the first premium payment in Good Order.

We apply subsequent premium payments that are received on or after the Register Date, on the Valuation Date we receive them in Good Order. Subsequent premium payments will be applied in accordance with your premium allocation instructions.

## Transfers

While your policy is In Force, you may generally transfer all or part of a Separate Account Division's Account Value to any other Separate Account Division or the GPA by indicating the dollar amount or the percentage (in whole numbers) you wish to transfer. Transfers are effective as of the Valuation Date we receive your request in Good Order at our Administrative Office. If we receive your request in Good Order on a non-Valuation Date or after the end of a Valuation Date, your transfer request will be effective as of the next Valuation Date.

We do not charge for transfers.

You can submit transfer requests by sending us a Written Request on our transfer request form. You may also submit transfer requests by telephone, or by other means we authorize, subject to certain restrictions. To help protect against unauthorized or fraudulent telephone instructions, we will take reasonable steps to confirm that telephone instructions given to us are genuine. We may record all telephone conversations.

Generally, there is no limit on the number of transfers you may make among the Separate Account Divisions. However, as discussed more fully in the section below, we may terminate, limit, or modify your ability to make such transfers due to frequent trading or market timing activity.

We limit transfers from the GPA to the Separate Account Divisions to one each Policy Year.

In addition, you may not transfer more than 25% of the Fixed Account Value (less any Policy Debt) at the time of transfer. There is one exception to this rule. If:

- you have transferred 25% of the Fixed Account Value (less any Policy Debt) each year for three consecutive Policy Years; and
- you have not added any Net Premiums or transferred amounts to the GPA during these three years,

then you may transfer the remainder of the Fixed Account Value (less any Policy Debt) out of the GPA in the succeeding Policy Year.

## **Limits on Frequent Trading and Market Timing Activity**

This policy and its investment choices are not designed to serve as vehicles for what we have determined to be frequent trading or market timing trading activity. We consider these activities to be abusive trading practices that can disrupt the management of a Fund in the following ways:

- by requiring the Fund to keep more of its assets liquid rather than investing them for long-term growth, resulting in lost investment opportunity; and
- by causing unplanned portfolio turnover.

These disruptions, in turn, can result in increased expenses and can have an adverse effect on Fund performance that could impact all Owners and beneficiaries under the policy, including long-term Owners who do not engage in these activities. Therefore, we discourage frequent trading and market timing trading activity and will not accommodate frequent transfers among the Funds. Organizations and individuals that intend to trade frequently and/or use market timing investment strategies should not purchase this policy. We have adopted policies and procedures to help us identify those individuals or entities that we determine may be engaging in frequent trading and/or market timing trading activities. We monitor trading activity to uniformly enforce those procedures. However, those who engage in such activities may employ a variety of techniques to avoid detection. Our ability to detect frequent trading or market timing may be limited by operational or technological systems, as well as by our ability to predict strategies employed by Owners (or those acting on their behalf) to avoid detection.

Therefore, despite our efforts to prevent frequent trading and the market timing of Funds among the Separate Account Divisions, there can be no assurance that we will be able to identify all those who trade frequently or those who employ a market timing strategy (or any intermediaries acting on behalf of such persons) and curtail their trading in every instance. Moreover, our ability to discourage and restrict frequent trading or market timing may be limited by decisions of state regulatory bodies and court orders that we cannot predict. In addition, some of the Funds are available with variable products issued by other insurance companies. We do not know the effectiveness of the policies and procedures used by these other insurance companies to detect frequent trading and/or market timing. The Funds may reflect lower performance and higher expenses across all policies as a result of undetected abusive trading practices. If we, or the investment adviser to any of the Funds available with this policy, determine that an Owner's transfer patterns reflect frequent trading or employment of a market timing strategy, we will allow the Owner to submit transfer requests by regular mail only. We will not accept the Owner's transfer request if submitted by overnight mail, fax, the telephone, our website, or any other type of electronic medium. Additionally, we may reject any single trade that we determine to be abusive or harmful to the Fund.

Orders for the purchase of Fund shares may be subject to acceptance by the Fund. Therefore, we reserve the right to reject, without prior notice, any Fund transfer request if the investment in the Fund is not accepted for any reason. In addition, Funds may assess a redemption fee (which we reserve the right to collect) on shares held for a relatively short period. The prospectuses for the Funds describe the Funds' frequent trading or market timing policies and procedures, which may be more or less restrictive than the policies and procedures we have adopted. We have entered into a written agreement, as required by SEC regulation, with each Fund or its principal underwriter that obligates us to provide to the Fund promptly upon request certain information about the trading activity of individual Owners, and to execute instructions from the Fund to restrict or prohibit further purchases or transfers by specific Owners who violate the frequent trading or market timing policies established by the Fund. Owners and other persons with interests in the policies should be aware that the purchase and redemption orders received by the Funds generally are "omnibus" orders from intermediaries, such as retirement plans or separate accounts funding variable insurance contracts. The omnibus orders reflect the aggregation and netting of multiple orders from individual Owners of variable contracts and/or individual retirement plan participants. The omnibus nature of these orders may limit the Funds in their ability to apply their frequent trading or market timing policies and procedures. It may also require us to restrict or prohibit further purchases or transfers as requested by a Fund on all policies owned by

an Owner whose trading activity under one variable contract has violated a Fund's frequent trading or market timing policy. If a Fund believes that an omnibus order reflects one or more transfer requests from Owners engaged in frequent trading or market timing activity, the Fund may reject the entire omnibus order.

We will notify you in writing if we reject a transfer or if we implement a restriction due to frequent trading or the use of market timing investment strategies. If we do not accept a transfer request, no change will be made to your allocations per that request. We will then allow you to resubmit the rejected transfer by regular mail only. Additionally, we may in the future take any of the following restrictive actions that are designed to prevent the employment of a frequent trading or market timing strategy:

- not accept transfer instructions from an Owner or other person authorized to conduct a transfer;
- limit the number of transfer requests that can be made during a Policy Year; and
- require the value transferred into a Fund to remain in that Fund for a particular period of time before it can be transferred out of the Fund.

We will apply any restrictive action we take uniformly to all Owners we believe are employing a frequent trading or market timing strategy. These restrictive actions may not work to deter frequent trading or market timing activity. We reserve the right to revise our procedures for detecting frequent trading and/or market timing at any time without prior notice if we determine it is necessary to do so in order to better detect frequent trading and/or market timing, to comply with state or federal regulatory requirements, or to impose different restrictions on frequent traders and/or market timers. If we modify our procedures, we will apply the new procedure uniformly to all Owners.

## **Dollar Cost Averaging Program**

The Dollar Cost Averaging (DCA) Program is an automated transfer program that provides scheduled transfers of a set amount from a selected Separate Account Division to any other Separate Account Division(s) or the GPA.

DCA will not assure you of a profit and will not protect you against a loss in declining markets. Since our DCA Program anticipates continued investment during periods of fluctuating prices, you should consider your ability to assume the financial risks of continued DCA through periods of fluctuating price levels.

Initially, a minimum of \$5,000 of Account Value is placed in one Separate Account Divisions. Then, over a stipulated period of time and at a preset frequency, a specified amount of Account Value is transferred from that Separate Account Division and allocated to other Separate Account Divisions or to the GPA. The minimum transfer amount for the DCA Program is \$50. Account Value held in the GPA cannot be transferred out of the GPA through the DCA Program.

Since the same specified dollar amount is transferred to each Separate Account Division at a preset frequency, more Accumulation Units are purchased when prices are low than when prices are high. Therefore, a lower average cost per unit may be achievable than through a lump-sum purchase of units or through non-level purchases of units.

If on a specified DCA transfer date, however, the Separate Account Division from which amounts are being transferred is less than the specified transfer amount, the remaining value in that Separate Account Division will be transferred on a pro rata basis to the designated divisions and the GPA. The DCA will then automatically terminate, and future DCA transfers will not occur. You must submit another DCA request to restart the DCA Program.

To elect DCA, complete our Dollar Cost Averaging Request form and send it to us for processing. We do not charge you to participate in the DCA Program. We may at any time modify, suspend, or terminate the DCA Program without prior notification.

## **Portfolio Rebalancing Program**

The Portfolio Rebalancing Program is an automated transfer program that allows you to rebalance your portfolio on a predetermined schedule that you set (annual, semiannual, quarterly, and monthly). The GPA is not included in the Portfolio Rebalancing Program.

Over time, varying investment performance among the Separate Account Divisions may cause the ratios of your Account Value in those selected Separate Account Divisions to change. The Portfolio Rebalancing Program allows you to choose Separate Account Divisions among which you wish to maintain certain relative proportions of Account Value. At a pre-determined frequency, we will make transfers among all the Separate Account Divisions you select so that the Account Values in the selected Separate Account Divisions match the ratios you set.

In order for portfolio rebalancing to occur, the Account Value in at least one of the selected Funds must vary from your chosen ratio by at least \$25.

To elect the Portfolio Rebalancing Program, complete our Portfolio Rebalancing Request form and send it to us for processing. You can also elect the Portfolio Rebalancing Program by telephone, subject to certain restrictions.

You may not elect the automated Portfolio Rebalancing Program while Dollar Cost Averaging is in effect for the policy. We do not charge you to participate in the Portfolio Rebalancing Program. We may at any time modify, suspend, or terminate the Portfolio Rebalancing Program without prior notification. Portfolio rebalancing will not assure you of a profit and will not protect you against loss in declining markets.

If you prefer a one-time portfolio rebalance instead of the automated Portfolio Rebalancing Program, you may complete our administrative form and send it to us for processing. You can also elect unscheduled portfolio rebalancing by telephone, subject to certain restrictions. Unscheduled portfolio rebalancing transactions are effective as of the Valuation Date we receive your request in Good Order at our Administrative Office. If we receive your request in Good Order on a non-Valuation Date or after the end of a Valuation Date, your unscheduled portfolio rebalancing request will be effective as of the next Valuation Date.

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**Example:**

Assume that your initial Net Premium payment is split among four Separate Account Divisions: MML Managed Bond, MML Equity Index, MML Equity and Fidelity® VIP Contrafund® Portfolio.

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Further assume that you have also completed a Portfolio Rebalancing Request form indicating that you want the values in the Separate Account Divisions rebalanced quarterly as follows:

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- 60% in MML Managed Bond and
- 40% in Fidelity® VIP Contrafund® Portfolio.

Over the next 2½ months the bond market does very well while the stock market performs poorly. At the end of the first quarter, the MML Managed Bond division represents 80% of the value of the two selected Separate Account Divisions in your Portfolio Rebalancing Program.

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On the first day of the next quarter, we will sell all units in the MML Equity Index and MML Equity divisions using the proceeds to purchase units in the MML Managed Bond (60%) and Fidelity® VIP Contrafund® Portfolio (40%) divisions. In addition, some of your units in the MML Managed Bond division will be sold and the proceeds will be used to purchase additional units in the Fidelity® VIP Contrafund® Portfolio division to bring the ratio of the two investment choices to 60/40 respectively.

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## Policy Value

### How the Value of Your Policy is Calculated

The value of your policy is called its Account Value. The Account Value has two components:

- the Variable Account Value; and
- the Fixed Account Value.

We will calculate your Account Value on each Valuation Date.

#### Variable Account Value

Transactions in your Separate Account Divisions are all reflected through the purchase and sale of Accumulation Units. An Accumulation Unit is a unit of measure that we use to determine the value in each Separate Account Division. For instance, before we invest your Net Premium payment in a Separate Account Division, we convert your Net Premium payment into Accumulation Units and then purchase an appropriate number of shares in the designated Fund.

The Variable Account Value is the sum of your values in each of the Separate Account Divisions. It reflects:

- Net Premiums allocated to the Separate Account; plus
- transfers to the Separate Account from the GPA; less
- transfers and withdrawals from the Separate Account; less
- surrender charges deducted from the Separate Account due to any decreases in the Selected Face Amount; less
- fees and charges deducted from the Separate Account; adjusted by

- the Net Investment Experience of the Separate Account.

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## Net Investment Experience

The Net Investment Experience of the Variable Account Value is reflected in the value of the Accumulation Units.

Every Valuation Date we determine the value of an Accumulation Unit for each of the Separate Account Divisions. Changes in the Accumulation Unit value reflect the investment performance of the Fund as well as deductions for the mortality and expense risk charge, and Fund expenses.

The value of an Accumulation Unit may go up or down from Valuation Date to Valuation Date.

When you make a premium payment, we credit your policy with Accumulation Units. We determine the number of Accumulation Units to credit by dividing the amount of the Net Premium payment allocated to a Separate Account Division by the unit value for that Separate Account Division. When you make a withdrawal, we deduct Accumulation Units representing the withdrawal amount from your policy. We deduct Accumulation Units for insurance and other policy charges.

We calculate the value of an Accumulation Unit for each Separate Account Division at the end of each Valuation Date. Any change in the Accumulation Unit value will be reflected in your policy's Account Value.

## Fixed Account Value

The Fixed Account Value is the accumulation of:

- Net Premiums allocated to the GPA; plus
- amounts transferred into the GPA; less
- amounts transferred or withdrawn from the GPA; less
- surrender charges deducted from the GPA due to any decreases in the Selected Face Amount; plus
- fees and charges deducted from the GPA; plus
- interest credited to the GPA.

### Interest on the Fixed Account Value

The Fixed Account Value earns interest at an effective annual rate, credited daily.

For the part of the Fixed Account Value equal to any policy loan, the daily rate we use is the daily equivalent of:

- the annual credited loan interest rate minus the current loan interest rate expense charge; or
- 3%, if greater.

With each financial transaction (e.g., premium payment, monthly charges, etc.) processed for your policy, the interest earned on any outstanding loan is credited to the GPA.

For the part of the Fixed Account Value in excess of any policy loan, the daily rate we use is the daily equivalent of:

- (1) the current interest rate we declare; or
- (2) the guaranteed interest rate of 3%, if greater.

The current interest rate may change as often as monthly and becomes effective on the first of each calendar month.

## Death Benefit

If the Insured dies while the policy is In Force and we determine that the claim is valid, we will pay the death benefit to the named beneficiary in a lump sum or under one of the payment options below.

The death benefit will be the amount provided by the death benefit option in effect on the date of death, reduced by any outstanding Policy Debt, and any unpaid monthly charges needed to avoid Policy Termination. The death benefit is calculated as of the date of the Insured's death. The policy also provides additional amounts payable upon the death of the Insured through certain riders that may have been added to your policy with additional charges.

The Minimum Face Amount for your policy is based on your policy's Account Value as described below.

While the policy is In Force, you may make changes to the death benefit option and Selected Face Amount. You must pay any premium due before such transaction requests can be processed.

## Minimum Face Amount

In order to qualify as life insurance under IRC Section 7702, the policy must have a Minimum Face Amount that is determined by the Cash Value Accumulation Test. Under this test, the Minimum Face Amount on any date is equal to a percentage of the Account Value on that date. The Minimum Face Amount percentage depends on the Insured's:

- gender;
- Attained Age; and
- risk classification.

## Death Benefit Options

When you applied for the policy, you chose one of two death benefit options. These are:

- **Option 1** – The benefit amount is the greater of:
  - (a) the Selected Face Amount on the date of death; or
  - (b) the Minimum Face Amount on the date of death.
- **Option 2** – The benefit amount is the greater of:
  - (a) the Selected Face Amount plus the Account Value on the date of death; or
  - (b) the Minimum Face Amount on the date of death.

You should note that under death benefit option 1, the death benefit amount is not affected by your policy's investment experience unless the death benefit is based on the Minimum Face Amount. Under death benefit option 2, the death benefit is a variable death benefit. This means that, because the death benefit amount includes the Account Value, it can change from day to day. Your policy's Account Value will vary due to the investment performance of the Separate Account Divisions in which you have allocated premium or transferred funds. It is also impacted by the deduction of charges and other policy expenses. It is possible that the policy's Account Value can be zero, which will reduce the overall value of the death benefit. The "Policy Value" section provides more detailed information on how your policy's Account Value is determined.

## Right to Change the Death Benefit Option

After the first Policy Year, you may change the death benefit option while the Insured is living. However, a death benefit option change cannot be processed during a Grace Period, and no change of death benefit option will be permitted beyond the Insured's Attained Age 80.

You must send a Written Request in Good Order to our Administrative Office to change your death benefit option. We reserve the right to require a written application and evidence of insurability satisfactory to us for any death benefit option change that results in a Selected Face Amount increase.

The death benefit option change will be effective on the Monthly Calculation Date that is on or next follows the date we approve the request.

If you change your death benefit option, we will adjust your policy's Selected Face Amount. The Selected Face Amount adjustment (up or down) will be in the amount needed so that the death benefit immediately before the change will be the same as the death benefit after the change.

Please see Appendix B for examples of how a change in death benefit option may impact the policy's Selected Face Amount.

When the Selected Face Amount changes as a result of a change in the death benefit option:

- the monthly charges will also change;
- the charge for certain additional benefits may change; and
- the policy surrender charge will not change.

You cannot change the death benefit option if, as a result, the Selected Face Amount would be reduced to an amount that is less than the minimum Initial Selected Face Amount.



## When We Pay Death Benefit Proceeds

If the policy is In Force and it is determined that the claim is valid, we normally pay the death benefit within seven calendar days after the date we receive due proof of the Insured's death and all required documents, in Good Order, at our Administrative Office.

Certain situations may delay payment of a death claim. These situations include, but are not limited to, our right to contest the validity of a death claim. We investigate all death claims that occur within the policy's two-year contestable periods as described below.

We have the right to contest the validity of the policy for any material misrepresentation of a fact within two years:

- after the policy is issued; or
- after a Selected Face Amount increase where evidence of insurability is required.

If the Selected Face Amount increase is the result of a policy change that does not require evidence of insurability such as a conversion from another policy or the exercise of an option on this or another policy, we have the right to contest the validity of the Selected Face Amount increase within two years after that other policy was issued.

We may also investigate death claims beyond the contestable periods. After any two-year contestable period, we generally cannot contest the validity of a policy or a Selected Face Amount increase, except for failure to pay premiums. However, if the application(s) contains a fraudulent misstatement of fact, we may contest at any time, to the extent permitted by law.

We generally determine whether the contested claim is valid within five days after we receive the information from a completed investigation. Since it may take some time to receive the information, payment could be delayed during this period.

We can also delay payment of the death benefit if a portion is based on the Variable Account Value of the policy and the Insured's date of death is before or during any period when:

- it is not reasonably practicable to determine the amount because the NYSE is closed (other than customary weekend and holiday closings);
- trading is restricted by the SEC;
- an emergency exists as a result of which disposal of shares of the Funds is not reasonably practicable or we cannot reasonably value the shares of the Funds; or
- the SEC, by order, permits us to delay payment in order to protect our Owners.

## Interest on Death Benefit

We will add interest to the death benefit from the date of the Insured's death to the date of a lump sum payment or the effective date of a payment option payment. Interest will be computed at the rate determined under the interest payment option, or as required by applicable state law. Interest paid on the death benefit is taxable as ordinary income in the year such interest is credited.

Although the death benefit is generally excludable from the income of the beneficiary who receives it, interest on the death benefit is includable in the beneficiary's income.

## Payment Options

We will pay the death benefit in a lump sum or under one of the payment options described more fully below.

If the payment option is a lump sum when the Insured dies, the beneficiary may elect any payment option, with our consent. If the beneficiary does not elect a payment option and you have not elected a payment option during the Insured's lifetime, the death benefit will be paid as a single lump sum.

The different death benefit payment options are described below. None of these benefits depends upon the performance of the Separate Account or the GPA.

**Installments for a Specified Period.** Fixed time payments. Equal monthly payments for any period selected, up to 30 years. The amount of each payment depends on the total amount applied, the period selected, and the monthly income rates we are using when the first payment is due.

**Life Income.** Equal monthly payments based on the life of a named person. Payments will continue for the lifetime of that person. You can elect income with or without a minimum payment period.



**Interest.** We will hold any amount applied under this option. We will pay interest on the amount at an effective annual rate determined by us. This rate will not be less than 2.5%.

**Installments of a Specified Amount.** Fixed amount payments. Each payment may not be less than \$10 for each \$1,000 applied. We will credit interest each month on the unpaid balance and add this interest to the unpaid balance. This interest will be an effective annual rate determined by us, but not less than 2.5%. Payments continue until the balance we hold is reduced to less than the agreed fixed amount. The last payment will be for the balance only.

**Life Income with Payments Guaranteed for Amount Applied.** Equal monthly payments based on the life of a named person. We will make payments until the total amount paid equals the amount applied, whether or not the named person lives until all payments have been made. If the named person lives beyond the payments of the total amount applied, we will continue to make monthly payments as long as the named person lives.

**Joint Lifetime Income.** Monthly payments based on the lives of two named persons. When one dies, the same payment will continue for the lifetime of the other. You can elect income with or without a minimum payment period.

**Joint Lifetime Income with Reduced Payments to Survivor.** Monthly payments based on the lives of two named persons. We will make payments at the initial level while both are living. When one dies, we will reduce the payments by one-third. Payments will continue at that level for the lifetime of the other. Payments stop when both named persons have died.

The minimum amount that can be applied under a payment option is \$2,000 per beneficiary. If the periodic payment under any option is less than \$20, we reserve the right to make payments at less frequent intervals. Once payments have begun, only the specified amount and interest options may be changed.

All payment option elections must be sent to our Administrative Office in writing. You may change the payment option during the Insured's lifetime.

## Right to Change the Selected Face Amount

You may request an increase or decrease in the Selected Face Amount. If you change your Selected Face Amount, your policy charges, including surrender charges, will change accordingly. If the policy's Account Value (or Cash Surrender Value if there is Policy Debt) cannot keep the policy In Force with the requested change in Selected Face Amount, a premium payment may be required.

If you increase or decrease the policy Selected Face Amount, your policy may become a MEC under federal tax law. MECs are discussed in the "Federal Income Tax Considerations" section.

### Increases in Selected Face Amount

To increase the policy Selected Face Amount, you must send to our Administrative Office a written application and evidence the Insured is still insurable. We treat each Selected Face Amount increase as a separate segment of coverage. An increase in Selected Face Amount cannot be processed during a Grace Period.

An increase in Selected Face Amount may not be:

- less than \$15,000; or
- made after the anniversary of your policy's Issue Date nearest the Insured's 80th birthday.

Increases in the Selected Face Amount will be effective on the Monthly Calculation Date that is on, or next follows, the date we approve the application for the increase.

If the Account Value (or the Cash Surrender Value if there is Policy Debt) is insufficient to continue the changed policy In Force for three months at the new monthly charges and interest, we may require a premium payment sufficient to increase the Account Value to such an amount.

Mortality charges will apply for each Selected Face Amount increase you elect. Additionally, a separate surrender charge schedule will apply to the amount of the increase. Generally, these surrender charges will apply during the first 15 years of each segment of coverage.

Any increase elected under any insurability protection type of rider will be effective as directed in the rider.

## Decreases in Selected Face Amount

You may decrease the Selected Face Amount any time after the first Policy Year. You must send a Written Request in Good Order to our Administrative Office. When we receive a Written Request for a decrease in Selected Face Amount from the Owner, we will provide the Owner with a written notice that specifies the surrender charges to be assessed at the time of the decrease. If the Owner does not withdraw the request for the decrease in Selected Face Amount within ten days from the date of the written notice, we will process the decrease in Selected Face Amount and assess any surrender charges that may apply. If we determine that the policy will become a MEC, then the decrease will not be processed until a MEC Notice and Acknowledgment form is received in Good Order at our Administrative Office.

If you decrease the Selected Face Amount, we cancel all or part of your Selected Face Amount segments, and a partial surrender charge may apply. Surrender charges that apply when you decrease the policy's Selected Face Amount are discussed in "Surrender Charges for Decreases in Selected Face Amount" in the "Transaction Fees" section.

A decrease will reduce the Selected Face Amount in the following order:

- (1) the Selected Face Amount of the most recent increase; then
- (2) the Selected Face Amount of the next most recent increases successively; and last
- (3) the Initial Selected Face Amount.

You may not decrease the Selected Face Amount if the decrease would result in a Selected Face Amount of less than the minimum Selected Face Amount.

Selected Face Amount decreases will be effective on the Monthly Calculation Date that is on, or next follows, the date we receive (in Good Order at our Administrative Office) any applicable request for the decrease. A Selected Face Amount decrease will reduce your policy's Account Value by the amount of any applicable partial surrender charge. The remaining surrender charge will be reduced by the amount of the partial surrender charge assessed when the Selected Face Amount is decreased. If the policy's Account Value (or Cash Surrender Value if there is Policy Debt) cannot keep the policy In Force, a premium payment may be required.

Decreases in the policy's Selected Face Amount may have adverse tax consequences.

## Suicide

If the Insured dies by suicide, while sane or insane, and the policy is In Force, the policy will terminate.

- If the death occurs within two years after the Issue Date, we will refund the sum of all premiums paid, less any withdrawals and any Policy Debt.
- If death occurs within two years after the effective date of an increase in Selected Face Amount (but at least two years after the Issue Date), we will refund the sum of the monthly charges attributed to the increase. However, if a refund as described in the preceding paragraph is payable, there will be no additional payment for the increase.

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### Example:

Assume a policy is issued with a \$500,000 Selected Face Amount under death benefit option 1. In Policy Year 4, the Owner applies for a \$250,000 Selected Face Amount increase, which is approved. If the Insured commits suicide within two years of the increase, the benefit payable to the beneficiaries is equal to the original \$500,000 death benefit, plus an additional payment equal to the monthly charges that were deducted from the Account Value for the increase segment of \$250,000.

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For policies issued in Colorado, Minnesota, Missouri, and North Dakota, all references in the provision to "two years" should be replaced with "one year."

## Error of Age or Gender

If the Insured's date of birth or gender was misstated in the policy application or the policy has been issued incorrectly, we may adjust the death benefit. The adjustment will reflect the amount provided by the most recent monthly mortality charges using the correct age and gender. If the adjustment is made while the Insured is living, monthly charges after the adjustment will be based on the correct age and gender.

# Other Benefits Available Under the Policy

## Additional Benefits

In addition to the standard death benefit(s) associated with your policy, other standard and/or optional benefits may be available to you. You can obtain additional benefits if you request them and/or qualify for them. We provide certain additional benefits by rider or endorsement. The cost of each rider is generally deducted as part of the monthly charges. Some riders do not result in monthly charges, but do require a fee to exercise the riders. Adding or removing a rider for which there is a monthly charge may impact the premium limitations on your policy. For additional information, please see "Premium Limitations" in the "Premiums" section. If you added a rider for which we charge, you may cancel it at any time upon Written Request. You may not, however, add or remove a rider during a Grace Period. You must pay any premium due before such transaction requests can be processed. Having one or more riders that have monthly charges will increase the overall cost of your policy. The availability of certain riders is subject to state availability and policy Issue Date.

**Note:** The following riders can no longer be added to your policy:

- Accelerated Death Benefit Rider for Terminal Illness
- Accidental Death Benefit Rider
- Death Benefit Guarantee Rider
- Disability Benefit Rider
- Insurability Protection Rider

We also offer an automated transfer program as an additional benefit – Dollar Cost Averaging (DCA).

The following table summarizes the information about the additional benefits available under the policy. Information about the fees associated with each benefit included in the table may be found in the Fee Table.

Name of Benefit	Purpose	Is this Benefit Standard or Optional?	Brief Description of Restrictions/Limitations
<b>Accelerated Death Benefit Rider for Terminal Illness</b> <i>This rider is no longer issued.</i>	Advances portion of death benefit upon Insured being terminally ill and not expected to live more than 12 months.	Standard	<ul style="list-style-type: none"><li>• Eligible payment amount (Eligible Amount) does not include: any amount of death benefit equal to the Account Value; amounts under riders that do not provide level or increasing coverage for at least two years after acceleration date; and the amount payable upon the death of someone other than the Insured under the policy, if applicable.</li><li>• Minimum payment is \$25,000.</li><li>• Maximum payment is lesser of 75% of Eligible Amount and \$250,000.</li><li>• Death benefit reduced by accelerated amount.</li></ul>

Name of Benefit	Purpose	Is this Benefit Standard or Optional?	Brief Description of Restrictions/Limitations
<b>Accidental Death Benefit Rider</b> <i>This rider is no longer issued.</i>	Provides an additional death benefit if the Insured's death was caused by accidental bodily injury.	Optional	<ul style="list-style-type: none"><li>Death must have occurred: as a direct result of bodily injury independent of all other causes; within 180 days after the injury was received; while the policy and rider were In Force; and on or after the Insured's first birthday.</li><li>No rider benefit paid if death results directly or indirectly from: suicide; war; military service; aviation travel as a pilot, crew member, or while giving or receiving training; natural causes; drugs; or any injury received while committing a felony.</li><li>No benefit if Insured dies after Attained Age 69.</li><li>Minimum coverage is \$15,000.</li></ul>
<b>Death Benefit Guarantee Rider</b> <i>This rider is no longer issued.</i>	Guarantees the policy will not terminate, during the guarantee period, if its Account Value is insufficient to cover the monthly charges on a Monthly Calculation Date as long as the minimum premium requirement is met.	Optional	<ul style="list-style-type: none"><li>Guarantee period ends the earlier of: the Insured's Attained Age 70; or 40 years from the Policy Date.</li><li>Minimum premium requirement met if the sum of all premiums paid for the policy, minus any withdrawals and Policy Debt, exceeds the sum of the minimum monthly policy premiums as defined in the rider.</li></ul>
<b>Disability Benefit Rider</b> <i>This rider is no longer issued.</i>	Credits specified amount to Account Value and waives monthly charges on specific Monthly Calculation Dates while Insured is totally and continuously disabled (as defined in rider).	Optional	<ul style="list-style-type: none"><li>Evidence of insurability required to add rider.</li><li>Benefit equal to the greater of: the specified monthly amount for the rider; or a Net Premium payment equal to the sum of all monthly charges due on the Monthly Calculation Date.</li><li>Benefits end day before Insured's Attained Age 70 if total disability began on or after Insured's Attained Age 60.</li></ul>
<b>Insurability Protection Rider.</b> <i>This rider is no longer issued.</i>	Provides right to increase Selected Face Amount without evidence of insurability on specified dates.	Optional	<ul style="list-style-type: none"><li>Requires premium payment to increase Selected Face Amount.</li><li>Minimum increase is \$15,000.</li></ul>
<b>Right to Exchange Insured Endorsement</b>	Allows for substitution of Insured.	Standard	<ul style="list-style-type: none"><li>Owner must have insurable interest in life of substitute Insured.</li><li>Both Insured and substitute Insured must be alive on date of substitution.</li><li>Age of substitute Insured on date of the exchange may not exceed 75.</li><li>Evidence of insurability of substitute Insured required.</li></ul>

Name of Benefit	Purpose	Is this Benefit Standard or Optional?	Brief Description of Restrictions/Limitations
<b>Adjustment to Surrender Charges Endorsement (for internal replacements)</b>	Waives surrender charges in exchange of policy for non-variable life policy offered by MassMutual or its subsidiaries.	Standard	<ul style="list-style-type: none"><li>• Evidence of insurability required.</li><li>• MML Bay State reserves right to require repayment of loans and loan interest.</li></ul>
<b>Portfolio Rebalancing Program</b>	Automatically rebalances Separate Account Divisions to maintain original percent allocation of Account Value.	Optional	<ul style="list-style-type: none"><li>• Cannot use with Dollar Cost Averaging Program.</li></ul>
<b>Dollar Cost Averaging Program</b>	Automatically transfers a specific amount of Account Value from a single Separate Account Division to other divisions or the GPA, at set intervals.	Optional	<ul style="list-style-type: none"><li>• Cannot use with Dollar Cost Averaging Program.</li></ul>

## **Accelerated Death Benefit Rider for Terminal Illness – This Rider Is No Longer Issued**

This rider advances a portion of the policy's death benefit to the Owner when we receive proof, satisfactory to us, that the Insured is terminally ill and is not expected to live more than 12 months.

Benefits under the rider may be taxable. The Owner should seek tax advice prior to requesting an accelerated death benefit payment.

For the purposes of this rider, terminal illness is a medical condition that:

- is first diagnosed by a Legally Qualified Physician; and
- with reasonable medical certainty, will result in the death of the Insured within 12 months from the date the Legally Qualified Physician certifies the diagnosis; and
- is not curable by any means available to the medical profession.

We must receive the following items before an accelerated benefit can be paid:

- Owner's Written Request for payment of an accelerated death benefit under the policy;
- Insured's written authorization to release medical records to us;
- written consent to this request of any assignee and any irrevocable beneficiary under the policy; and
- written certification from a Legally Qualified Physician that the Insured has a terminal illness, as defined above.

The amount of the death benefit under the policy that can be considered for acceleration is determined as of the acceleration date. The acceleration date is the first date on which all the requirements for acceleration, except any confirming examination that we may require, have been met.

The amount eligible for acceleration under the rider (Eligible Amount) includes:

- the amount equal to the excess of the base policy death benefit over the Account Value; and
- the amount payable upon death of the Insured under any life insurance rider included with the policy, if that rider provides level or increasing coverage on the life of the Insured for at least two years after the acceleration date.

The Eligible Amount does not include:

- the amount payable upon the death of the Insured under any life insurance rider that does not provide level or increasing coverage for at least two years after the acceleration date; and
- the amount payable upon the death of someone other than the Insured under the policy, if applicable.

All other riders are excluded from the Eligible Amount.



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The Owner may accelerate any portion of the Eligible Amount subject to the following limitations:

- the minimum amount that may be accelerated is \$25,000; and
- the maximum amount that may be accelerated is equal to the lesser of 75% of the Eligible Amount or \$250,000 minus the total amount accelerated under all other policies issued by us or any of our affiliates.

There is no premium or cost of insurance charge for this rider. However, when you exercise benefits under this rider, your death benefit will be reduced by an amount greater than the terminal illness benefit payment. The terminal illness benefit payment will be reduced by:

- a fee of not more than \$250; and
- interest at the annual interest rate we have declared for policies in this class.

In return for the advance payment, a lien is placed on the policy equal to the amount of benefit accelerated. Interest is not charged on the lien. The Owner may not voluntarily repay all or any portion of the lien. However, the amount of the lien will be deducted from the amount of payment under the policy upon the death of the Insured.

Payment of the terminal illness benefit will be made to the Owner in a single sum, unless the payment has been assigned or designated by the Owner. However, we will not make the payment if we first receive due proof of the Insured's death; in this case, we will instead pay the death benefit as if no request has been received under the rider.

After the accelerated benefit payment is made, the policy will remain In Force, and premiums and charges will continue in accordance with the policy provisions.

The rider terminates on the earliest of:

- on the date the policy terminates, for any reason;
- on the date the policy matures;
- on the date the base policy is changed to a different policy on which the rider is not available; or
- two years before coverage under the policy is scheduled to terminate.

The Owner may terminate this rider upon Written Request.

Where this rider is available, it is included automatically with the policy at no charge at the time the policy is issued..

An example of the operation of the Accelerated Death Benefit Rider for Terminal Illness is set forth in Appendix C.

## **Accidental Death Benefit Rider – This Rider Is No Longer Issued**

This rider provides an additional death benefit if the Insured's death was caused by accidental bodily injury. This rider provides no benefit if the Insured dies after Attained Age 69. The minimum rider coverage is \$15,000.

Proof of the accidental death must be provided to us at our Administrative Office. The proof must show that the Insured's death occurred:

- as a direct result of an accidental bodily injury independent of all other causes;
- within 180 days after the injury was received;
- while the policy and rider were In Force; and
- on or after the Insured's first birthday.

No rider benefit will be paid if the Insured's death results directly or indirectly from:

- suicide;
- war;
- military service;
- aviation travel as a pilot, crew member, or while giving or receiving training;
- natural causes;

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- drugs; or
- any injury received while committing a felony.

These exclusions are more fully explained in the rider.

The rider terminates automatically:

- on the expiration date of the rider;
- upon termination of the policy for any reason; or
- at the end of the 61 day Grace Period provided by the policy.

The Owner may terminate this rider upon Written Request.

There is an additional charge for this rider that varies based on the individual characteristics of the Insured.

Below is an example of when rider benefits are paid.

Policy details:

Sex	Female
Risk Class	Non-Tobacco
Issue Age	30
Attained Age	40
Policy Selected Face Amount	\$250,000
Rider Face Amount	\$250,000

If the Insured dies while the rider is in effect, and death is proven to be accidental according to the rider and not subject to the rider's exclusions, total death proceeds of \$500,000 would be paid to the beneficiaries.

## **Death Benefit Guarantee Rider – This Rider Is No Longer Issued**

This rider guarantees that the policy will not terminate, during the guarantee period, if its Account Value is insufficient to cover the monthly charges on a Monthly Calculation Date as long as the minimum premium requirement is met. The guarantee period ends at the earlier of:

- the Insured's Attained Age 70; or
- 40 years from the Policy Date.

The minimum premium requirement is met if the sum of all of the premiums paid for the policy, minus any withdrawals and Policy Debt, exceeds the sum of the minimum monthly policy premiums as defined in the rider. The minimum monthly policy premium for this rider is set as of its Issue Date. We may change the minimum monthly policy premium later to reflect other changes in the policy.

Minimum monthly premiums may be paid on other than a monthly basis as long as the sum of premiums paid is at least equal to the total required minimum monthly premiums on each Monthly Calculation Date. The minimum monthly policy premium may change if the Selected Face Amount is increased or decreased or if riders are added, changed, or terminated. The new minimum monthly premium will apply from the effective date of the change.

If, on a Monthly Calculation Date, the minimum monthly policy premium requirement has not been met, we will provide an additional 61 days to pay a premium sufficient to maintain the death benefit guarantee. The required payment will be equal to (a) the smallest amount needed to meet the requirement as of that date, plus (b) two times the minimum monthly premium for that date. If the required payment is not received within this period, the rider will terminate, and the death benefit guarantee will be lost.

The rider will terminate:

- on the rider expiration date;
- upon termination of the policy for any reason other than insufficient Account Value;

- if the Selected Face Amount of the policy is reduced to an amount less than \$50,000; or
- at the end of the rider's 61-day Grace Period after failure to meet the policy premium requirement and to pay an amount of premium sufficient to maintain the guarantee.

The Owner may terminate this rider upon Written Request.

Once the rider is terminated, it cannot be reinstated.

Below is an example of the rider's benefits.

- On a given Monthly Calculation Date, the policy's Account Value monthly charges are insufficient to pay the monthly charges. If not for the Death Benefit Guarantee Rider, the policy would enter the Grace Period.
- However, because the rider is attached and the guarantee period has not expired, the following comparison is made:
  - If A exceeds B (both defined below), the policy will not enter the Grace Period.
    - A = the sum of all premiums paid, minus any partial withdrawals, and minus any Policy Debt including any accrued loan interest.
    - B = the sum of minimum monthly premiums from issue to (and including) the current month.
  - If A = 10,500, and B = 10,400, the policy will not enter the Grace Period.

## **Disability Benefit Rider – This Rider Is No Longer Issued**

This rider provides that we will apply a monthly benefit amount to the policy while the Insured is totally and continuously disabled as defined in the rider. The disability benefit amount will be the greater of:

- the specified monthly amount for the rider as shown in the policy's specifications pages for this rider; or
- a Net Premium equal to the sum of all monthly charges due on the Monthly Calculation Date.

The benefits will be provided after the Insured has been totally disabled for six continuous months and all conditions of the rider have been met.

Total Disability is defined as an incapacity of the Insured that:

- is caused by sickness or injury; and
- begins while this rider is In Force; and
- for the first 24 months of any period of Total Disability, prevents the Insured from performing the substantial and material duties of the Insured's occupation; and
- after Total Disability has continued for 24 months, prevents the Insured from engaging in any occupation the Insured is or may become qualified to perform.

The benefits will end when any of the following occurs:

- the Insured is no longer totally disabled; or
- satisfactory proof of continued Total Disability is not given to us as required; or
- the Insured refuses or fails to have an examination we require; or
- the day before the Insured's Attained Age becomes 70 if Total Disability began on or after the Insured's Attained Age was 60.

Proof of claim must be received at our Administrative Office while the Insured is living and during the continuance of Total

Disability. Also, it must be received within one year after the earlier of the Policy Anniversary date nearest the Insured's 65<sup>th</sup> birthday and termination of the policy. However, if it was not reasonably possible to give us proof of claim on time, the delay will not reduce the benefit if proof is given as soon as reasonably possible.

The Owner may terminate this rider at any time upon Written Request. If the rider is terminated at the Owner's request, this rider cannot be reinstated. If not terminated at the Owner's request, this rider will terminate automatically at the Insured's Attained Age 65 if the Insured is not Totally Disabled on that date.

There is a monthly charge for this rider, which is based on the Insured's Attained Age and gender, and on the benefits provided. The charge each month is the greater of:

- The specified benefit amount charge each month is equal to the specified monthly benefit multiplied by the specified benefit charge rate for the Insured's Attained Age.
- The waiver charge each month is equal to the sum of the monthly charges for the month, excluding the charge for this rider, multiplied by the waiver charge rate for the Insured's Attained Age.

The monthly charge is deducted from the Account Value on each Monthly Calculation Date prior to the rider's termination.

The specified benefit charge rates and waiver charge rates are shown in the policy's specifications pages.

The example below shows the impact of this rider when on claim.

- The specified monthly benefit is \$500.
- The Insured is Attained Age 55.
- The Insured has been totally and permanently disabled for at least six months.
- Account Value on the Monthly Calculation Date prior to the deduction of monthly charges is \$100,000.
- Total monthly charges are \$400.
- The rider benefit is treated as a premium paid in the amount equal to the greater of:

A. The specified monthly benefit of \$500; or

B. The amount that results in a Net Premium equal to the sum of all monthly charges. In this case, a gross premium of \$416.67 would result in a Net Premium equal to \$400 after a 4% premium expense charge is taken.

- The rider benefit for this month would be a gross premium of \$500 because A is greater than B above.

## **Insurability Protection Rider – This Rider Is No Longer Issued**

This rider provides the right to increase the Selected Face Amount of the policy without evidence of insurability on certain option dates as defined in the rider.

A written application is required to elect an increase in the Selected Face Amount. The completed application and any premium payment needed for the increase must be received at our Administrative Office by the end of the option period.

The minimum increase is \$15,000. The maximum increase will be listed in the policy's specifications pages.

There are two types of option periods, regular and substitute. Regular option periods coincide with the Policy Anniversary dates nearest the Insured's 25<sup>th</sup> birthday and end with the Policy Anniversary nearest the Insured's 43<sup>rd</sup> birthday. Substitute option dates occur 60 days after the Insured's marriage, the birth of the Insured's child or adoption of a child by the Insured.

A substitute option date can be exercised only if there is a subsequent regular option date. If new insurance is purchased during a substitute option period, new insurance cannot be purchased again during the next regular option period. Failure to exercise an option date does not impact your ability to exercise a future option.

While the rider is In Force, term insurance, equal to the rider benefit listed in the policy's specification pages, is provided during the 60-day period before each option date on which an increase may be elected. If the Insured dies during this period, the term insurance is added to the policy's death benefit.

The rider terminates:

- after the last regular option date as shown in the policy's specification pages;
- if the policy terminates for any reason; or

- election of an increase on a substitute option date if that increase is the last one that may be elected under the rider.

The Owner may terminate this rider upon Written Request.

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There is a monthly charge for this rider. It is a rate per \$1,000 of rider face amount, which is deducted from the Account Value on each Monthly Calculation Date prior to the rider's termination.

Below is an example of exercising this rider.

Policy details:

Sex	Male
Risk Class	Non-Tobacco
Issue Age	30
Attained Age	37
Selected Face Amount	\$250,000
Rider Option Amount	\$50,000

On the Policy Anniversary:

- The Selected Face Amount can be increased by the rider option amount, from \$250,000 to \$300,000.
- The increase segment gets the same risk class as the base policy (Non-Tobacco).
- Evidence of insurability is not required for this Selected Face Amount increase.

## Right to Exchange Insured Endorsement - This Endorsement Is No Longer Issued

This endorsement allows you to substitute a new Insured in place of the current Insured under the policy without incurring surrender charges.

A substitute of the Insured is allowed if the policy is In Force, and all of the following conditions are met as of the Date of Substitution:

- the policy has been In Force for at least one year;
- the Owner has an insurable interest in the life of the substitute Insured; and
- the substitute Insured's Attained Age does not exceed 75 years of age on the date of the exchange.

Before the submission can become effective, we require:

- a written application for substitution, received by us at our Administration Office;
- evidence of insurability of the substitute Insured that is satisfactory to us; and
- payment of a fee of \$75.00 and the amount of any Policy Debt, if any, that is more than the maximum loan available under the new policy.

The Selected Face Amount and the Death Benefit for the new policy will be the same as for this policy. The Account Value immediately after the exchange will be equal to:

- The Account Value immediately before the exchange; minus
- The monthly charges deducted on the date of exchange.

Immediately after the exchange, the Account Value for the new policy will be allocated among the Separate Account Divisions and the Guaranteed Principal Account (including outstanding loans) in the same proportion as the Account Value of this policy immediately preceding the exchange. All monthly charges, surrender charges, and other values after the substitution of the

Insured will be based on the life and risk classification of the substitute Insured.

An example of the operation of the Right to Exchange Insured Endorsement is set forth in Appendix D.

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## **Adjustment to Surrender Charges Endorsement (for internal replacements)**

This endorsement allows the Company to waive surrender charges if an Owner wishes to exchange this policy for a qualifying non-variable life insurance policy offered by MassMutual or one of its subsidiaries provided the following conditions are met:

- On the date of the exchange, the Cash Surrender Value of the new policy must be less than or equal to the Cash Surrender Value of the replaced policy;
- The Selected Face Amount of the new policy must be equal to or greater than the Selected Face Amount of the replaced policy; and
- The entire value of the replaced policy must be put into the new policy.

The endorsement is included automatically with the policy at no charge at the time the policy is issued.

We require a written application and evidence of insurability satisfactory to us for the new policy. There is no guarantee the new policy will be issued. We reserve the right to require repayment of any loans and loan interest.

We have the right to modify, suspend, or terminate any replacement program at any time without prior notification. This right does not apply to policies to which the endorsement has already been added.

## **Right to Exchange**

Generally, you can exchange a life insurance policy for another in a tax-free exchange under Section 1035 of the Internal Revenue Code. Before making such an exchange, you should compare the features, fees, and risks of both policies to determine whether the purchase of the new policy is in your best interest. Remember that if you replace a policy with another policy, you might have to pay a surrender charge on the surrendered policy, and there may be new surrender charges for the new policy. In addition, other charges may be higher (or lower), and the benefits may be different. You should talk to your financial professional or tax adviser.

## **Accessing the Money in Your Policy**

### **Withdrawals**

After the first Policy Year, the maximum amount you may withdraw is 75% of the current Cash Surrender Value. This amount is referred to as the maximum partial withdrawal. The minimum amount you may withdraw is \$100. We do not currently charge a withdrawal fee or surrender charge for a withdrawal.

You can make a withdrawal by sending us a Written Request in Good Order on our partial withdrawal request form.

You must state in your request form the dollar amount and corresponding Separate Account Division(s) from which you want the withdrawal made. If you choose to withdraw an amount from the GPA, it may not exceed the non-loaned Account Value in the GPA. If you request a maximum partial withdrawal, the amount of the withdrawal will be deducted proportionately from the available Separate Account Divisions and the non-loaned Account Value in the GPA.

A withdrawal will reduce your policy's Account Value by the amount withdrawn. If the policy's Account Value is reduced to a point where it cannot meet a monthly deduction, your policy may terminate. A withdrawal may also: 1) reduce your policy's Selected Face Amount; and 2) have adverse tax consequences. For more information on tax implications, please see the "Federal Income Tax Considerations" section.

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**Example:**

Assume Death Benefit Option 1 is in effect and prior to the withdrawal the policy has a Selected Face Amount of \$50,000 and an Account Value of \$20,000. If you make a withdrawal of \$5,000, the Account Value will be reduced to \$15,000 and the Selected Face Amount will be reduced to \$45,000. The withdrawal payment will be \$5,000.

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If your policy's Selected Face Amount is decreased because of a withdrawal, surrender charges will not apply. We may reduce the Selected Face Amount of your policy unless you have chosen death benefit option 2 or we receive evidence of insurability satisfactory to us. The amount of the reduction will be the amount of the withdrawal.

There is one exception:

If the death benefit provided by the death benefit option immediately before the withdrawal is equal to the Minimum Face Amount, either the Selected Face Amount reduction will be limited or we will not reduce the Selected Face Amount.

We will not reduce the Selected Face Amount if the death benefit immediately after the withdrawal would be the new Minimum Face Amount (based on the reduced Account Value). Otherwise, the Selected Face Amount reduction will be based on a formula.

The formula considers the smallest withdrawal amount that would bring the Minimum Face Amount below the death benefit provided by the death benefit option. The formula reduces the Selected Face Amount by the excess of the requested withdrawal amount over this smallest withdrawal amount. (Minimum Face Amount, death benefit, and death benefit options are explained in the "Death Benefit" section.)

We may not allow a withdrawal if it would result in a reduction of the Selected Face Amount to less than \$25,000.

Withdrawal requests where evidence of insurability is not required will be effective on the Valuation Date we receive the Written Request in Good Order at our Administrative Office. Withdrawal requests where evidence of insurability is required will be effective on the Valuation Date we approve the evidence of insurability application provided that the remainder of the withdrawal request is in Good Order on that date. Withdrawal requests determined to be in Good Order on a non-Valuation Date or after the end of a Valuation Date, will be effective as of the next Valuation Date.

If a withdrawal would cause the policy to become a MEC, a MEC Notice and Acknowledgement Form will be required before the withdrawal will be processed. For more information on MECs, please see the "Federal Income Tax Considerations" section.

We will normally pay any withdrawal amounts within seven calendar days of the withdrawal effective date unless we are required to suspend or postpone withdrawal payments. Please see "Other Policy Rights and Limitations" in the "Other Information" section for additional information.

## Surrenders

You may surrender your policy to us at any time while the policy is In Force. We will pay you its Cash Surrender Value. To surrender your policy, you must submit a completed surrender form and any other forms we may require.

The surrender will be effective on the Valuation Date we receive all required, fully completed forms in Good Order at our Administrative Office. If the surrender involves an exchange or transfer of assets to a policy issued by another financial institution or insurance company (not MassMutual or any of its subsidiaries), we also will require a completed absolute assignment form and any state mandated replacement paperwork. If we receive your request in Good Order on a non-Valuation Date or after the end of a Valuation Date, your surrender request will be effective as of the next Valuation Date.

We will normally pay any surrender amounts within seven calendar days of the surrender effective date, unless we are required to suspend or postpone surrender payments. Please see "Other Policy Rights and Limitations" in the "Other Information" section for additional information.

The policy terminates as of the effective date of the surrender and cannot be reinstated unless required by law. Surrendering the policy may result in adverse tax consequences. These tax consequences are discussed in the "Federal Income Tax Considerations" section.

# Loans

You may take a loan from the policy once the Account Value exceeds the total of any surrender charges. You must assign the policy to us as collateral for the loan. We charge interest on policy loans that is added to the Policy Debt. We refer to all outstanding loans plus accrued interest as Policy Debt. You may repay all or part of your Policy Debt, but you are not required to do so.

The maximum loan amount allowed at any time is calculated as follows:

- (1) we subtract from the Account Value any surrender charges that would apply if the policy were surrendered on that date;
- (2) we calculate 90% of the amount determined in (1) above; and
- (3) we subtract any Policy Debt from the amount determined in (2) above. The result is the maximum amount that can be borrowed.

Taking a loan from your policy has several risks: (1) it may increase the risk that your policy will terminate; (2) it will have a permanent effect on your policy's Cash Surrender Value; (3) it may increase the amount of premium needed to keep the policy In Force; (4) it will reduce the death benefit proceeds; and (5) it may have adverse tax consequences.

The risks that can result from taking a policy loan may be reduced if you repay Policy Debt. The tax consequences of loans are discussed in the "Federal Income Tax Considerations" section.

## Requesting a Loan

You may take a loan by completing a loan request form and sending it to our Administrative Office, or by other means we authorize, subject to certain restrictions. You must assign the policy to us as collateral for the loan.

Once we have processed the loan request and deducted the proportionate amounts from the Separate Account Divisions and/or the GPA, we consider the loan effective and outstanding. If, after we process the loan request, you decide not to cash the check, you may submit a Written Request to our Administrative Office to repay the loan amount. The loan repayment will be effective on the Valuation Date the Written Request is received in Good Order at our Administrative Office. Loan interest begins to accrue as soon as the loan is effective. Therefore, loan interest will accrue even if the loan check is not cashed. Please see "Loan Interest Charged" below for additional information.

## Payment of Proceeds

Loans will be effective on the Valuation Date we receive your loan request form and all other required documents in Good Order at our Administrative Office. If we receive your request in Good Order on a non-Valuation Date or after the end of a Valuation Date, your loan request will be effective as of the next Valuation Date.

On the effective date of the loan, we deduct proportionate amounts from the Separate Account Divisions and/or the GPA (excluding any outstanding loans) and transfer the resulting dollar amounts to the loaned portion of the GPA. We will normally pay any loan amounts within seven calendar days of the loan effective date, unless we are required to suspend or postpone loan amounts. Please see the "Other Policy Rights and Limitations" sub-section in the "Other Information" section for additional information.

## Interest Credited on the Loaned Value

When you take a loan, we transfer an amount equal to the loan to the loaned portion of the GPA. This amount earns interest at a rate equal to the greater of:

- 3%; or
- the loan interest rate less the current loan interest rate expense charge.

With each financial transaction (e.g., premium payment, monthly charges, etc.) processed for your policy, the interest earned on any outstanding loan is credited to the GPA.

## Loan Interest Charged

At the time you applied for the policy, you selected either a fixed loan interest rate of 6% or (in all jurisdictions except Arkansas) an adjustable loan rate.

Each year we will set the adjustable rate that will apply for the next Policy Year. The maximum loan rate is based on the Monthly Average Corporate yield on seasoned corporate bonds as published by Moody's Investors Service, Inc. If this Average is no longer published, we will use a similar average as approved by the insurance department of the state in which your contract was issued.

The maximum rate is the greater of:

- The published monthly average for the calendar month ending two months before the Policy Year begins; or
- 4%

If the maximum rate is less than 0.5% higher than the rate in effect for the previous year, we will not increase the rate. If the maximum rate is at least 0.5% lower than the rate in effect for the previous year, we will decrease the rate.

Interest on policy loans is not due in advance. The interest accrues daily and becomes part of the Policy Debt as it accrues. Interest is due on each Policy Anniversary date. If interest is not paid when due, it will be added to the loan and will bear interest at the loan rate. The interest is deducted proportionately from the Separate Account Divisions and the GPA according to the then current value in those Separate Account Divisions and the GPA and added to the loan. If the policy's Account Value cannot cover the loan interest due, the policy may lapse. Please see the "Policy Termination and Reinstatement" section.

## Effect of a Loan on the Values of the Policy

A policy loan negatively affects policy values because we reduce the death benefit and Cash Surrender Value by the amount of the Policy Debt.

Also, a policy loan, whether or not repaid, has a permanent effect on your policy's Cash Surrender Value because, as long as a loan is outstanding, a portion of the Account Value equal to the loan is invested in the GPA. This amount does not participate in the investment performance of the Separate Account or receive the current interest rates credited to the non-loaned portion of the GPA. The longer a loan is outstanding, the greater the effect on your Cash Surrender Value will be. In addition, if you do not repay a loan, your outstanding Policy Debt will reduce the death benefit and Cash Surrender Value that might otherwise be payable.

Whenever you reach your Policy Debt Limit, your policy is at risk of terminating. Your Policy Debt Limit is reached when total Policy Debt exceeds the Account Value less surrender charges. If this happens, we will notify you in writing. The "Policy Termination and Reinstatement" section explains more completely what will happen if your policy is at risk of terminating. Please note that Policy Termination with an outstanding loan also can result in adverse tax consequences. Please see the "Federal Income Tax Considerations" section for additional information.

As you repay a loan, the amount in the non-loaned section of the GPA will increase because we allocate loan repayments first to the GPA until you have repaid all loan amounts originally deducted from that account. Additionally, your ability to transfer funds out of the GPA following a loan repayment will be limited due to certain transfer restrictions. Please see the "Transfers" section for additional information.

## Repayment of Loans

All or part of your Policy Debt may be repaid at any time while the Insured is living and while the policy is In Force. We will increase the death benefit and Cash Surrender Value under the policy by the amount of the repayment.

A loan repayment must be identified as such or we will consider it a premium payment. We will apply the loan repayment on the Valuation Date it is received in Good Order. If we receive the loan repayment in Good Order on a non-Valuation Date or after the end of a Valuation Date, the loan repayment is effective as of the next Valuation Date. If a loan repayment is dishonored by your bank after we have applied the loan repayment to your policy, the transaction will be deemed void and your loan repayment will be reversed.

You may initiate single or recurring loan repayments through our secure website ([www.MassMutual.com](http://www.MassMutual.com)) or by calling our Administrative Office and authorizing an electronic draft from your bank account. Please see the "Electronic Premium Payments" sub-section in the "Premiums" section for additional information. In addition, loan repayments may be sent to MassMutual, PO Box 92483, Chicago, IL 60675-2483.

Any loan repayment made within 30 days prior to the Policy Anniversary date will be used to first pay policy loan interest due. For any other loan repayment, we will first transfer values equal to the repayment amount from the loaned portion of the GPA to the non-loaned portion of the GPA until all loan amounts originally deducted from that account have been repaid. We will allocate any additional loan repayments by transferring values equal to the repayment amount from the loaned portion of the GPA to the non-loaned portion of the GPA and/or the applicable Separate Account Divisions, based on your premium allocation instructions in effect at that time. When we receive a loan repayment and only a portion is needed to fully repay the loan, we will apply any excess as premium and allocate it according to the current premium allocation instructions. Any subsequent loan repayments received after the loan is fully repaid will be refunded to the premium payer.

We will deduct any outstanding Policy Debt from:

- the proceeds payable on the death of the Insured;
- the proceeds payable when you surrender the policy; or
- the Account Value if the policy lapses.

In these situations, we will then consider the Policy Debt paid.

## Policy Termination and Reinstatement

Your policy could lapse, and terminate without value, if the Account Value of the policy becomes too low to support the policy's monthly charges. Factors that may cause your policy to terminate include: insufficient premium payments, poor investment performance, withdrawals, and unpaid loans or loan interest. Even if you have made Planned Premium payments, there is no guarantee that your policy will remain In Force. Conversely, your policy will not necessarily terminate if you do not make Planned Premium payments since the policy may have enough Account Value to cover the monthly charges.

Before your policy terminates, we allow a Grace Period during which you can pay the amount of premium needed to avoid termination. We explain the Grace Period in more detail in the section below.

If there is no Policy Debt, the policy may terminate without value if the Account Value on a Monthly Calculation Date cannot cover the charges due.

If there is Policy Debt, the policy will terminate without value at the end of the Grace Period if:

- the Policy Debt Limit is reached. The Policy Debt Limit is reached when the Policy Debt (outstanding loans plus accrued interest) exceeds the Account Value less any surrender charges that may apply: 1) on a Monthly Calculation Date or (2) on the Valuation Date a premium payment is received, if the policy is in the Grace Period.

If your policy lapses, your insurance coverage terminates. In the event of a policy lapse, we would apply the applicable surrender charge, also known as a deferred sales load, which compensates us for expenses incurred related to your policy. The surrender charge is a charge against the Account Value of the policy. The deduction is taken from the Separate Account Divisions and the GPA, excluding Policy Debt, in proportion to the values in each, on the effective date of the lapse. Please see "Surrender Charges" under "Transaction Charges" for more information.

Policy Termination could have adverse tax consequences for you. To avoid Policy Termination and potential tax consequences in these situations, you may need to make substantial premium payments or loan repayments to keep your policy In Force.

## Grace Period

Before your policy terminates, we allow a Grace Period during which you can pay the amount of premium needed to avoid termination. We will mail you a notice stating this amount.

The Grace Period begins on the date the monthly charges are due. It ends 61 days after the date we mail you the notice.

If there is no Policy Debt, the amount of premium needed to avoid Policy Termination will be the amount needed to cover the monthly charges due.

If there is Policy Debt, the amount of premium needed to avoid Policy Termination will be the amount needed to bring the Policy Debt back within the limit (Policy Debt cannot exceed the Account Value less surrender charges that may apply: (1) on a Monthly Charge Date or (2) on the Valuation Date a premium payment is received, if the policy is in a Grace Period). During the Grace Period, the policy will stay In Force. If the Insured dies during this period and the amount of premium needed to avoid Policy Termination has not been paid, we will pay the death benefit proceeds, reduced by the amount of premium needed to avoid Policy Termination and any Policy Debt.

If we do not receive the required payment by the end of the Grace Period, the policy will terminate without value at the end of the Grace Period. We will return a premium payment if it is less than the minimum amount needed to avoid termination.

During the Grace Period, certain financial transactions cannot be processed (transfers, withdrawals, loans). You must pay the premium due before subsequent financial transactions can be processed.

The Company's mailing of a Policy Termination or a lapse notice to you constitutes sufficient notice of cancellation of coverage.

## Reinstating Your Policy

If your policy terminates, you may be able to reinstate it. You may not, however, reinstate your policy if:

- you surrendered it (unless required by law); or
- five years have passed since it terminated.

To reinstate your policy, we will need:

- a written application to reinstate;
- evidence, satisfactory to us, that the Insured is still insurable;
- a premium payment sufficient to keep the policy In Force for three months after reinstatement. The minimum amount of this premium payment will be quoted upon request; and
- a MEC Notice and Acknowledgement form, if the reinstated policy would be a MEC (please see "Policy After You Reinstate" below, and the "Federal Income Tax Considerations" section).

We will not apply the required premium for reinstatement to any investment option until we have approved your reinstatement application.

The policy will be reinstated after your application has been approved by us and the required premium is received in Good Order at our Administrative Office. The Reinstatement Date will be the Valuation Date on or immediately following the date we determine the application and payment to be in Good Order. We will assess monthly charges due to us upon reinstatement of your policy as of the Reinstatement Date.

## Policy After You Reinstate

If you reinstate your policy, the Selected Face Amount will be the same as it was when the policy terminated. Your Account Value will be:

- (1) the premium paid to reinstate your policy, less
- (2) applicable monthly charges due.

Additionally, if the policy lapsed during a period when a surrender charge applied, surrender charges equal to the amount and period applicable when the policy lapsed will apply to the reinstated policy.

We do not reinstate Policy Debt.

If you reinstate your policy, it may become a MEC under current federal tax law. Please consult your tax adviser. More information on MECs is included in the "Federal Income Tax Considerations" section.

Reinstatement will not reverse any adverse tax consequences caused by Policy Termination unless it occurs within 90 days of the end of the Grace Period. In no situation, however, can adverse tax consequences that are a result of Policy Debt be reversed.

## Federal Income Tax Considerations

The information in this prospectus is general and is not an exhaustive discussion of all tax questions that might arise under the policy. The information is not written or intended as tax or legal advice. You are encouraged to seek legal and tax advice from a qualified tax adviser. In addition, we do not profess to know the likelihood that current federal income tax laws and Treasury Regulations or the current interpretations of the Internal Revenue Code of 1986, as amended (IRC), Regulations, and other guidance will continue. We cannot make any guarantee regarding the future tax treatment of any policy. We reserve the right to make changes in the policy to ensure that it continues to qualify as life insurance for tax purposes.

***No attempt is made in this prospectus to consider any applicable state or other tax laws.***

### Policy Proceeds and Loans

We believe the policy meets the IRC definition of life insurance. Therefore, the death benefit under the policy generally is excludable from the beneficiary's gross income under federal tax law. If you sell the policy or there is a transfer for value under IRC Section 101(a)(2), all or a portion of the death benefit under the policy may become taxable unless an exception applies.

As a life insurance policy under the IRC, the gain accumulated in the policy is not taxed until it is withdrawn or otherwise accessed. Any gain withdrawn from the policy is taxed as ordinary income.

From time to time, the Company may be entitled to certain tax benefits related to the investment of Company assets, including those comprising the policy value. These tax benefits, which may include foreign tax credits and the corporate dividends received deduction, are not passed back to you since the Company is the owner of the assets from which the tax benefits are derived.

***The following information applies only to a policy that is not a MEC under federal tax law. Please see "Modified Endowment Contracts" later in this section for information about MECs.***

As a general rule, withdrawals are taxable only to the extent that the amounts received exceed your cost basis (also referred to as investment in the contract) in the policy. Cost basis equals the sum of the premiums and other consideration paid for the policy less any prior withdrawals under the policy that were not subject to income taxation. For example, if your cost basis in the policy is \$10,000, amounts received under the policy will not be taxable as income until they exceed \$10,000 in the aggregate; then, only the excess over \$10,000 is taxable.

However, special rules apply to certain withdrawals associated with a decrease in the policy death benefit. The IRC provides that if:

- there is a reduction of benefits during the first 15 years after a policy is issued; and
- there is a cash distribution associated with the reduction,

you may be taxed on all or a part of the amount distributed. After 15 years, cash distributions are not subject to federal income tax, except to the extent they exceed your cost basis.

If you surrender the policy for its Cash Surrender Value, all or a portion of the distribution may be taxable as ordinary income. The distribution represents income to the extent the value received exceeds your cost basis in the policy. For this calculation, the value received is equal to the Account Value, reduced by any surrender charges, but not reduced by any outstanding Policy Debt. Therefore, if there is a loan on the policy when the policy is surrendered, the loan will reduce the cash actually paid to you but will not reduce the amount you must include in your taxable income as a result of the surrender.

To illustrate how Policy Termination with an outstanding loan can result in adverse tax consequences as described above, suppose that your premiums paid (that is, your cost basis) in the policy is \$10,000, your Account Value is \$15,000, you have no surrender charges,

and you have received no other distributions and taken no withdrawals under the policy. If, in this example, you have an outstanding Policy Debt of \$14,000, you would receive a payment equal to the Cash Surrender Value of only \$1,000; but you still would have taxable income at the time of surrender equal to \$5,000 (\$15,000 Account Value minus \$10,000 cost basis).

The potential that Policy Debt will cause taxable income from Policy Termination to exceed the payment received at termination also may occur if the policy terminates without value. Factors that may contribute to these potential situations include:

- amount of outstanding Policy Debt at or near the maximum loan value;
- unfavorable investment results affecting your policy Account Value;
- increasing monthly policy charge rates due to increasing Attained Age of the Insured;
- high or increasing amount of Insurance Risk, depending on death benefit option and changing Account Value; and
- increasing policy loan rates if the adjustable policy loan rate is in effect.

One example occurs when the Policy Debt Limit is reached. If, using the previous example, the Account Value were to decrease to \$14,000 due to unfavorable investment results, and the policy were to terminate because the Policy Debt Limit is reached, the policy would terminate without any cash paid to you; but your taxable income from the policy at that time would be \$4,000 (\$14,000 Account Value minus \$10,000 cost basis). The policy also may terminate without value if unpaid policy loan interest increases the outstanding Policy Debt to reach the Policy Debt Limit.

***To avoid Policy Terminations that may give rise to significant income tax liability, you may need to make substantial premium payments or loan repayments to keep your policy In Force.***

***You can reduce the likelihood that these situations will occur by considering these risks before taking a policy loan. If you take a policy loan, you should monitor the status of your policy with your registered representative and your tax adviser at least annually, and take appropriate preventative action.***

We believe that, under current tax law, any loan taken under the policy will be treated as Policy Debt of the Owner. If your policy is not a MEC, the loan will not be considered income to you when received.

Interest on policy loans used for personal purposes generally is not tax-deductible. However, you may be able to deduct this interest if the loan proceeds are used for “trade or business” or “investment” purposes, provided that you meet certain narrow criteria.

If the Owner is a corporation or other business, additional restrictions may apply. For example, there are limits on interest deductions available for loans against a business-owned policy. In addition, the IRC restricts the ability of a business to deduct interest on debt totally unrelated to any life insurance, if the business holds a cash value policy on the life of certain insureds.

## **Investor Control and Diversification**

There are a number of tax benefits associated with variable life insurance policies. Gains on the Net Investment Experience of the Separate Account are deferred until withdrawn or otherwise accessed, and gains on transfers among Separate Account Divisions also are deferred. For these benefits to continue, the policy must continue to qualify as life insurance. In addition to other requirements, federal tax law dictates that the insurer, and not the Owner, has control of the investments underlying the various Separate Account Divisions for the policy to qualify as life insurance.

You may make transfers among Separate Account Divisions, but you may not direct the investments each Separate Account Division makes. If the IRS were to conclude that you, as the investor, have control over these investments, then the policy would no longer qualify as life insurance and you would be taxed on the gain in the policy as it is earned rather than when it is withdrawn or otherwise accessed.

The IRS has provided some guidance on investor control, but many issues remain unclear. One such issue is whether an Owner can have too much investor control if the variable life policy offers a large number of investment divisions in which to invest Account Values. We do not know if the IRS will provide any further guidance on the issue. We do not know if any such guidance would apply retroactively to policies already In Force.

Consequently, we reserve the right to further limit Net Premium allocations and transfers under the policy, so that it will not lose its qualification as life insurance due to investor control.



In addition, the IRC requires that the investments of the Separate Account Divisions be "adequately diversified" in order for a policy to be treated as a life insurance contract for federal income tax purposes. It is intended that the Separate Account Divisions, through their underlying investment Funds, will satisfy these diversification requirements.

## Modified Endowment Contracts

If a policy is a Modified Endowment Contract (MEC) under federal tax law, loans, withdrawals, and other amounts distributed under the policy are taxable to the extent of any income accumulated in the policy. The policy income is the excess of the Account Value (both loaned and non-loaned) over your cost basis. For example, if your cost basis in the policy is \$10,000 and the Account Value is \$15,000, then all distributions up to \$5,000 (the accumulated policy income) are immediately taxable as income when withdrawn or otherwise accessed. The collateral assignment of a MEC is also treated as a taxable distribution. Death benefits paid under a MEC, however, are not taxed any differently than death benefits payable under other life insurance contracts.

If any amount is taxable as a distribution of income under a MEC, it may also be subject to a 10% penalty tax. There are a few exceptions to the additional penalty tax for distributions to individual Owners. The penalty tax will not apply to distributions:

- made on or after the date the taxpayer attains age 59½; or
- made because the taxpayer became disabled; or
- made as part of a series of substantially equal periodic payments paid for the life or life expectancy of the taxpayer, or the joint lives or joint life expectancies of the taxpayer and the taxpayer's beneficiary. These payments must be made at least annually.

A policy is a MEC if it satisfies the IRC definition of life insurance but fails the "7-pay test." A policy fails this test if:

- (1) the accumulated amount paid under the policy at any time during the first seven contract years exceeds
- (2) the total premiums that would have been payable at that time for a policy providing the same benefits guaranteed after the payment of seven level annual premiums.

A life insurance policy will always be treated as a MEC if it is issued as part of an IRC Section 1035 tax-free exchange from a life insurance policy that was already a MEC.

If certain changes are made to a policy, we will retest it to determine if it has become a MEC. For example, if you reduce the death benefit during a 7-pay testing period, we will retest the policy using the lower death benefit amount, from the start of that testing period. If the reduction in death benefit causes the policy to fail the 7-pay test for any prior Policy Year, the policy will be treated as a MEC beginning in the Policy Year in which the reduction takes place.

Any reduction in benefits attributable to the non-payment of premiums will not be taken into account if the benefits are reinstated within 90 days after the reduction in such benefit.

We will retest whenever there is a "material change" to the policy while it is In Force. If there is a material change, a new 7-pay test period begins at that time. The term "material change" includes certain increases in death benefits.

Since the policy provides for flexible premium payments, we have procedures for determining whether increases in death benefits or additional premium payments cause the start of a new seven-year test period or cause the policy to become a MEC.

Once a policy fails the 7-pay test, loans and distributions taken in the year of failure and in future years are taxable as distributions from a MEC to the extent of gain in the policy. In addition, the IRS has authority to apply the MEC taxation rules to loans and other distributions received in anticipation of the policy failing the 7-pay test. The IRC authorizes the issuance of regulations providing that a loan or distribution, if taken within two years prior to the policy's becoming a MEC, shall be treated as received in anticipation of failing the 7-pay test. However, such written authority has not yet been issued.

Under current circumstances, a loan, collateral assignment, or other distribution under a MEC may be taxable even though it exceeds the amount of gain accumulated in that particular policy. For purposes of determining the amount of taxable income received from a MEC, the law considers the total of all gain in all the MECs issued within the same calendar year to the same Owner by an insurer and its affiliates. Loans, collateral assignments, and distributions from any one MEC are taxable to the extent of this total gain.

## Other Tax Considerations

A change of the Owner or an Insured, or an exchange or assignment of the policy, may cause the Owner to recognize taxable income.

The impact of federal income taxes on values under the policy and on the benefit to you or your beneficiary depends on MassMutual's tax status and on the tax status of the individual concerned. We currently do not make any charge against the Separate Account for federal income taxes. We may make such a charge eventually in order to recover the future federal income tax liability to the Separate Account.

Under current laws in several states, we may incur state and local taxes (in addition to premium taxes). These taxes are not currently significant, and we are not currently charging for them. If they increase, we may deduct charges for such taxes.

Federal estate and gift taxes, state and local estate taxes, and other taxes depend on the circumstances of each Owner or beneficiary.

## Qualified Plans

The policy may be used as part of certain tax-qualified and/or ERISA employee benefit plans. Since the rules concerning the use of a policy with such plans are complex, you should not use the policy in this way until you have consulted a competent tax adviser. You may not use the policy as part of an Individual Retirement Account (IRA) or as part of a Tax-Sheltered Annuity (TSA) or an IRC Section 403(b) custodial account.

While the policy is owned by the qualified plan, we will only pay amounts under the policy while the Insured is still living (e.g., withdrawals, surrenders, and loans) to the qualified plan trustee or plan administrator. We will not make such payments directly to any other party, including the Insured participant. The only exception is for a Keogh plan, where the Insured participant is also the policy owner.

## Employer-Owned Policies

The IRC contains certain notice and consent requirements for "employer-owned life insurance" policies. The IRC defines "employer-owned life insurance" as a life insurance contract:

- that is owned by a person or entity engaged in a trade or business (including policies owned by related or commonly controlled parties);
- insuring the life of a U.S. citizen or resident who is an employee on the date the contract is issued; and
- under which the policyholder is directly or indirectly a beneficiary.

The tax-free death benefit for employer-owned life insurance is limited to the amount of premiums paid unless certain notice and consent requirements are met. The notice requirements are met if, before the contract is issued, the employee is notified in writing of the following:

- (1) the employer intends to insure the employee's life;
- (2) the maximum face amount for which the employee could be insured at the time the contract was issued; and
- (3) the employer will be the beneficiary of any proceeds payable on the death of the employee.

Prior to issuance of the contract, the employee must provide written consent to being insured under the contract and to continuation of the coverage after employment terminates.

The law also imposes annual reporting and record keeping requirements for businesses owning employer-owned life insurance policies. The employer must maintain records of the employer's notice and the employee's consent, and must file certain annual reports with the IRS.

Provided that the notice and consent requirements are satisfied, the death proceeds of an employer-owned life insurance policy will generally be income tax-free in the following situations:

- (1) At the time the contract is issued, the insured employee is a director, highly compensated employee, or highly compensated individual within the meaning of IRC Section 101(j)(2)(A)(ii);
- (2) The Insured was an employee at any time during the 12-month period before his or her death;
- (3) The proceeds are paid to a member of the Insured's family, an individual who is the designated beneficiary of the Insured under the contract, a trust established for the benefit of any such member of the family or designated beneficiary, or the Insured's estate; or
- (4) The proceeds are used to purchase an equity interest in the employer from any of the persons described in (3).

Death proceeds that do not fall within one of the enumerated exceptions will be subject to ordinary income tax (even if the notice and consent requirements were met), and MassMutual will report payment of taxable proceeds to the IRS, where applicable.

## **Business Uses of Policy**

Businesses can use the policies in various arrangements, including nonqualified deferred compensation or salary continuance plans, split dollar insurance plans, executive bonus plans, tax exempt and nonexempt welfare benefit plans, retiree medical benefit plans and others. The tax consequences of such plans may vary depending on the particular facts and circumstances. The Internal Revenue Service and Treasury have issued guidance that may substantially affect these arrangements. If you are purchasing the policy for any arrangement the value of which depends in part on its tax consequences, you should consult a qualified tax adviser.

## **Tax Shelter Regulations**

Prospective Owners that are corporations should consult a tax adviser about the treatment of the policy under the Treasury Regulations applicable to corporate tax shelters.

## **Generation Skipping Transfer Tax Withholding**

Under certain circumstances, the IRC may impose a "generation skipping transfer tax" when all or part of a life insurance policy is transferred to, or a death benefit is paid to, an individual two or more generations younger than the Owner. Regulations issued under the IRC may require us to deduct the tax from your policy, or from any applicable payment, and pay it directly to the IRS.

## **Withholding**

To the extent that policy distributions are taxable, they are generally subject to withholding for the recipient's federal income tax liability. Recipients can generally elect, however, not to have tax withheld from distributions.

## **Life Insurance Purchases by Residents of Puerto Rico**

Income received by residents of Puerto Rico under life insurance policies issued by a United States life insurance company is U.S.-source income that is generally subject to United States federal income tax.

## **Non-Resident Aliens and Foreign Entities**

Generally, a distribution from a contract to a non-resident alien or foreign entity is subject to federal income tax withholding at a rate of 30% of the amount of the income that is distributed. A non-resident alien is a person who is neither a citizen, nor a resident, of the United States of America (U.S.). We are required to withhold the tax and send it to the IRS. Some distributions to non-resident aliens or foreign entities may be subject to a lower (or no) tax if a treaty applies. In order to obtain the benefits of such a treaty, the non-resident alien must claim the treaty benefit on Form W-8BEN (or the equivalent entity form), providing us with:

- proof of residency (in accordance with IRS requirements); and
- the applicable taxpayer identification number.



If the above conditions are not met, we will withhold 30% of the income from the distribution. Additionally, under the Foreign Account Tax Compliance Act, effective July 1, 2014, U.S. withholding may be required for certain entity owners (including foreign financial institutions and non-financial foreign entities (such as corporations, partnerships and trusts)) at a rate of 30% without regard to lower treaty rates.

## **Sales to Third Parties**

If you sell your policy to a viatical settlement provider, and the Insured is considered terminally or chronically ill within the meaning of IRC Section 101(g), the proceeds of the sale will be treated as death benefit proceeds, and will generally be received by you income tax-free.

However, the sale of your policy to an unrelated investor in a sale that does not qualify as a viatical settlement may have adverse tax consequences. IRS guidance issued in 2009 provides that the gain from such a sale is taxed as ordinary income to the extent that you would have realized ordinary income if you had instead surrendered your policy. Any amount you receive in excess of that amount is taxed as capital gain income. Under the Tax Cuts and Jobs Act of 2017, these sales may qualify as reportable sales and require the purchaser and the contract issuer to report the sale to the seller and the IRS. Previously the IRS had taken the position that your cost basis in the policy for computing the gain on the sale must be decreased by the cumulative cost of insurance charge incurred prior to the sale. The Tax Cuts and Jobs Act of 2017 provides that for reportable sales that take place after August 25, 2009, no reduction in the cost basis for the cost of insurance incurred is required.

## **Medicare Hospital Insurance Tax**

A Medicare Hospital Insurance Tax (known as the “Unearned Income Medicare Contribution”) applies to all or part of a taxpayer’s “net investment income,” at a rate of 3.8%, when certain income thresholds are met. “Net investment income” is defined to include, among other things, non-qualified annuities and net gain attributable to the disposition of property.

Under final regulations, this definition includes the taxable portion of any annuitized payment from a life insurance contract and it may also include the gain from the sale of a life insurance contract. Under current guidance we are required to report to the IRS whether a distribution is potentially subject to the tax. You should consult a tax adviser as to the potential impact of the Medicare Hospital Insurance Tax on your policy.

## **Other Information**

### **Other Policy Rights and Limitations**

#### **Right to Assign the Policy**

Generally, you may assign the policy as collateral for a loan or other obligation. For any assignment we allow to be binding on us, we must receive, in Good Order, written notice of the assignment and a signed copy of it at our Administrative Office. We are not responsible for the validity of any assignment. If you assign your policy, certain of your rights may only be exercised with the consent of the assignee of record.

#### **Possible Restrictions on Financial Transactions**

Federal laws designed to counter terrorism and prevent money laundering might, in certain circumstances, require us to reject a premium payment or block an Owner's ability to make certain transactions and thereby refuse to accept any request for transfers, withdrawals, surrenders, loans, or death benefits, until the instructions are received from the appropriate regulator. We may also be required to provide additional information about you and your policy to government regulators.

## **Delay of Payment of Proceeds from the GPA**

We may delay payment of any Cash Surrender Values, withdrawals, and loan proceeds that are based on the GPA for up to six months from the date the request is received at our Administrative Office.

## **Delay of Payment of Proceeds from the Separate Account**

We may suspend or postpone transfers from the Separate Account Divisions, or delay payment of the Cash Surrender Values, withdrawals, loan proceeds and death benefits from the Separate Account during any period when:

- it is not reasonably practicable to determine the amount because the NYSE is closed (other than customary weekend and holiday closings);
- trading is restricted by the SEC;
- an emergency exists as a result of which disposal of shares of the Funds is not reasonably practicable or we cannot reasonably value the shares of the Funds; or
- the SEC, by order, permits us to delay payment in order to protect our Owners.

If, pursuant to SEC rules, a money market Fund suspends payment of redemption proceeds in connection with a liquidation of the Fund, we will delay payment of any transfer, partial withdrawal, surrender, loan, or death benefit from a money market division until the Fund is liquidated.

## **Distribution**

The policies are no longer for sale to the public. While the policies were offered for sale, they were sold by both registered representatives of MML Investors Services, LLC (MMLIS), a subsidiary of MassMutual, and by registered representatives of other broker-dealers who have entered into distribution agreements with MML Strategic Distributors, LLC (MSD), a subsidiary of MassMutual. Pursuant to separate underwriting agreements with the Company, on its own behalf and on behalf of the Separate Account, MMLIS serves as principal underwriter of the policies sold by its registered representatives, and MSD serves as principal underwriter of the policies sold by registered representatives of other broker-dealers who have entered into distribution agreements with MSD.

Both MMLIS and MSD are registered with the SEC as broker-dealers under the Securities Exchange Act of 1934 and are members of the Financial Industry Regulatory Authority (FINRA). MMLIS and MSD receive compensation for their actions as principal underwriters of the policies.

## **Commissions and Allowances Paid to MMLIS and Broker-Dealers**

Commissions are paid to MMLIS and all broker-dealers involved in the sale of the policy. Commissions for sales of the policies by MMLIS registered representatives are paid by MassMutual on behalf of MMLIS to its registered representatives. Commissions for sales of the policies by registered representatives of other broker-dealers are paid by MassMutual on behalf of MSD to those broker-dealers.

Commissions are a percentage of the premium paid in each year of coverage and differ for premiums paid up to the Target Premium and for premiums paid in excess of the Target Premium. The Target Premium is based on the issue age, gender and risk classification of the Insured.

The maximum commission percentages we pay to MMLIS registered representatives and broker-dealers are:

<b>First Year Commission</b>	<b>Commission in Years 2-5</b>	<b>Commission in Years 6-7</b>	<b>Commission in Years 8-10</b>	<b>Commission in Years 2-5</b>
50% of premium paid up to the Target Premium and 2% of premium paid in excess of the Target Premium	6% of premium paid up to the Target Premium and 2% of premium paid in excess of the Target Premium	5% of premium paid up to the Target Premium and 2% of premium paid in excess of the Target Premium	4% of premium paid up to the Target Premium and 2% of premium paid in excess of the Target Premium	2% of premium paid up to the Target Premium and 2% of premium paid in excess of the Target Premium

For Policy Years 2 - 20, we pay an annual commission of 0.15% of the average monthly account value after the first Policy Year. For Policy Years 21 and beyond, we pay an annual maximum commission of 0.05% of the average monthly account value.

## **Additional Compensation Paid to MMLIS**

Most MMLIS registered representatives are also MassMutual insurance agents, and as such, are eligible for certain cash and non-cash benefits from MassMutual. Cash compensation includes bonuses and allowances based on factors such as sales, productivity and persistency (policy retention). Non-cash compensation includes various recognition items such as prizes and awards as well as attendance at, and payment of the costs associated with attendance at, conferences, seminars and recognition trips, and also includes contributions to certain individual plans such as pension and medical plans. Sales of this policy may help these registered representatives and their supervisors qualify for such benefits. MMLIS registered representatives who are also General Agents or sales managers of MassMutual also may receive overrides, allowances and other compensation that is based on sales of the policy by their registered representatives.

## **Additional Payments to Certain Broker-Dealers**

In addition to the commissions described above, we may make cash payments to certain broker-dealers to attend sales conferences and educational seminars, thereby promoting awareness of our products. The broker-dealers may use these payments for any reason, including helping offset the costs of the conference or educational seminar.

We may also make cash payments to broker-dealers pursuant to marketing service agreements. These marketing service arrangements vary depending on a number of factors, including the specific level of support being provided. These payments are not made in connection with the sale of specific policies.

These additional payments are not offered to all broker-dealers and the terms of these arrangements may differ. Any such payments will be paid by MassMutual out of our assets and will not result in any additional direct charge to you. Such payments may give us greater access to the registered representatives of the broker-dealers that receive such payments and may influence the way that a broker-dealer markets the policy.

## **Compensation in General**

The compensation arrangements described in the paragraphs above may have provided a registered representative with an incentive to sell this policy over other available policies whose issuers did not provide such compensation or which provided lower levels of compensation. You may want to take these compensation arrangements into account when evaluating any recommendations regarding this policy.

We intend to recoup a portion of the cash and non-cash compensation payments that we make through the assessment of certain charges described in this prospectus, including the contingent deferred sales charge. We may also use some of the 12b-1 distribution fee payments (if applicable) and other payments that we receive from certain Funds to help us make these cash and non-cash payments.

Your registered representative typically receives a portion of the compensation that is payable to his or her broker-dealer, depending on the agreement between the representative and their firm. MassMutual is not involved in determining compensation paid to a registered

representative of an unaffiliated broker-dealer. You may contact, as applicable, MMLIS, your broker-dealer or registered representative to find out more information about the compensation they may receive in connection with your purchase of a policy.

Commissions or overrides may also be paid to broker-dealers providing wholesaling services (such as providing sales support and training for sales representatives who sell the policies).

## Computer System, Cybersecurity, and Service Disruption Risks

The Company relies on its ultimate parent, MassMutual, for various operating and administrative services including computer systems. MassMutual and its business partners rely on computer systems to conduct business, including customer service, marketing and sales activities, customer relationship management and producing financial statements. While MassMutual and its business partners have policies, procedures, automation and backup plans designed to prevent or limit the effect of failures, their respective computer systems may be vulnerable to disruptions or breaches as the result of natural disasters, man-made disasters, criminal activity, pandemics, or other events beyond their control. The failure of MassMutual or its business partners' computer systems for any reason could disrupt operations, result in the loss of customer business and adversely impact profitability.

The Company and its business partners retain confidential information on our respective computer systems, including customer information and proprietary business information. Any compromise of the security of our or our business partners' computer systems that results in the disclosure of personally identifiable customer information could damage our reputation, expose us to litigation, increase regulatory scrutiny and require us to incur significant technical, legal, and other expenses. The risk of cyber-attacks may be higher during periods of geopolitical turmoil (such as the Russian invasion of Ukraine and the responses by the United States and other governments).

Geopolitical and other events, including natural disasters, war, terrorism, economic uncertainty, trade disputes, public health crises and related geopolitical events, and widespread disease, including pandemics (such as COVID-19) and epidemics, have led, and in the future may lead, to increased market volatility, which may disrupt U.S. and world economies and markets and may have significant adverse direct or indirect effects on the Company and MassMutual. These events may adversely affect computer and other systems on which the MassMutual and the Company rely, interfere with the processing of contract-related transactions (including the processing of orders from Owners and orders with the Funds) and the Company's ability to administer this contract in a timely manner, or have other possible negative effects. These events may also impact the issuers of securities in which the Funds invest, which may cause the Funds underlying the contract to lose value. There can be no assurance that we, the Funds or our service providers will avoid losses affecting the contract due to these geopolitical and other events. If we are unable to receive U.S. mail or fax transmissions due to a closure of U.S. mail delivery by the government or due to the need to protect the health of our employees, you may still be able to submit transaction requests to the Company electronically or over the telephone. Our inability to receive U.S. mail or fax transmissions may cause delays in the pricing and processing of transaction requests submitted to us by U.S. mail or by fax during that time period.

## Legal Proceedings

The Company is subject to legal and regulatory actions, including class action lawsuits, in the ordinary course of its business. Our pending legal and regulatory actions include proceedings specific to us, as well as proceedings generally applicable to business practices in the industry in which we operate. From time to time, we also are subject to governmental and administrative proceedings and regulatory inquiries, examinations, and investigations in the ordinary course of our business. In addition, we, along with other industry participants, may occasionally be subject to investigations, examinations, and inquiries (in some cases industry-wide) concerning issues upon which regulators have decided to focus. Some of these proceedings involve requests for substantial and/or unspecified amounts, including compensatory or punitive damages.

While it is not possible to predict with certainty the ultimate outcome of any pending litigation proceedings or regulatory action, management believes, based on information currently known to it, that the ultimate outcome of all pending litigation and regulatory matters, after consideration of applicable reserves and rights to indemnification, is not likely to have a material adverse effect upon the Separate Account, the ability of the principal underwriter(s) to perform in accordance with its contracts with the Company on behalf of the Separate Account, or the ability of the Company to meet its obligations under the policy.

For more information regarding the Company's litigation and other legal proceedings, please see the notes to the Company's financial statements contained within the SAI.

## Unclaimed Property

Every state has some form of unclaimed property law that imposes varying legal and practical obligations on insurers and, indirectly, on policy owners, Insureds, beneficiaries, and any other payees of proceeds from a policy. Unclaimed property laws generally provide for the transfer of benefits or payments under various circumstances to the abandoned property division or unclaimed property office in the state of last residence. This process is known as escheatment. To help avoid escheatment, keep your own information, as well as beneficiary and any other payee information up-to-date, including: full names, postal and electronic media addresses, telephone numbers, dates of birth, and social security numbers. To update this information, contact our Administrative Office.

## Financial Statements

We encourage both existing and prospective Owners to read and understand our financial statements and those of the Separate Account. Our audited statutory financial statements and the Separate Account's audited U.S. GAAP financial statements are included in the SAI. You can request the SAI by contacting our Administrative Office.

# Appendix A

## Funds Available Under the Policy

The following is a list of Funds currently available under the policy. This list of Funds is subject to change, as discussed in this prospectus for the policy. Before you invest, you should review the prospectuses for the Funds. These prospectuses contain more information about the Funds and their risks and may be amended from time to time. You can find the prospectuses and other information about the Funds online at [www.MassMutual.com/VLS](http://www.MassMutual.com/VLS). You can also request this information at no cost by calling (800) 272-2216 or sending an email request to [MassMutualServiceCenter@MassMutual.com](mailto:MassMutualServiceCenter@MassMutual.com).

The current expenses and performance information below reflects fees and expenses of the Funds, but does not reflect the other fees and expenses that your policy may charge. Expenses would be higher and performance would be lower if these charges were included. Each Fund's past performance is not necessarily an indication of future performance.

Fund Type	Fund and Adviser/Sub-Adviser	Current Expenses (expenses/average assets)	Average Annual Total Returns (as of 12/31/2023)		
			1 Year	5 Year	10 Year
Money Market	MML U.S. Government Money Market Fund (Initial Class) <sup>(1)</sup> <b>Adviser:</b> MML Investment Advisers, LLC <b>Sub-Adviser:</b> Barings LLC	0.52%	4.64%	1.54%	0.95%
Fixed Income	Invesco V.I. Global Strategic Income Fund (Series I) <b>Adviser:</b> Invesco Advisers, Inc. <b>Sub-Adviser:</b> N/A	0.92% <sup>(*)</sup>	8.88%	1.30%	1.50%
Fixed Income	MML Managed Bond Fund (Initial Class) <b>Adviser:</b> MML Investment Advisers, LLC <b>Sub-Adviser:</b> Barings LLC	0.45%	6.70%	1.58%	2.04%
Balanced	MML Blend Fund (Initial Class) <sup>(2)</sup> <b>Adviser:</b> MML Investment Advisers, LLC <b>Sub-Adviser:</b> BlackRock Investment Management, LLC	0.50%	17.62%	9.10%	7.55%
Large Cap Value	LVIP American Century Disciplined Core Value Fund (Standard Class II) <sup>(3)</sup> <b>Adviser:</b> Lincoln Financial Investments Corporation <b>Sub-Adviser:</b> American Century Investment Management, Inc.	0.71% <sup>(*)</sup>	8.65%	10.19%	8.19%
Large Cap Value	MML Equity Fund (Initial Class) <b>Adviser:</b> MML Investment Advisers, LLC <b>Sub-Adviser:</b> Brandywine Global Investment Management, LLC	0.44%	9.32%	11.99%	8.34%
Large Cap Blend	Fidelity® VIP Contrafund® Portfolio (Initial Class) <b>Adviser:</b> Fidelity Management & Research Company LLC <b>Sub-Advisers:</b> FMR Investment Management (UK) Limited, Fidelity Management & Research (Hong Kong) Limited, and Fidelity Management & Research (Japan) Limited	0.56%	33.45%	16.65%	11.61%
Large Cap Blend	MML Equity Index Fund (Class II) <b>Adviser:</b> MML Investment Advisers, LLC <b>Sub-Adviser:</b> Northern Trust Investments, Inc.	0.28%	25.93%	15.38%	11.73%
Large Cap Growth	Invesco V.I. Capital Appreciation Fund (Series I) <b>Adviser:</b> Invesco Advisers, Inc. <b>Sub-Adviser:</b> N/A	0.80% <sup>(*)</sup>	35.38%	16.40%	11.56%
Small/Mid-Cap Blend	MML Small Cap Equity Fund (Initial Class) <b>Adviser:</b> MML Investment Advisers, LLC <b>Sub-Adviser:</b> Invesco Advisers, Inc.	0.73%	17.81%	13.18%	9.09%

Fund Type	Fund and Adviser/Sub-Adviser	Current Expenses (expenses/average assets)	Average Annual Total Returns (as of 12/31/2023)		
			1 Year	5 Year	10 Year
Small/Mid-Cap Growth	Invesco V.I. Discovery Mid Cap Growth Fund (Series I) <b>Adviser:</b> Invesco Advisers, Inc. <b>Sub-Adviser:</b> N/A	0.87%	13.15%	12.77%	9.79%
Small/Mid-Cap Growth	T. Rowe Price Mid-Cap Growth Portfolio <b>Adviser:</b> T. Rowe Price Associates, Inc. <b>Sub-Adviser:</b> T. Rowe Price Investment Management, Inc.	0.84%	19.96%	11.63%	10.50%
International/Global	Invesco V.I. Global Fund (Series I) <b>Adviser:</b> Invesco Advisers, Inc. <b>Sub-Adviser:</b> N/A	0.82%	34.73%	12.30%	8.47%

(\*) These Funds and their investment advisers have entered into contractual fee waivers or expense reimbursements. These temporary fee reductions are reflected in their current expenses. Those contractual arrangements are designed to reduce the Fund's total current expenses for Owners and will continue past the current year.

- (1) You could lose money by investing in the Fund. Although the Fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the Fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The Fund's sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time. The yield of this Fund may become very low during periods of low interest rates. After deduction of Separate Account charges, the yield in the division that invests in this Fund could be negative.
- (2) These are fund-of-funds investment choices. They are known as fund-of-funds because they invest in other underlying funds. A fund offered in a fund-of-funds structure may have higher expenses than a direct investment in its underlying funds because a fund-of-funds bears its own expenses and indirectly bears its proportionate share of expenses of the underlying funds in which it invests.
- (3) Effective April 26, 2024, American Century VP Disciplined Core Value Fund reorganized into LVIP American Century Disciplined Core Value Fund.

## Appendix B

### Hypothetical Examples of the Impact of the Minimum Face Amount

#### ***Example I***

---

Assume the following:

- Death Benefit Option 1.
- Selected Face Amount is \$500,000.
- Account Value is \$50,000.
- Policy Debt is \$0.
- Insured's Attained Age is 45.
- Minimum Face Amount Percentage is 215%.

The death benefit for death benefit option 1 is the greater of the Selected Face Amount or the Minimum Face Amount. The Minimum Face Amount is calculated by multiplying the Account Value times the Minimum Face Amount percentage.

The death benefit will be \$500,000 based on the greater of:

- \$500,000 or
- $\$50,000 \times 2.15 = \$107,500$

#### ***Example II***

---

Assume the following:

- Death Benefit Option 1.
- Selected Face Amount is \$500,000.
- Account Value is \$250,000.
- Policy Debt is \$0.
- Insured's Attained Age is 45.
- Minimum Face Amount Percentage is 215%.

The death benefit for death benefit option 1 is the greater of the Selected Face Amount or the Minimum Face Amount. The Minimum Face Amount is calculated by multiplying the Account Value times the Minimum Face Amount percentage.

The death benefit will be \$537,500 based on the greater of:

- \$500,000 or

- $\$250,000 \times 2.15 = \$537,500$

## Hypothetical Examples of the Impact of the Account Value and Premiums

### ***Example I ~ Death Benefit Option 1***

---

Assume the following:

- Selected Face Amount is \$1,000,000.
- Account Value is \$50,000.
- Minimum Face Amount is \$219,000.
- Policy Debt is \$0.

Based on these assumptions,

- the death benefit is \$1,000,000.

If the Account Value increases to \$80,000 and the Minimum Face Amount increases to \$350,400,

- the death benefit remains at \$1,000,000.

If the Account Value decreases to \$30,000 and the Minimum Face Amount decreases to \$131,400,

- the death benefit still remains at \$1,000,000.

### ***Example II ~ Death Benefit Option 2***

---

Assume the following:

- Selected Face Amount is \$1,000,000.
- Account Value is \$50,000.
- Minimum Face Amount is \$219,000.
- Policy Debt is \$0.

Based on these assumptions,

- the death benefit is \$1,050,000 (Selected Face Amount plus Account Value).

If the Account Value increases to \$80,000 and the Minimum Face Amount increases to \$350,400,

- the death benefit will increase to \$1,080,000.

If the Account Value decreases to \$30,000 and the Minimum Face Amount decreases to \$131,400,

- the death benefit will decrease to \$1,030,000.

## Hypothetical Examples of Death Benefit Option Changes

### ***Example I ~ Change from Option 2 to Option 1***

---

For a change from Option 2 to Option 1, the Selected Face Amount is increased by the amount of the Account Value on the effective date of the change.

For example, if the policy has a Selected Face Amount of \$500,000 and an Account Value of \$25,000, the death benefit under Option 2 is equal to the Selected Face Amount plus the Account Value, or \$525,000. If you change from Option 2 to Option 1, the death benefit under Option 1 is equal to the policy Selected Face Amount. Since the death benefit under the policy does not change as the result of a death benefit option change, the Selected Face Amount will be increased from \$500,000 under Option 2 to \$525,000 under Option 1 and the death benefit after the change will remain at \$525,000.

### ***Example II ~ Change from Option 1 to Option 2***

---

For a change from Option 1 to Option 2, the Selected Face Amount will be decreased by the amount of the Account Value on the effective date of the change.

For example, if the policy has a Selected Face Amount of \$700,000 and an Account Value of \$25,000, under Option 1 the death benefit is equal to the Selected Face Amount, or \$700,000. If you change from Option 1 to Option 2, the death benefit under Option 2 is equal to the Selected Face Amount plus the Account Value. Since the death benefit does not change as the result of a death benefit option change, the Selected Face Amount will be decreased by \$25,000 to \$675,000, and the death benefit under Option 2 after the change will remain at \$700,000.

## Appendix C

### Hypothetical Example – Accelerated Death Benefit Rider for Terminal Illness

The calculations below show the impact of accelerating the death benefit under this rider for a sample policy.

Policy details prior to the acceleration of the death benefit:

Death Benefit	\$250,000
Account Value	\$50,000

The Eligible Amount is the amount of death benefit under the policy that can be considered for acceleration.

$$\text{Eligible Amount} = \text{Death Benefit} - \text{Account Value}$$
$$\text{Eligible Amount} = \$250,000 - \$50,000 = \$200,000$$

The Amount To Be Accelerated cannot exceed 75% of the Eligible Amount, or \$150,000.

The Insured is terminally ill as defined in the rider, and the Owner requests to accelerate \$100,000 of death benefit. Alternatively, the Owner could request the Terminal Illness Benefit Payment amount rather than the amount to be accelerated. Assuming an Annual Interest Rate of 5%, the interest charge is calculated as follows:

$$\text{Interest Charge} = 5\% \times 100,000 / (1 + 5\%) = \$4,761.90$$

The terminal illness benefit payment is then calculated as follows:

Amount to Be Accelerated	\$100,000.00
Less Interest Charge	-\$4,761.90
Less administrative fee	-\$250.00
Terminal Illness Benefit Payment	\$94,988.10

A lien of \$100,000 is placed on the policy. The death benefit after acceleration is reduced by the amount of the lien, from \$250,000 to \$150,000. No other policy values are impacted.

## Appendix D

### Hypothetical Example – Right to Exchange Insured Endorsement

Below is an example of exercising this endorsement.

Policy details prior to the exchange:

Issue Date	1/1/2020
Insured Date of Birth	1/1/1965
Issue Age	55
Sex	Male
Risk Class	Tobacco
Selected Face Amount	\$250,000
Account Value on 1/1/30	\$50,000

On 1/1/2030, the Right to Exchange Insured Endorsement is exercised with the following insured:

New Insured D.O.B.	1/1/1980
Issue Age	40
Sex	Female
Risk Class	Non-Tobacco

A fee of \$75 must be made before the exchange is processed. There is no other cost or credit associated with exercising the rider. The Selected Face Amount and Account Value will be the same after the exchange. All monthly charges, surrender charges, and other values after the exchange will be based on the life and risk class of the new insured. Below is the impact on the guaranteed monthly charges on the date the endorsement is exercised:

Breakdown of Guaranteed Monthly Charges on Date of Substitution		
	Original Insured	Substitute Insured
	Male	Female
Insurance Charge	Male Tobacco Issue Age 55 Duration 11	Non-Tobacco Issue Age 40 Duration 11
Insurance Charge	\$ 617.03	\$ 69.99
Selected Face Amount Charge	0.00	0.00
Administrative Charge	9.00	9.00
Surrender Charge	0.00	0.00
Account Value After Charges	49,373.97	49,921.01

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The SAI contains additional information about the Separate Account and the policy. The SAI is incorporated into this prospectus by reference and is legally part of this prospectus. We filed the SAI with the SEC.

This prospectus and the SAI are available online at [www.MassMutual.com/VLS](http://www.MassMutual.com/VLS). For a free copy of other information about this policy, or general inquiries, you can contact our Administrative Office:

MassMutual Customer Service Center  
PO Box 1865  
Springfield, MA 01102-1865  
(800) 272-2216  
(866) 329-4527 (Fax)  
[www.MassMutual.com](http://www.MassMutual.com)  
[MassMutualServiceCenter@MassMutual.com](mailto:MassMutualServiceCenter@MassMutual.com) (Email Requests)

Reports and other information about the Separate Account, including the SAI, are also available on the SEC website ([www.sec.gov](http://www.sec.gov)) and can be obtained, upon payment of a duplicating fee, by electronic request at the following email address: [publicinfo@sec.gov](mailto:publicinfo@sec.gov).

You can also request, free of charge, a personalized illustration of death benefits, surrender values, and cash values from your registered representative or by calling our Administrative Office.

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Investment Company Act file number: 811-03542  
Securities Act file number: 033-82060  
Class (Contract) Identifier: C000030140

**STATEMENT OF ADDITIONAL INFORMATION**  
**MML BAY STATE LIFE INSURANCE COMPANY**  
**(Depositor)**  
**MML BAY STATE VARIABLE LIFE SEPARATE ACCOUNT I**  
**(Registrant)**

**Variable Life Select**

**April 29, 2024**

This Statement of Additional Information (SAI) is not a prospectus. It should be read in conjunction with the statutory prospectus dated April 29, 2024, for the Variable Life Select (VLS) policy. The VLS policy and its statutory prospectus may be referred to in this SAI.

For a copy of the VLS statutory prospectus, contact your registered representative, our Administrative Office by mail at PO Box 1865, Springfield, Massachusetts, 01102-1865, or by phone (800) 272-2216, or access the internet at [www.MassMutual.com/VLS](http://www.MassMutual.com/VLS), or access the Securities and Exchange Commission website at [www.sec.gov](http://www.sec.gov).

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## **GENERAL INFORMATION AND HISTORY**

### **Company**

In this Statement of Additional Information, the "Company," "we," "us," and "our" refer to MML Bay State Life Insurance Company (MML Bay State). MML Bay State, a Connecticut corporation that was originally incorporated on April 1, 1935, is a wholly owned stock life insurance subsidiary of C.M. Life Insurance Company (C.M. Life) and an indirect subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual®). MML Bay State provides life insurance and annuities to individuals and group life insurance to institutions.

MassMutual and its subsidiaries provide individual and group life insurance, disability insurance, individual and group annuities and guaranteed interest contracts to individual and institutional customers in all 50 states of the U.S., the District of Columbia and Puerto Rico. Products and services are offered primarily through MassMutual's distribution channels: MassMutual Financial Advisors, MassMutual Strategic Distributors, Institutional Solutions and Worksite.

MassMutual was established on May 15, 1851 and is organized as a mutual life insurance company in the Commonwealth of Massachusetts. MML Bay State's home office is located at 200 Great Pond Drive, Suite 150, Windsor, Connecticut 06095.

### **The Separate Account**

The Company's Board of Directors established the Separate Account (MML Bay State Variable Life Separate Account I) on June 9, 1982, as a separate investment account of MML Bay State. It was established in accordance with the provisions of Chapter 376 of the Missouri Statutes. On June 30, 1997, MML Bay State redomesticated from the state of Missouri to the state of Connecticut. The Separate Account is registered with the Securities and Exchange Commission (SEC) as a unit investment trust under the provisions of the Investment Company Act of 1940.

The Separate Account exists to keep your life insurance assets separate from our other Company assets. As such, any income, gains, or losses credited to, or charged against, the Separate Account reflect only the Separate Account's own investment experience. At no time will the Separate Account reflect the investment experience of the Company's other assets.

We may not use the assets in the Separate Account to pay any liabilities of the Company other than those arising from the VLS policies. We may, however, transfer to our General Investment Account any assets that exceed anticipated obligations of the Separate Account. We are required to pay, from our general assets, if necessary, all amounts promised under the VLS policies. In the event that the assets in the Separate Account exceed the liabilities, the Company may only withdraw seed capital and earned fees and charges.

## **SERVICES**

The Company holds title to the assets of the Separate Account. The Company maintains the records and accounts relating to the Guaranteed Principal Account, the Separate Account, the segment within the Separate Account established to receive and invest premium payments for the policies, and divisions of that segment. The Company's principal business address is 1295 State Street, Springfield, Massachusetts 01111-0001.

## **ADDITIONAL INFORMATION ABOUT THE OPERATION OF THE POLICY AND THE REGISTRANT**

### **Purchase of Shares in Underlying Investment Funds**

Shares are purchased and redeemed at net asset value. Fund dividends and capital gain distributions are automatically reinvested, unless the Company, on behalf of the Separate Account, elects otherwise.

Because the underlying funds are also offered in variable annuity contracts, it is possible that conflicts could arise between the owners of variable life insurance policies and the owners of variable annuity contracts. If a conflict exists, the fund's board will notify the insurers and take appropriate action to eliminate the conflict. Additionally, if the insurer becomes aware of such conflicts, the insurer will work with the underlying fund's board to resolve the conflict.

### **Annual Reports**

Each year within the 30 days following the Policy Anniversary date, we will provide the policy owner a report showing the following policy information:

- the Account Value at the beginning of the previous Policy Year;
- all premiums paid since that time;

- all additions to and deductions from the Account Value during the year; and
- the Account Value, death benefit, Net Surrender Value and Policy Debt as of the current Policy Anniversary. This report may contain additional information if required by any applicable law or regulation.

## UNDERWRITERS

The policies are no longer for sale to the public. While the policies were offered for sale, they were sold by both registered representatives of MML Investors Services, LLC (MMLIS), a subsidiary of MassMutual, and by registered representatives of other broker-dealers who entered into distribution agreements with MML Strategic Distributors, LLC (MSD), a subsidiary of MassMutual. Pursuant to separate underwriting agreements with the Company, on its own behalf and on behalf of the Separate Account, MMLIS serves as principal underwriter of the policies sold by its registered representatives, and MSD serves as principal underwriter of the policies sold by registered representatives of other broker-dealers who entered into distribution agreements with MSD.

MMLIS and MSD are located at 1295 State Street, Springfield, MA 01111-0001. MMLIS and MSD are registered with the SEC as broker-dealers under the Securities Exchange Act of 1934 and are members of the Financial Industry Regulatory Authority (FINRA).

During the last three years, MMLIS, and MSD were paid the compensation amounts shown below for their actions as principal underwriters for the Contracts described in the statutory prospectus.

Year	MMLIS	MSD
2023	\$76,873	\$4,721
2022	\$73,938	\$3,373
2021	\$37,647	\$4,736

We no longer offer this policy for sale to the public. However, policy owners may continue to make premium payments to their policies.

## Commissions

Commissions are a percentage of the premium paid in each year of coverage and differ for premiums paid up to the Target Premium and for premiums paid in excess of the Target Premium. The Target Premium is based on the issue age, gender, and risk classification of the Insured.

Commissions for sales of the policies by MMLIS registered representatives are paid by MassMutual on behalf of MMLIS to its registered representatives. Commissions for sales of the policies by registered representatives of other broker-dealers are paid by MassMutual on behalf of MSD to those broker-dealers.

During the last three years, commissions, as described in the statutory prospectus, were paid by MassMutual through MMLIS and MSD as shown below.

Year	MMLIS	MSD
2023	\$380,597	\$35,774
2022	\$393,765	\$56,672
2021	\$464,604	\$71,380

## ADDITIONAL INFORMATION

### Underwriting Procedures

Before issuing a policy we required evidence of insurability. This means that:

1. you had to complete an application and submit it to our Administrative Office; and
2. we usually required that the Insured have a medical examination.

Acceptance was subject to completion of all underwriting requirements and our underwriting rules.

Insurance charges will be determined on each Policy Anniversary based on a number of factors including, but not limited to, our expectations for future mortality, investment earnings, persistency and expense results, capital and reserve requirements, taxes, future profits, and other factors unrelated to mortality experience. The insurance charge rate will not exceed those shown on the policy's schedule pages, which are based on the 1980 Commissioners' Standard Ordinary Mortality Table (1980 CSO), male or female (unisex rates may be required in some states), the Nonsmoker or Smoker Table, and age of the Insured on their nearest birthday.

Special risk classifications are used when mortality experience in excess of the standard risk classifications is expected. These substandard risks will be charged a higher cost of insurance rate that will not exceed rates based on a multiple of the 1980 CSO, male or female (unisex rates may be required in some situations), the Nonsmoker or Smoker Table, and age of the Insured on their nearest birthday plus any flat extra amount assessed. The multiple will be based on the Insured's substandard rating.

There are three non-rated classifications: preferred non-smoker, non-smoker, and smoker.

## **Increases in Selected Face Amount**

A Selected Face Amount increase is accomplished by issuing an additional insurance coverage segment. Each such segment has a distinct issue age and risk classification.

It is possible for risk classifications of prior segments to change in order to match the risk classification of a new segment. In cases where the risk classifications are different, the Company may change the risk classification of prior segments if doing so will reduce the insurance charges associated with the prior segments. However, the Company will not change the risk classifications of prior segments when the Selected Face Amount increase coincides with a conversion of an existing term life insurance policy, unless evidence of insurability acceptable to us is provided. In addition, the Company will not change the risk classifications of prior segments if doing so will increase the insurance charges associated with the prior segments. Changing the risk classifications of prior segments may impact the maximum premium limits, MEC premiums and Minimum Death Benefit under the Cash Value Accumulation Test.

If you increase the Selected Face Amount, the insurance charge will increase. In addition, a separate surrender charge schedule will apply during the first 15 years of the segment's coverage.

Premium payments received once an increase in Selected Face Amount becomes effective will be allocated to each segment of the Selected Face Amount. The premium allocation will be made on a pro rata basis. If the policy's Account Value (or Cash Surrender Value if there is Policy Debt) is insufficient to continue the changed policy In Force for three months at the new monthly charges and interest, we will require a premium payment sufficient to increase the Account Value to such an amount.

## **PERFORMANCE DATA**

From time to time, we may report historical performance for the Separate Account Divisions available under the policy. The investment performance figures are calculated using the actual historical performance of the investment options for the periods shown in the report. When applicable, the performance will include periods before the policy was available for sale.

The performance returns in these reports will reflect deductions for management fees and all other operating expenses of the underlying investment funds and an annual deduction for the Mortality and Expense Risk Charge. The returns will not reflect any deductions from premiums, monthly charges assessed against the Account Value of the policies, policy surrender charges, or other policy charges, which, if deducted, would reduce the returns.

From time to time, we may also report actual historical performance of the investment funds underlying each division of the Separate Account. These returns will reflect the fund operating expenses but they will not reflect the Mortality and Expense Risk Charge, any deductions from premiums, monthly charges assessed against the Account Value of the policies, policy surrender charges, or other policy charges. If these expenses and charges were deducted, the rates of return would be significantly lower.

The rates of return we report will not be illustrative of how actual investment performance will affect the benefits under the policy. Neither are they necessarily indicative of future performance. Actual rates may be higher or lower than those reported.

We currently post investment performance reports for VLS on our website at [www.MassMutual.com](http://www.MassMutual.com). You can also request a copy of the most recent report from your registered representative or by calling our Administrative Office at (800) 272-2216, Monday – Friday, 8 AM to 8 PM Eastern Time. Questions about the information in these reports should be directed to your registered representative.

We may also distribute sales literature that includes historical performance of broad market indices, such as the Standard & Poor's 500 Stock Index® and the Dow Jones Industrial Average. These indices are provided for informational purposes only.

## **EXPERTS**

The financial statements of MML Bay State Variable Life Separate Account I as of December 31, 2023 and 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 and the statutory financial statements of MML Bay State Life Insurance Company (the Company) as of December 31, 2023 and 2022, and for each of the years in the three-year period ended December 31, 2023, each have been included in this Statement of Additional Information herein in reliance upon the reports of KPMG LLP, an independent registered public accounting firm, each of which are also included herein, and upon the authority of said firm as experts in accounting and auditing. KPMG LLP's report, dated February 27, 2024, states that the Company prepared its financial statements using statutory accounting practices prescribed or permitted by the State of Connecticut Insurance Department (statutory accounting practices), which is a basis of accounting other than U.S. generally accepted accounting principles. Accordingly, KPMG LLP's report states that the financial statements of the Company are not intended to be and, therefore, are not presented fairly in accordance with U.S. generally accepted accounting principles and further states that those statements are presented fairly, in all material respects, in accordance with the statutory accounting practices. The principal business address of KPMG LLP is One Financial Plaza, 755 Main Street, Hartford, Connecticut 06103.

## **FINANCIAL STATEMENTS**

### **The Registrant**

Report of Independent Registered Public Accounting Firm

Statement of Assets and Liabilities as of December 31, 2023

Statements of Operations and Changes in Net Assets for the years ended December 31, 2023 and 2022

Notes to Financial Statements

### **The Depositor**

Independent Auditors' Report

Statutory Statements of Financial Position as of December 31, 2023 and 2022

Statutory Statements of Operations for the years ended December 31, 2023, 2022 and 2021

Statutory Statements of Changes in Shareholder's Equity for the years ended December 31, 2023, 2022 and 2021

Statutory Statements of Cash Flows for the years ended December 31, 2023, 2022 and 2021

Notes to Statutory Financial Statements

**MML BAY STATE LIFE INSURANCE COMPANY**

**STATUTORY FINANCIAL STATEMENTS**

As of December 31, 2023 and 2022 and  
for the years ended December 31, 2023, 2022 and 2021

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MML BAY STATE LIFE INSURANCE COMPANY  
STATUTORY FINANCIAL STATEMENTS

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KPMG LLP  
One Financial Plaza  
755 Main Street  
Hartford, CT 06103

### **Independent Auditors' Report**

Board of Directors  
MML Bay State Life Insurance Company:

#### *Opinions*

We have audited the financial statements of MML Bay State Life Insurance Company (the Company), which comprise the statutory statements of financial position as of December 31, 2023 and 2022, and the related statutory statements of operations and changes in capital and surplus, and cash flows for the three-year period ended December 31, 2023, and the related notes to the financial statements.

#### *Unmodified Opinion on Statutory Basis of Accounting*

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for the three-year period ended December 31, 2023 in accordance with accounting practices prescribed or permitted by the State of Connecticut Insurance Department described in Note 2.

#### *Adverse Opinion on U.S. Generally Accepted Accounting Principles*

In our opinion, because of the significance of the matter discussed in the Basis for Adverse Opinion on U.S. Generally Accepted Accounting Principles section of our report, the financial statements do not present fairly, in accordance with U.S. generally accepted accounting principles, the financial position of the Company as of December 31, 2023 and 2022, or the results of its operations or its cash flows for the three-year period ended December 31, 2023.

#### *Basis for Opinions*

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### *Basis for Adverse Opinion on U.S. Generally Accepted Accounting Principles*

As described in Note 2 to the financial statements, the financial statements are prepared by the Company using accounting practices prescribed or permitted by the State of Connecticut Insurance Department, which is a basis of accounting other than U.S. generally accepted accounting principles. Accordingly, the financial statements are not intended to be presented in accordance with U.S. generally accepted accounting principles. The effects on the financial statements of the variances between the statutory accounting practices described in Note 2 and U.S. generally accepted accounting principles, although not reasonably determinable, are presumed to be material and pervasive.

#### *Responsibilities of Management for the Financial Statements*

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting practices prescribed or permitted by the State of Connecticut Insurance Department.

KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.



Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are issued.

*Auditors' Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

/s/ KPMG LLP

Hartford, Connecticut  
February 27, 2024

**MML BAY STATE LIFE INSURANCE COMPANY**  
**STATUTORY STATEMENTS OF FINANCIAL POSITION**

	December 31, 2023	December 31, 2022
	(\$ In Millions Except for Par Value)	
<b>Assets:</b>		
Bonds	\$ 250	\$ 213
Mortgage loans	1	2
Policy loans	96	94
Cash, cash equivalents and short-term investments	68	112
Total invested assets	415	421
Investment income due and accrued	4	4
Insurance amounts receivable	15	26
Federal income taxes	1	-
Net deferred income taxes	1	2
Total assets excluding separate accounts	436	453
Separate account assets	4,672	4,570
Total assets	<u><u>\$ 5,108</u></u>	<u><u>\$ 5,023</u></u>
<b>Liabilities:</b>		
Policyholders' reserves	\$ 142	\$ 138
Liabilities for deposit-type contracts	11	13
Contract claims and other benefits	29	25
Transfers due to separate accounts	(7)	5
Payable to affiliates	2	-
Federal income taxes	-	2
Asset valuation reserve	6	7
Other liabilities	20	11
Total liabilities excluding separate accounts	203	201
Separate account liabilities	4,672	4,570
Total liabilities	<u><u>4,875</u></u>	<u><u>4,771</u></u>
<b>Capital and surplus:</b>		
Common stock, \$200 par value 50,000 shares authorized 12,501 shares issued and outstanding	2	2
Paid-in and contributed surplus	144	144
Surplus	87	106
Total capital and surplus	233	252
Total liabilities and capital and surplus	<u><u>\$ 5,108</u></u>	<u><u>\$ 5,023</u></u>

See accompanying notes to statutory financial statements

**MML BAY STATE LIFE INSURANCE COMPANY**  
**STATUTORY STATEMENTS OF OPERATIONS**

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
<b>Revenue:</b>			
Premium income	\$ (9)	\$ 2	\$ 12
Net investment income	19	15	13
Reserve adjustments on reinsurance ceded	(82)	(113)	(79)
Fees and other income	90	82	79
Total revenue	<u>18</u>	<u>(14)</u>	<u>25</u>
<b>Benefits, expenses and other deductions:</b>			
Policyholders' benefits	61	65	83
Change in policyholders' reserves	4	(6)	-
Net transfers from separate accounts	(63)	(97)	(89)
General insurance expenses	8	7	8
Commissions	2	2	2
State taxes, licenses and fees	1	1	1
Other deductions	(2)	(2)	(2)
Total benefits, expenses and other deductions	<u>11</u>	<u>(30)</u>	<u>3</u>
Net gain from operations before federal income taxes	7	16	22
Federal income tax (benefit) expense	<u>(1)</u>	<u>1</u>	<u>3</u>
Net gain from operations	8	15	19
Net realized loss	(1)	-	-
Net income	<u><u>\$ 7</u></u>	<u><u>\$ 15</u></u>	<u><u>\$ 19</u></u>

See accompanying notes to statutory financial statements

**MML BAY STATE LIFE INSURANCE COMPANY**  
**STATUTORY STATEMENTS OF CHANGES IN CAPITAL AND SURPLUS**

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Capital and surplus, beginning of year	\$ 252	\$ 265	\$ 275
Net increase due to:			
Net income	7	15	19
Change in other net deferred income taxes	(1)	(1)	-
Change in nonadmitted assets	-	1	-
Change in reserve valuation basis	-	-	-
Change in asset valuation reserve	-	(1)	1
Dividend paid	(25)	(26)	(27)
Other	-	(1)	(3)
Net increase	<u>(19)</u>	<u>(13)</u>	<u>(10)</u>
Capital and surplus, end of year	<u>\$ 233</u>	<u>\$ 252</u>	<u>\$ 265</u>

See accompanying notes to statutory financial statements

**MML BAY STATE LIFE INSURANCE COMPANY**  
**STATUTORY STATEMENTS OF CASH FLOWS**

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
<b>Cash from operations:</b>			
Premium and other income collected	\$ 1	\$ 1	\$ 3
Net investment income	19	15	13
Miscellaneous income	30	(19)	10
Benefit payments	(69)	(55)	(89)
Net transfers from separate accounts	51	85	92
Commissions and other expenses	(5)	(16)	(9)
Federal and foreign income taxes paid	(2)	5	(3)
<b>Net cash from operations</b>	<b>25</b>	<b>16</b>	<b>17</b>
<b>Cash from investments:</b>			
Proceeds from investments sold, matured or repaid:			
Bonds	10	6	33
<b>Total investment proceeds</b>	<b>10</b>	<b>6</b>	<b>33</b>
Cost of investments acquired:			
Bonds	(48)	-	(7)
<b>Total investments acquired</b>	<b>(48)</b>	<b>-</b>	<b>(7)</b>
Net decrease in policy loans	(2)	(3)	2
<b>Net cash (applied to) from investing activities</b>	<b>(40)</b>	<b>3</b>	<b>28</b>
<b>Cash from financing and miscellaneous sources:</b>			
Net (withdrawals) deposits on deposit-type contracts	(2)	(4)	2
Dividend paid	(25)	(26)	(27)
Other cash (used) provided	(2)	2	(3)
<b>Net cash (used in) from financing and miscellaneous sources</b>	<b>(29)</b>	<b>(28)</b>	<b>(28)</b>
Net change in cash, cash equivalents and short-term investments	(44)	(9)	17
<b>Cash, cash equivalents and short-term investments, beginning of year</b>	<b>112</b>	<b>121</b>	<b>104</b>
<b>Cash, cash equivalents and short-term investments, end of year</b>	<b>\$ 68</b>	<b>\$ 112</b>	<b>\$ 121</b>

See accompanying notes to statutory financial statements

**MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS**

## **1. Nature of operations**

These statutory financial statements include MML Bay State Life Insurance Company (the Company), a wholly owned stock life insurance subsidiary of C.M. Life Insurance Company (C.M. Life). C.M. Life is a wholly owned stock life insurance subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual). The Company is domiciled in the State of Connecticut. It provides life insurance and annuities to individuals and group life insurance to institutions.

Massachusetts Mutual Life Insurance Company (MassMutual or the Company), a mutual life insurance company domiciled in the Commonwealth of Massachusetts, and its domestic life insurance subsidiaries provide individual and group life insurance, disability insurance (DI), individual and group annuities and guaranteed interest contracts (GIC) to individual and institutional customers in all 50 states of the United States of America (U.S.), the District of Columbia and Puerto Rico. Products and services are offered primarily through the Company's MassMutual Financial Advisors (MMFA), MassMutual Strategic Distributors (MMSD), Institutional Solutions (IS) and Worksite distribution channels.

MMFA is a sales force of financial professionals that operate in the U.S. MMFA sells individual life, individual annuities, hybrid life and long-term care (LTC) and DI. The Company's MMSD channel sells life insurance, disability, annuity, and hybrid life and LTC solutions through a network of third-party distribution partners. The Company's IS distribution channel places group annuities, life insurance and GIC primarily through retirement advisory firms, actuarial consulting firms, investment banks, insurance benefit advisors and investment management companies. The Company's Worksite channel works with advisors and employers across the country to provide American workers with voluntary and executive benefits such as group whole life, critical illness, accident insurance and DI, through the workplace.

## **2. Summary of significant accounting policies**

### **a. Basis of presentation**

The statutory financial statements have been prepared in conformity with the statutory accounting practices of the National Association of Insurance Commissioners (NAIC) and the accounting practices prescribed or permitted by the State of Connecticut Insurance Department (the Department).

Statutory accounting principles are different in some respects from financial statements prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP). The more significant differences between statutory accounting principles and U.S. GAAP are as follows:

#### *Invested assets*

- Bonds are generally carried at amortized cost, whereas U.S. GAAP reports bonds at fair value for bonds available for sale and trading or at amortized cost for bonds held to maturity (HTM)
- Starting on January 1, 2022, the Company adopted the current expected credit loss (CECL) impairment model for U.S. GAAP, which only applies to financial assets carried at amortized cost, including mortgage and other commercial loans, equipment loans, HTM debt securities, and trade, lease, reinsurance and other receivables. CECL is based on expected credit losses rather than incurred losses. All financial assets within scope of CECL will have a credit loss allowance. The adopted guidance also changes the incurred loss model on AFS debt securities to be an allowance for credit losses with potential recoverability. Statutory accounting continues to utilize the other-than-temporary impairment(s) (OTTI) model described in Note 2s.

#### *Policyholders' liabilities*

- Statutory policy reserves are based upon prescribed methods, such as the Commissioners' Reserve Valuation Method, Commissioners' Annuity Reserve Valuation Method (CARVM) or net level premium method, and prescribed statutory mortality, morbidity and interest assumptions at the time of issuance, whereas U.S. GAAP policy reserves would generally be based upon the net level premium method or the

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

- estimated gross margin method with estimates, at time of issuance, of future mortality, morbidity, persistency and interest
- Liabilities for policyholders' reserves, unearned premium, and unpaid claims are presented net of reinsurance ceded, whereas U.S. GAAP would present the liabilities on a direct basis and report an asset for the amounts recoverable or due from reinsurers
- Payments received for universal and variable life insurance products and certain variable annuities contracts are reported as premium income and corresponding change in reserves, whereas U.S. GAAP would treat these payments as deposits to policyholders' account balances

*General insurance expenses and commissions*

- Certain acquisition costs, such as commissions and other variable costs, directly related to successfully acquiring new business are charged to current operations as incurred, whereas U.S. GAAP generally would capitalize these expenses and amortize them based on profit emergence over the expected life of the policies or over the premium payment period

*Net realized capital gains (losses)*

- After-tax realized capital gains (losses) that result from changes in the overall level of interest rates for all types of fixed-income investments and interest-related hedging activities are deferred into the interest maintenance reserve (IMR) and amortized into revenue, whereas U.S. GAAP reports these gains and losses as revenue

*Capital and surplus*

- Changes in the balances of deferred income taxes, which provide for book versus tax temporary differences, are subject to limitation and are recorded in surplus, whereas U.S. GAAP would generally include the change in deferred taxes in net income without limitation
- Assets are reported at admitted asset value and assets designated as nonadmitted are excluded through a charge against surplus, whereas U.S. GAAP recognizes all assets, net of any valuation allowances
- An asset valuation reserve (AVR) is reported as a contingency reserve to stabilize surplus against fluctuations in the statement value of partnerships and limited liability companies and certain common stocks as well as credit-related changes in the value of bonds, mortgage loans and certain derivatives, whereas U.S. GAAP does not record this reserve
- Changes to the mortgage loan valuation allowance are recognized in net unrealized capital gains (losses), net of tax, in the Statutory Statements of Changes in Capital and Surplus, whereas U.S. GAAP reported these changes in net realized capital gains (losses) in 2021 and adopted the CECL impairment model effective 1/1/2022
- Statutory Statements of Changes in Capital and Surplus includes net income, change in net unrealized capital gains (losses), change in net unrealized foreign exchange capital gains (losses), change in other net deferred income taxes, change in nonadmitted assets, change in AVR prior period adjustments, whereas U.S. GAAP presents net income as retained earnings and net unrealized capital gains (losses), change in net unrealized foreign exchange capital gains (losses) as other comprehensive income

The preparation of financial statements requires management to make estimates and assumptions that impact the reported amounts of assets and liabilities, the disclosure of assets and liabilities as of the date of the statutory financial statements and the reported amounts of revenues and expenses during the reporting periods. The most significant estimates include those used in determining the carrying values of investments including the amount of mortgage loan investment valuation reserves, OTTI, the liabilities for policyholders' reserves, the determination of admissible deferred tax assets (DTA), the liability for taxes and the liability for litigation or other contingencies. Future events including, but not limited to, changes in the level of mortality, morbidity, interest rates, persistency, asset valuations and defaults could cause results to differ from the estimates used in the statutory financial statements. Although some variability is inherent in these estimates, management believes the amounts presented are appropriate.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**b. Bonds**

Bonds are generally valued at amortized cost using the constant yield interest method with the exception of NAIC Category 6 bonds, which are in or near default, and certain residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), which are rated by outside modelers, which are carried at the lower of amortized cost or fair value. NAIC ratings are applied to bonds and other investments. Categories 1 and 2 are considered investment grade, while Categories 3 through 6 are considered below investment grade. Bonds are recorded on a trade date basis, except for private placement bonds, which are recorded on the funding date.

For loan-backed and structured securities, such as asset-backed securities (ABS), mortgage-backed securities (MBS), including RMBS and CMBS, and structured securities, including collateralized debt obligations (CDOs), amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies.

Fixed income securities, with the highest ratings from a rating agency follow the retrospective method of accounting.

All other fixed income securities, such as floating rate bonds and interest only securities, including those that have been impaired, follow the prospective method of accounting.

The fair value of bonds is based on quoted market prices when available. If quoted market prices are not available, values provided by other third-party organizations are used. If values provided by other third-party organizations are unavailable, fair value is estimated using internal models by discounting expected future cash flows using observable current market rates applicable to yield, credit quality and maturity of the investment or using quoted market values for comparable investments. Internal inputs used in the determination of fair value include estimated prepayment speeds, default rates, discount rates and collateral values, among others. Structure characteristics and cash flow priority are also considered. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants.

Refer to *Note 2s. “Realized capital gains (losses) including other-than-temporary impairments and unrealized capital gains (losses)”* for information on the Company’s policy for determining OTTI.

**c. Mortgage loans**

Mortgage loans are valued at the unpaid principal balance of the loan, net of unamortized premium, discount, mortgage origination fees and valuation allowances.

**d. Policy loans**

Policy loans are carried at the outstanding loan balance less amounts unsecured by the cash surrender value of the policy.

**e. Cash, cash equivalents and short-term investments**

Cash and cash equivalents, which are carried at amortized cost, consist of all highly liquid investments purchased with original maturities of three months or less.

Short-term investments, which are carried at amortized cost, consist of short-term bonds and all highly liquid investments purchased with maturities of greater than three months and less than or equal to 12 months.

The carrying value reported in the Statutory Statements of Financial Position for cash, cash equivalents and short-term investment instruments approximates the fair value.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

**f. Investment income due and accrued**

Accrued investment income consists primarily of interest, which is recognized on an accrual basis.

**g. Other than invested assets**

Other than invested assets primarily includes deferred and uncollected life insurance premium, reinsurance recoverables and other receivables.

**h. Federal income taxes**

Total federal income taxes are based upon the Company's best estimate of its current and DTAs or liabilities (DTA(L)). Current tax expense (benefit) is reported in the Statutory Statements of Operations as federal income tax expense (benefit) if resulting from operations and within net realized capital gains (losses) if resulting from invested asset transactions. Changes in the balances of deferred taxes, which provide for book-to-tax temporary differences, are subject to limitations and are reported within various lines within surplus. Accordingly, the reporting of book-to-tax temporary differences, such as reserves and policy acquisition costs, and of book-to-tax permanent differences, such as tax-exempt interest and tax credits, results in effective tax rates in the Statutory Statements of Operations that differ from the federal statutory tax rate.

**i. Nonadmitted assets**

Assets designated as nonadmitted by the NAIC primarily include the amount of DTAs (subject to certain limitations) that will not be realized by the end of the third calendar year following the current year end. These assets are designated as nonadmitted and are excluded from Statutory Statements of Financial Position through a charge against surplus.

**j. Separate accounts**

Separate accounts and sub-accounts are segregated funds administered and invested by the Company, the performance of which primarily benefits the policyholders/contract holders with an interest in the separate accounts. Group and individual variable annuity, variable life and other insurance policyholders/contract holders select from among the separate accounts and sub-accounts made available by the Company. The separate accounts and sub-accounts are offered as investment options under certain insurance contracts or policies. The returns produced by separate account assets increase or decrease separate account reserves. Separate account assets consist principally of marketable securities reported at fair value. Except for the Company's seed money, and certain book value separate accounts, separate account assets can only be used to satisfy separate account liabilities and are not available to satisfy the general obligations of the Company. Separate account administrative and investment advisory fees are included in fees and other income.

Assets may be transferred from the general investments of the Company to seed the separate accounts. When assets are transferred to separate accounts, they are transferred at fair market value. Gains related to the transfer are deferred to the extent that the Company maintains a proportionate interest in the separate account. The deferred gain is recognized as the Company's ownership decreases or when the separate account sells the underlying asset during the normal course of business. Losses associated with these transfers are recognized immediately.

Separate accounts reflect two categories of risk assumption: nonguaranteed separate accounts for which the policyholder/contract holder assumes the investment risk and guaranteed separate accounts for which the Company contractually guarantees a minimum return, a minimum account value, or both to the policyholder/contract holder.

Premium income, benefits and expenses of the separate accounts are included in the Statutory Statements of Operations with the offset recorded in the change in policyholders' reserves. Investment income, realized capital gains (losses) and unrealized capital gains (losses) on the assets of separate accounts, other than seed money, accrue to policyholders/contract holders and are not recorded in the Statutory Statements of Operations.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

***k. Policyholders' reserves***

Policyholders' reserves are developed by actuarial methods and are determined based on statutory prescribed mortality/morbidity tables using specified interest rates and valuation methods that will provide for the present value of estimated future obligations in excess of estimated future premium on policies in force.

The Company charges a higher premium on certain contracts that cover substandard mortality risk. For these policies, the reserve calculations are based on a substandard mortality rate, which is a multiple of the standard mortality tables.

Certain individual variable annuity products issued by the Company offer guaranteed minimum death benefits (GMDBs). The liability for GMDBs is included in policyholders' reserves and the related change in this liability is included in change in policyholders' reserves.

Tabular interest, tabular reserves less actual reserves released, and tabular cost for all life and annuity contracts and supplementary contracts involving life contingencies are determined in accordance with NAIC Annual Statement instructions. For tabular interest, variable life uses a formula that applies a weighted average interest rate determined from a seriatim valuation file to the mean average reserves. Variable universal life, group life, annuity and supplemental contracts use a formula that applies a weighted average credited rate to the mean account value. For contracts without an account value a weighted average statutory valuation rate is applied to the mean statutory reserve or accepted actuarial methods using applicable interest rates are applied.

All policyholders' reserves and accruals are presented net of reinsurance. Management believes that these liabilities and accruals represent management's best estimate and will be sufficient, in conjunction with future revenues, to meet future anticipated obligations of policies and contracts in force.

***l. Liabilities for deposit-type contracts***

Liabilities for investment-type contracts such as supplementary contracts not involving life contingencies are based on account value or accepted actuarial methods using applicable interest rates.

***m. Transfers due to separate accounts***

Transfers due to separate accounts represent a net payable to the Company's separate accounts.

***n. Asset valuation reserve***

The Company maintains an AVR that is a contingency reserve to stabilize capital and surplus against credit-related changes in the value of bonds and mortgage loans. The AVR is reported as a liability and the change in AVR, net of tax, is reported in capital and surplus.

***o. Interest maintenance reserve***

The Company maintains an IMR that is used to stabilize net income against fluctuations in interest rates. After-tax realized capital gains (losses), which result from changes in interest rates for all types of fixed-income investments, are deferred into the IMR and amortized into net investment income using the grouped amortization method. In the grouped amortization method, assets are grouped based on years of maturity. IMR is reduced by the amount ceded to reinsurers when entering into in force coinsurance ceding agreements. The IMR is included in other liabilities, or if negative, is recorded as a nonadmitted asset.

***p. Other liabilities***

Other liabilities primarily consist of due and accrued separate account transfers, remittances and items not allocated, affiliated payables and accounts payable.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

***q. Reinsurance***

The Company enters into reinsurance agreements with affiliated and unaffiliated insurers in the normal course of business to limit its insurance risk.

Premium income, benefits to policyholders (including unpaid claims) and policyholders' reserves are reported net of reinsurance. Premium, benefits and reserves related to reinsured business are accounted for on bases consistent with those used in accounting for the original policies issued and the terms of the reinsurance contracts. The Company records a receivable for reinsured benefits paid, but not yet reimbursed by the reinsurer and reduces policyholders' reserves for the portion of insurance liabilities that are reinsured. Commissions and expense allowances on reinsurance ceded and modified coinsurance (Modco) reserve adjustments on reinsurance ceded are recorded as revenue.

***r. Premium and related expense recognition***

Life insurance premium revenue is generally recognized annually on the anniversary date of the policy. However, premium for flexible products, primarily variable life contracts, is recognized as revenue when received. Annuity premium is recognized as revenue when received.

Premium revenue is adjusted by the related deferred premium adjustment. Deferred premium adjusts for the overstatement created in the calculation of reserves as the reserve computation assumes the entire year's net premium is collected annually at the beginning of the policy year and does not take into account installment or modal payments. Commissions and other costs related to issuance of new policies and policy maintenance and settlement costs are charged to current operations when incurred. Surrender fee charges on certain life and annuity products are recorded as a reduction of benefits and expenses.

***s. Realized capital gains (losses) including other-than-temporary impairments and unrealized capital gains (losses)***

Realized capital gains (losses), net of taxes, exclude gains (losses) deferred into the IMR and gains (losses) of the separate accounts. Realized capital gains (losses), including OTTI, are recognized in net income and are determined using the specific identification method.

***Bonds - general***

The Company employs a systematic methodology to evaluate OTTI by conducting a quarterly analysis of bonds. OTTI is evaluated in a manner consistent with market participant assumptions. The Company considers the following factors, where applicable depending on the type of securities, in the evaluation of whether a decline in value is other than temporary: (a) the likelihood that the Company will be able to collect all amounts due according to the contractual terms of the debt security; (b) the present value of the expected future cash flows of the security; (c) the characteristics, quality and value of the underlying collateral or issuer securing the position; (d) collateral structure; (e) the length of time and extent to which the fair value has been below amortized cost; (f) the financial condition and near-term prospects of the issuer; (g) adverse conditions related to the security or industry; (h) the rating of the security; (i) the Company's ability and intent to hold the investment for a period of time sufficient to allow for an anticipated recovery to amortized cost; and (j) other qualitative and quantitative factors in determining the existence of OTTI including, but not limited to, unrealized loss trend analysis and significant short-term changes in value.

In addition, if the Company has the intent to sell, or the inability, or lack of intent to retain the investment for a period sufficient to recover the amortized cost basis, an OTTI is recognized as a realized loss equal to the entire difference between the investment's amortized cost basis and its fair value at the balance sheet date.

When a bond is other-than-temporarily impaired, a new cost basis is established.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

*Bonds - corporate*

For corporate securities, if it is determined that a decline in the fair value of a bond is other than temporary, OTTI is recognized as a realized loss equal to the difference between the investment's amortized cost basis and, generally, its fair value at the balance sheet date.

*Bonds - loan-backed and structured securities*

For loan-backed and structured securities, if the present value of cash flows expected to be collected is less than the amortized cost basis of the security, an OTTI is recognized as a realized loss equal to the difference between the investment's amortized cost basis and the present value of cash flows expected to be collected. The expected cash flows are discounted at the security's effective interest rate. Internal inputs used in determining the amount of the OTTI on structured securities include collateral performance, prepayment speeds, default rates, and loss severity based on borrower and loan characteristics, as well as deal structure including subordination, over-collateralization and cash flow priority.

ABS and MBS are evaluated for OTTI using scenarios and assumptions based on the specifics of each security including collateral type, loan type, vintage and subordination level in the structure. Cash flow estimates are based on these assumptions and inputs obtained from external industry sources along with internal analysis and actual experience. Where applicable, assumptions include prepayment speeds, default rates and loss severity, weighted average maturity and changes in the underlying collateral values.

The Company has a review process for determining if CDOs are at risk for OTTI. For the senior, mezzanine and junior debt tranches, cash flows are modeled using multiple scenarios based on the current ratings and values of the underlying corporate credit risks and incorporating prepayment and default assumptions that vary according to collateral attributes of each CDO. The prepayment and default assumptions are varied within each model based upon rating (base case), historical expectations (default), rating change improvement (optimistic), rating change downgrade (pessimistic) and fair value (market). The default rates produced by these multiple scenarios are assigned an expectation weight according to current market and economic conditions and fed into a final scenario. OTTI is recorded if this final scenario results in the loss of any principal or interest payments due.

For the most subordinated junior CDO tranches, the present value of the projected cash flows in the final scenario is measured using an effective yield. If the current book value of the security is greater than the present value measured using an effective yield, an OTTI is taken in an amount sufficient to produce its effective yield. Certain CDOs cannot be modeled using all of the scenarios because of limitations on the data needed for all scenarios. The cash flows for these CDOs, including foreign currency denominated CDOs, are projected using a customized scenario management believes is reasonable for the applicable collateral pool.

For loan-backed and structured securities, any difference between the new amortized cost basis and any increased present value of future cash flows expected to be collected is accreted into net investment income over the expected remaining life of the bond.

*Unrealized capital gains (losses)*

Unrealized capital gains (losses) include changes in the fair value of bonds held at fair value and are recorded as a change in capital and surplus net of tax.

**3. New accounting standards**

*Adoption of new accounting standards*

In June 2022, the NAIC adopted modifications to SSAP No. 25, Affiliates and Other Related Parties and SSAP No. 43R, Loan-Backed and Structured Securities, effective December 31, 2022. The modifications clarify application of the existing affiliate definition and incorporate disclosure requirements for all investments that involve related parties, regardless of whether they meet the affiliate definition. The revisions to SSAP No. 43R also included additional clarifications that the investments from any arrangements that results in direct or indirect control, which

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**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

include but are not limited to control through a servicer, shall be reported as affiliated investments. The modifications did not have a material effect on the Company's financial statements.

In August 2023, the NAIC adopted INT 23-01T — Disallowed IMR (“INT 23-01T”). INT 23-01T provides optional, limited-term guidance for the assessment of disallowed IMR for up to 10% of adjusted general account capital and surplus. An insurer's capital and surplus must first be adjusted to exclude certain “soft assets” including net positive goodwill, electronic data processing equipment and operating system software, net deferred tax assets and admitted disallowed IMR. An insurer will only be able to admit the negative IMR if the insurer's risk-based capital is over 300% authorized control level after adjusting to remove the assets described above.

As adopted, negative IMR may be admitted first in the insurer's general account and then, if all disallowed IMR in the general account is admitted and the percentage limit is not reached, to the separate account proportionately between insulated and noninsulated accounts. If the insurer can demonstrate historical practice in which acquired gains from derivatives were also reversed to IMR (as liabilities) and amortized, there is no exclusion for derivatives losses. INT 23-01T was adopted by the Company as of September 30, 2023 and will be effective through December 31, 2025. To the extent the Company's IMR balance is a net negative, the effects of INT 23-01T will be reflected in the Company's financial position, results of operations, and financial statement disclosures. The Company has adopted this guidance and the adoption did not result in an admitted disallowed IMR for the year ended December 31, 2023.

In August 2023, the NAIC adopted revisions to clarify and incorporate a new bond definition within disclosures SSAP No. 26 – *Bonds*, SSAP No. 43 – *Asset-Backed Securities*, and other related SSAPs, effective January 1, 2025. The revisions were issued in connection with its principle-based bond definition project, the Bond Project.

The Bond Project began in October 2020 through the development of a principle-based bond definition to be used for all securities in determining whether they qualify for reporting on the statutory annual statement Schedule D. Within the new bond definition, bonds are classified as an “issuer credit obligation” or an “asset-backed security.” An “issuer credit obligation” is defined as a bond where repayment is supported by the general creditworthiness of an operating entity, and an “asset-backed security” is defined as a bond issued by an entity created for the primary purpose of raising capital through debt backed by financial assets. The revisions to SSAP No. 26 reflect the principle-based bond definition, and SSAP No. 43 provides accounting and reporting guidance for investments that qualify as asset-backed securities under the new bond definition. Upon adoption, investments that do not qualify as bonds will not be permitted to be reported as bonds on Schedule D, Part 1 thereafter as there will be no grandfathering for existing investments that do not qualify under the revised SSAPs. The Company is currently assessing the impacts of the adopted SSAP No. 26, SSAP No. 43 and other related SSAPs in relation to the financial statements.

In March 2023, the NAIC adopted modifications to SSAP No. 34 – *Investment Income Due and Accrued*, effective December 31, 2023. The modifications require additional disclosures and data capture related to gross, non-admitted and admitted amounts for interest income due and accrued, deferred interest, and paid-in-kind (PIK) interest.

In August 2023, the NAIC adopted revisions to further clarify the PIK interest disclosure in SSAP No. 34, effective December 31, 2023. The revisions clarify that decreasing amounts to principal balances are first applied to any PIK interest included in the principal balance. The original principal would not be reduced until the PIK interest had been fully eliminated from the balance. The revisions also provide a practical expedient for determining the PIK interest in the cumulative balance by subtracting the original principal/ par value from the current principal/ par value, with the resulting PIK interest not to go less than zero. The modifications did not have a material effect on the Company's impact of PIK in relation to the financial statements.

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**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**4. Fair value of financial instruments**

The following presents a summary of the carrying values and fair values of the Company's financial instruments:

	December 31, 2023					
	Carrying Value	Fair Value	Level 1	Level 2	Level 3	
	(In Millions)					
<b>Financial assets:</b>						
Bonds:						
U. S. government and agencies	\$ 4	\$ 4	-	\$ 4	\$ 4	-
Special revenue	24	24	-	24	24	-
Industrial and miscellaneous	221	210	-	210	210	-
Parent, subsidiaries and affiliates	1	1	-	1	1	-
Mortgage loans - residential	1	1	-	-	-	1
Cash, cash equivalents and short-term investments	68	68	1	67	67	-
Separate account assets	4,672	4,619	1,152	3,461	3,461	6
<b>Financial liabilities:</b>						
Individual annuity contracts	2	2	-	-	-	2
Supplementary contracts	10	11	-	-	-	11

	December 31, 2022					
	Carrying Value	Fair Value	Level 1	Level 2	Level 3	
	(In Millions)					
<b>Financial assets:</b>						
Bonds:						
U. S. government and agencies	\$ 4	\$ 4	-	\$ 4	\$ 4	-
Industrial and miscellaneous	208	193	-	193	193	-
Parent, subsidiaries and affiliates	1	1	-	1	1	-
Mortgage loans - residential	2	1	-	-	-	1
Cash, cash equivalents and short-term investments	112	112	2	110	110	-
Separate account assets	4,570	4,474	1,014	3,453	3,453	7
<b>Financial liabilities:</b>						
Individual annuity contracts	3	3	-	-	-	3
Supplementary contracts	12	12	-	-	-	12

Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The authoritative guidance for fair value establishes a measurement framework that includes a hierarchy used to classify the inputs used in measuring fair value. The hierarchy prioritizes the inputs to valuation techniques into three levels. Each level reflects a unique description of the inputs that are significant to the fair value measurements. The levels of the fair value hierarchy are as follows:

Level 1 – Observable inputs in the form of quoted prices for identical instruments in active markets.

Level 2 – Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be derived from observable market data for substantially the full term of the assets or liabilities.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

Level 3 – One or more unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using internal models, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

When available, the Company generally uses unadjusted quoted market prices from independent sources to determine the fair value of investments and classifies such items within Level 1 of the fair value hierarchy. If quoted prices are not available, prices are derived from observable market data for similar assets in an active market or obtained directly from brokers for identical assets traded in inactive markets. Investments that are priced using these inputs are classified within Level 2 of the fair value hierarchy. When some of the necessary observable inputs are unavailable, fair value is based upon internally developed models. These models use inputs not directly observable or correlated with observable market data. Typical inputs, which are integrated in the Company's internal discounted cash flow models and discounted earnings models include, but are not limited to, issuer spreads derived from internal credit ratings and benchmark yields such as LIBOR, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments that are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

The Company has established and maintains policies and guidelines that govern its valuation methodologies and their consistent application. These policies and guidelines address the use of inputs, price source hierarchies and provide controls around the valuation processes. These controls include appropriate review and analysis of prices against market activity or indicators for reasonableness, approval of price source changes, price overrides, methodology changes and classification of fair value hierarchy levels. The valuation policies and guidelines are reviewed and updated as appropriate.

Annually, the Company reviews the primary pricing vendor to validate that the inputs used in that vendor's pricing process are deemed to be market observable as defined above. While the Company was not provided access to proprietary models of the vendor, the reviews have included on-site walk-throughs of the pricing process, methodologies and control procedures for each asset class and level for which prices are provided. The review also included an examination of the underlying inputs and assumptions for a sample of individual securities across asset classes. In addition, the Company and its pricing vendors have an established challenge process in place for all security valuations, which facilitates identification and resolution of prices that fall outside expected ranges. The Company believes that the prices received from the pricing vendors are representative of prices that would be received to sell the assets at the applicable measurement date (exit prices) and are classified appropriately in the hierarchy.

The Company reviews the fair value hierarchy classifications at each reporting period. Overall, reclassifications between levels occur when there are changes in the observability of inputs and market activity used in the valuation of a financial asset or liability. Such reclassifications are reported as transfers between levels at the beginning fair value for the reporting period in which the changes occur. Given the types of assets classified as Level 1, transfers between Level 1 and Level 2 measurement categories are expected to be infrequent.

The fair value of individual annuity and supplementary contracts is determined using one of several methods based on the specific contract type. For short-term contracts, generally less than 30 days, the fair value is assumed to be the book value. For investment-type contracts, the fair value is determined by calculating the present value of future cash flows discounted at current market interest rates, the risk-free rate or a current pricing yield curve based on pricing assumptions using assets of a comparable corporate bond quality. Annuities are valued using cash flow projections from the Company's asset-liability management analysis.

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**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The following presents the Company's fair value hierarchy for assets and liabilities that are carried at fair value:

December 31, 2023				
Level 1	Level 2	Level 3	Total	
(In Millions)				

**Financial assets:**

Separate account assets	\$ 1,152	\$ 2,287	\$ -	\$ 3,439
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\$1,233 million of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the year ended December 31, 2023, there were no significant transfers between Level 1 and Level 2.

December 31, 2022				
Level 1	Level 2	Level 3	Total	
(In Millions)				

**Financial assets:**

Separate account assets	\$ 1,014	\$ 2,340	\$ -	\$ 3,354
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\$1,216 million of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the year ended December 31, 2022, there were no significant transfers between Level 1 and Level 2.

*Valuation Techniques and Inputs*

The Company determines the fair value of its investments using primarily the market approach or the income approach. The use of quoted prices for identical assets and matrix pricing or other similar techniques are examples of market approaches, while the use of discounted cash flow methodologies is an example of the income approach. The Company attempts to maximize the use of observable inputs and minimize the use of unobservable inputs in selecting whether the market or the income approach is used.

A description of the significant valuation techniques and inputs to the determination of estimated fair value for the more significant asset and liability classes measured at fair value on a recurring basis and categorized within Level 2 and Level 3 of the fair value hierarchy is as follows:

*Separate account assets* - These assets primarily include bonds (industrial and miscellaneous; U.S. government and agencies) and derivatives. Their fair values are determined as follows:

*Bonds (Industrial and miscellaneous)* - These securities are principally valued using the market or the income approaches. Level 2 valuations are based primarily on quoted prices in markets that are not active, broker quotes, matrix pricing or other similar techniques that use standard market observable inputs such as benchmark yields, spreads versus benchmark yields, new issuances, issuer ratings, duration, and trades of identical or comparable securities. Privately placed securities are valued using discounted cash flow models using standard market observable inputs, and inputs derived from, or corroborated by, market observable data including market yield curve, duration, call provisions, observable prices and spreads for similar publicly traded or privately traded issues that incorporate the credit quality and industry sector of the issuer. This level also includes securities priced by independent pricing services that use observable inputs. Valuations based on matrix pricing or other similar techniques that utilize significant unobservable inputs or inputs that cannot be derived principally from, or corroborated by, observable market data, including adjustments for illiquidity, delta spread adjustments or spreads to reflect industry trends or specific credit-related issues are classified as Level 3. In addition, inputs including quoted prices for identical or similar securities that are less liquid and based on lower levels of trading activity than securities classified in Level 2 are classified as Level 3.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**Bonds (U.S. government and agencies)** - These securities are principally valued using the market approach. Level 2 valuations are based primarily on quoted prices in markets that are not active, or using matrix pricing or other similar techniques using standard market observable inputs such as the benchmark U.S. Treasury yield curve, the spreads versus the U.S. Treasury yield curve for the identical security and comparable securities that are actively traded.

**Derivative assets and liabilities** - These financial instruments are primarily valued using the market approach. The estimated fair value of derivatives is based primarily on quotations obtained from counterparties and independent sources, such as quoted market values received from brokers. These quotations are compared to internally derived prices and a price challenge is lodged with the counterparties and an independent source when a significant difference cannot be explained by appropriate adjustments to the internal model. When quoted market values are not reliable or available, the value is based upon an internal valuation process using market observable inputs that other market participants would use. Significant inputs to the valuation of derivative financial instruments include overnight index swaps (OIS) and SOFR basis curves, interest rate volatility, swap yield curve, currency spot rates, cross currency basis curves and dividend yields. Due to the observability of the significant inputs to these fair value measurements, they are classified as Level 2.

The use of different assumptions or valuation methodologies may have a material impact on the estimated fair value amounts. For the periods presented, there were no significant changes to the Company's valuation techniques.

## 5. Investments

The Company maintains a diversified investment portfolio. Investment policies limit concentration in any asset class, geographic region, industry group, economic characteristic, investment quality or individual investment.

### a. Bonds

The carrying value and fair value of bonds were as follows:

	December 31, 2023					
	Carrying Value	Gross Unrealized Gains		Gross Unrealized Losses		Fair Value
		(In Millions)				
U.S. government and agencies	\$ 4	\$ -	\$ -	\$ 4		
Special revenue	24	-	-	24		
Industrial and miscellaneous	221	1	12	210		
Parent, subsidiaries and affiliates	1	-	-	1		
<b>Total</b>	<b>\$ 250</b>	<b>\$ 1</b>	<b>\$ 12</b>	<b>\$ 239</b>		

	December 31, 2022					
	Carrying Value	Gross Unrealized Gains		Gross Unrealized Losses		Fair Value
		(In Millions)				
U.S. government and agencies	\$ 4	\$ -	\$ -	\$ 4		
Industrial and miscellaneous	208	1	16	193		
Parent, subsidiaries and affiliates	1	-	-	1		
<b>Total</b>	<b>\$ 213</b>	<b>\$ 1</b>	<b>\$ 16</b>	<b>\$ 198</b>		

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The quality of the bond portfolio is determined by the use of NAIC's Securities Valuation Office ratings and the equivalent rating agency designations, except for RMBS and CMBS that use outside modelers. The following sets forth the NAIC class ratings for the bond portfolio including RMBS and CMBS:

NAIC Class	Equivalent Rating Agency Designation	2023		2022	
		Carrying Value	% of Total	Carrying Value	% of Total
		(\$ In Millions)			
1	Aaa/ Aa/ A	\$ 170	68%	\$ 135	63%
2	Baa	76	31	73	34
3	Ba	3	1	4	2
4	B	1	-	-	-
5	Caa and lower	-	-	1	-
6	In or near default	1	-	-	1
Total		\$ 251	100%	\$ 213	100%

The following summarizes NAIC ratings for RMBS and CMBS subject to NAIC modeling:

NAIC Class	2023				2022			
	RMBS		CMBS		RMBS		CMBS	
	Carrying Value	% of Total						
(\$ In Millions)								
1	\$ 2	100 %	\$ 59	88%	\$ 2	100%	\$ 63	91%
2	-	-	6	8	-	-	5	7
3	-	-	1	2	-	-	1	1
4	-	-	1	1	-	-	-	-
5	-	-	-	-	-	-	1	1
6	-	-	-	-	-	-	-	-
	\$ 2	100%	\$ 67	100%	\$ 2	100 %	\$ 70	100%

The following is a summary of the carrying value and fair value of bonds as of December 31, 2023 by contractual maturity. Expected maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations with or without prepayment penalties. Securities with more than one maturity date are included in the table using the final maturity date.

	Carrying Value	Fair Value	
		(In Millions)	
Due in one year or less		\$ 13	\$ 13
Due after one year through five years		105	103
Due after five years through ten years		26	25
Due after ten years		107	98
Total	\$ 251	\$ 239	

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**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

Sales proceeds and related gross realized capital gains (losses) from bonds were as follows:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Proceeds from sales	\$ 1	\$ -	\$ 18
Gross realized capital gains from sales	-	-	1
Gross realized capital losses from sales	\$ (1)	\$ -	\$ -

Gross realized capital gains (losses) from sales were \$1 million for the years ended December 31, 2023, and 2021, and less than \$1 million for the year ended December 31, 2022.

Gross unrealized losses of bonds were \$1 million for the year ended December 31, 2023 and gross unrealized losses of bonds were less than \$1 million for the year ended December 31, 2022. The following is a summary of the fair values and gross unrealized losses aggregated by bond category and length of time that the securities were in a continuous unrealized loss position:

	December 31, 2023					
	Less Than 12 Months			12 Months or Longer		
	Fair Value	Unrealized Losses	Number of Issuers	Fair Value	Unrealized Losses	Number of Issuers
	(\$ In Millions)					
U.S. government and agencies	\$ -	\$ -	1	\$ -	\$ -	- -
Special revenue	2	-	1	-	-	-
Industrial and miscellaneous	7	-	8	178	13	201
Parent, subsidiaries and affiliates	-	-	-	1	-	1
<b>Total</b>	<b>\$ 9</b>	<b>\$ -</b>	<b>10</b>	<b>\$ 179</b>	<b>\$ 13</b>	<b>202</b>

	December 31, 2022					
	Less Than 12 Months			12 Months or Longer		
	Fair Value	Unrealized Losses	Number of Issuers	Fair Value	Unrealized Losses	Number of Issuers
	(\$ In Millions)					
U.S. government and agencies	\$ -	\$ -	1	\$ 4	\$ -	1
Industrial and miscellaneous	156	10	184	32	6	44
Parent, subsidiaries and affiliates	1	-	1	-	-	-
<b>Total</b>	<b>\$ 157</b>	<b>\$ 10</b>	<b>186</b>	<b>\$ 36</b>	<b>\$ 6</b>	<b>45</b>

Gross unrealized losses of bonds less than 12 months were \$10 million with a fair value of \$157 million on 186 issuers and gross unrealized losses of bonds 12 months or longer were \$6 million with a fair value of \$36 million on 45 issuers for the year ended December 31, 2022.

As of December 31, 2023 and 2022, management has not deemed these unrealized losses to be other than temporary because the investment's carrying value is expected to be realized and the Company has the ability and intent not to sell these investments until recovery, which may be at maturity.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

As of December 31, 2023, investments in structured and loan-backed securities that had unrealized losses, which were not recognized in earnings, had a fair value of \$68 million. Securities in an unrealized loss position for less than 12 months had a fair value of \$3 million and unrealized losses less than \$1 million. Securities in an unrealized loss position for greater than 12 months had a fair value of \$64 million and unrealized losses of \$8 million. These securities were categorized as industrial and miscellaneous.

As of December 31, 2022, investments in structured and loan-backed securities that had unrealized losses, which were not recognized in earnings, had a fair value of \$66 million. Securities in an unrealized loss position for less than 12 months had a fair value of \$43 million and unrealized losses of \$4 million. Securities in an unrealized loss position for greater than 12 months had a fair value of \$22 million and unrealized losses of less than \$4 million. These securities were categorized as industrial and miscellaneous.

In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days to enhance the Company's yield on its investment portfolio. The Company did not sell any securities with the NAIC Designation 3 or below for the years ended December 31, 2023 or 2022, that were reacquired within 30 days of the sale date.

The Company had assets on deposit with government authorities or trustees, as required by law, in the amount of \$4 million as of December 31, 2023 and 2022.

*Residential mortgage-backed exposure*

RMBS are included in the U.S. government and agencies, special revenue, and industrial and miscellaneous bond categories. The Alt-A category includes option adjustable-rate mortgages and the subprime category includes 'scratch and dent' or reperforming pools, high loan-to-value pools and pools where the borrowers have very impaired credit but the average loan-to-value is low, typically 70% or below. In identifying Alt-A and subprime exposure, management used a combination of qualitative and quantitative factors, including FICO scores and loan-to-value ratios.

As of December 31, 2023, RMBS had a total carrying value of \$31 million and a fair value of \$31 million, of which approximately 1%, based on carrying value, was classified as Alt-A. Alt-A and subprime RMBS had a total carrying value of \$7 million and a fair value of \$7 million. As of December 31, 2022, RMBS had a total carrying value of \$3 million and a fair value of \$2 million, of which approximately 14%, based on carrying value, was classified as Alt-A. Alt-A and subprime RMBS had a total carrying value of \$3 million and a fair value of \$2 million.

During the year ended December 31, 2023, there were no significant credit downgrades for the securities held by the Company that were backed by residential mortgage pools.

*Leveraged loan exposure*

Leveraged loans are loans extended to companies that already have considerable amounts of debt. The Company reports leveraged loans as bonds. These leveraged loans have interest rates higher than typical loans, reflecting the additional risk of default from issuers with high debt-to-equity ratios.

As of December 31, 2023, the Company did not have any leveraged loans and leveraged loan CDOs. As of December 31, 2022, total leveraged loans and leveraged loan CDOs had a carrying value and fair value of less than a million dollars.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

*Commercial mortgage-backed exposure*

The Company holds bonds backed by pools of commercial mortgages. The mortgages in these pools have varying risk characteristics related to underlying collateral type, borrower's risk profile and ability to refinance and the return provided to the borrower from the underlying collateral. These investments had a carrying value of \$67 million and fair value of \$60 million as of December 31, 2023 and a carrying value of \$69 million and fair value of \$61 million as of December 31, 2022.

**b. Mortgage loans**

Residential mortgage loans include seasoned pools of homogeneous residential mortgage loans substantially backed by Federal Housing Administration and Veterans Administration guarantees. As of December 31, 2023 and December 31, 2022, the Company did not have any direct subprime exposure through the purchases of unsecuritized whole-loan pools.

Geographical concentration is considered prior to the purchase of residential mortgage loan pools. The mortgage loan portfolio is diverse with no significant collateral concentrations in any particular geographic region as of December 31, 2023 or 2022.

The carrying and fair values of the Company's residential mortgage loans were \$1 million as of December 31, 2023 and \$2 million as of December 31, 2022.

The Company uses an internal rating system as its primary method of monitoring credit quality. The residential mortgage loan portfolio translated into the equivalent rating agency designation of AAA/AA/A and had carrying values of \$1 million as of December 31, 2023 and \$2 million as of December 31, 2022.

Interest rates, including fixed and variable, on the Company's portfolio of mortgage loans were:

	December 31,			
	2023		2022	
	Low	High	Low	High
Residential mortgage loans			3.8%	7%

The Company did not purchase any residential mortgage loans during the years ended December 31, 2023 and 2022.

The Company did not hold any impaired residential mortgage loans and had no valuation allowances recorded as of December 31, 2023, 2022 or 2021. The Company did not hold any restructured residential mortgage loans or residential mortgage loans with principal or interest past due as of December 31, 2023 or 2022.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**c. Net investment income**

Net investment income comprised the following:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Bonds	\$ 9	\$ 8	\$ 9
Policy loans	5	5	5
Cash, cash equivalents and short-term investments	6	3	-
Subtotal investment income	20	16	14
Investment expenses	(1)	(1)	(1)
Net investment income	<u><u>\$ 19</u></u>	<u><u>\$ 15</u></u>	<u><u>\$ 13</u></u>

**d. Net realized capital gains (losses)**

Net realized capital gains after tax and transfer to the IMR were less than \$1 million for the years ended December 31, 2023, 2022 and 2021.

Refer to Note 2o. "Interest maintenance reserve" for information on the Company's policy for IMR.

For the years ended December 31, 2023, 2022 and 2021, the Company recognized less than \$1 million for each year, of OTTI on structured and loan-backed securities, primarily due to the present value of expected cash flows being less than the amortized cost.

The remaining OTTI amounts were determined using external inputs such as publicly observable fair values and credit ratings. Refer to Note 2s. "Realized capital gains (losses) including other-than-temporary impairments and unrealized capital gains (losses)" for more information on assumptions and inputs used in the Company's OTTI models.

Refer to Note 17. "Impairment listing for loan-backed and structured securities" for a CUSIP level list of impaired structured securities where the present value of cash flows expected to be collected is less than the amortized cost basis.

**6. Federal income taxes**

On August 16th, 2022, the Inflation Reduction Act ("IRA") was signed into law and includes certain corporate income tax provisions. Impacts to the Company could include the imposition of a corporate alternative minimum tax ("CAMT") applicable to tax years beginning after December 31, 2022. The CAMT imposes a 15% minimum tax on adjusted financial statement income on applicable corporations that have an average group wide adjusted financial statement income over \$1 billion in the prior three-year period (2020-2022). As of the reporting date, the Company has determined that it is not an applicable corporation and therefore not liable for CAMT in 2023. While the Company is not an applicable corporation in 2023, any future CAMT liability will be allocated to MassMutual in accordance with the tax allocation agreement. The United States Treasury Secretary and the IRS have been authorized to issue further guidance and intend to publish proposed regulations in 2024.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The Company provides for DTAs in accordance with statutory accounting practices, and has met the required threshold to utilize the three-year reversal period and 15% of surplus limitation.

The net DTA or deferred tax liability (DTL) recognized in the Company's assets, liabilities and surplus is as follows:

	December 31, 2023		
	Ordinary	Capital	Total
	(In Millions)		
Gross DTAs	\$ 4	\$ -	\$ 4
Statutory valuation allowance adjustment	-	-	-
Adjusted gross DTAs	4	-	4
DTAs nonadmitted	(1)	-	(1)
Subtotal net admitted DTA	3	-	3
Total gross DTLs	(2)	-	(2)
Net admitted DTA(L)	\$ 1	\$ -	\$ 1

	December 31, 2022		
	Ordinary	Capital	Total
	(In Millions)		
Gross DTAs	\$ 4	\$ -	\$ 4
Statutory valuation allowance adjustment	-	-	-
Adjusted gross DTAs	4	-	4
DTAs nonadmitted	(1)	-	(1)
Subtotal net admitted DTA	3	-	3
Total gross DTLs	(1)	-	(1)
Net admitted DTA(L)	\$ 2	\$ -	\$ 2

	Change		
	Ordinary	Capital	Total
	(In Millions)		
Gross DTAs	\$ -	\$ -	\$ -
Statutory valuation allowance adjustment	-	-	-
Adjusted gross DTAs	-	-	-
DTAs nonadmitted	-	-	-
Subtotal net admitted DTA	-	-	-
Total gross DTLs	(1)	-	(1)
Net admitted DTA(L)	\$ (1)	\$ -	\$ (1)

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The amount of adjusted gross DTA admitted under each component of the guidance and the resulting change by tax character are as follows:

	December 31, 2023		
	Ordinary	Capital	Total
	(In Millions)		
<b>Admitted DTA 3 years:</b>			
Federal income taxes that can be recovered	\$ -	\$ -	\$ -
<b>Remaining adjusted gross DTAs expected to be realized within 3 years:</b>			
1. Adjusted gross DTA to be realized	1	-	1
2. Adjusted gross DTA allowed per limitation threshold	34	-	34
Lesser of lines 1 or 2	1	-	1
<b>Adjusted gross DTAs offset by existing DTLs</b>	2	-	2
<b>Total admitted DTA realized within 3 years</b>	<u>\$ 3</u>	<u>\$ -</u>	<u>\$ 3</u>
	December 31, 2022		
	Ordinary	Capital	Total
	(In Millions)		
<b>Admitted DTA 3 years:</b>			
Federal income taxes that can be recovered	\$ -	\$ -	\$ -
<b>Remaining adjusted gross DTAs expected to be realized within 3 years:</b>			
1. Adjusted gross DTA to be realized	2	-	2
2. Adjusted gross DTA allowed per limitation threshold	37	-	37
Lesser of lines 1 or 2	2	-	2
<b>Adjusted gross DTAs offset by existing DTLs</b>	1	-	1
<b>Total admitted DTA realized within 3 years</b>	<u>\$ 3</u>	<u>\$ -</u>	<u>\$ 3</u>
	Change		
	Ordinary	Capital	Total
	(In Millions)		
<b>Admitted DTA 3 years:</b>			
Federal income taxes that can be recovered	\$ -	\$ -	\$ -
<b>Remaining adjusted gross DTAs expected to be realized within 3 years:</b>			
1. Adjusted gross DTA to be realized	(1)	-	(1)
2. Adjusted gross DTA allowed per limitation threshold	(3)	-	(3)
Lesser of lines 1 or 2	(1)	-	(1)
<b>Adjusted gross DTAs offset by existing DTLs</b>	1	-	1
<b>Total admitted DTA realized within 3 years</b>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The Company's total realization threshold limitations are as follows:

	December 31, 2023	December 31, 2022
	(\$ In Millions)	(\$ In Millions)
Ratio percentage used to determine recovery period and threshold limitation	9,665%	10,793%
Amount of adjusted capital and surplus used to determine recovery period and threshold limitation above	\$ 229	\$ 248

The ultimate realization of DTAs depends on the generation of future taxable income during the periods in which the temporary differences are deductible. Management considers the scheduled reversal of DTLs, including the impact of available carryback and carryforward periods, projected taxable income and tax-planning strategies in making this assessment. The impact of tax-planning strategies is as follows:

	December 31, 2023		
	Ordinary	Capital (Percent)	Total
Impact of tax planning strategies:			
Adjusted gross DTAs (% of total adjusted gross DTAs)	- %	- %	- %
Net admitted adjusted gross DTAs (% of total net admitted adjusted gross DTAs)	4 %	- %	4 %
	December 31, 2022		
	Ordinary	Capital (Percent)	Total
Impact of tax planning strategies:			
Adjusted gross DTAs (% of total adjusted gross DTAs)	- %	- %	- %
Net admitted adjusted gross DTAs (% of total net admitted adjusted gross DTAs)	- %	- %	- %
	Change		
	Ordinary	Capital (Percent)	Total
Impact of tax planning strategies:			
Adjusted gross DTAs (% of total adjusted gross DTAs)	- %	- %	- %
Net admitted adjusted gross DTAs (% of total net admitted adjusted gross DTAs)	4 %	- %	4 %

There are no reinsurance strategies included in the Company's tax-planning strategies.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The provision for current tax expense on earnings is as follows:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Federal income tax expense (benefit) on operating earnings	\$ (1)	\$ 1	\$ 3
Foreign income tax expense on operating earnings	-	-	-
Total federal and foreign income tax expense (benefit) on operating earnings	(1)	1	3
Federal income tax expense on net realized capital gains (losses)	-	-	-
Total federal and foreign income tax expense (benefit)	\$ (1)	\$ 1	\$ 3

The tax effects of temporary differences that give rise to significant portions of the DTAs and DTLs are as follows:

	December 31,		
	2023	2022	Change
	(In Millions)		
<b>DTAs:</b>			
Ordinary			
Policy acquisition costs	\$ 3	\$ 3	\$ -
Reserve items	1	1	-
Total ordinary DTAs	4	4	-
Nonadmitted DTAs	(1)	(1)	-
Admitted ordinary DTAs	3	3	-
Capital			
Investment items	-	-	-
Total capital DTAs	-	-	-
Nonadmitted DTAs	-	-	-
Admitted capital DTAs	-	-	-
Admitted DTAs	3	3	-
<b>DTLs:</b>			
Ordinary			
Other	2	1	1
Total ordinary DTLs	2	1	1
Capital			
Investment items	-	-	-
Total capital DTLs	-	-	-
Total DTLs	2	1	1
Net admitted DTA	\$ 1	\$ 2	\$ (1)

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The change in net deferred income taxes comprised the following:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Net DTA(L)	\$ (1)	\$ (1)	\$ -
Less: Items not recorded in the change in net deferred income taxes:			
Change in net deferred income taxes	<u>\$ (1)</u>	<u>\$ (1)</u>	<u>\$ -</u>

As of December 31, 2023, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has no tax credit carryforwards included in deferred taxes.

The components of federal and foreign income tax are recorded in the Statutory Statements of Operations and the Statutory Statements of Changes in Capital and Surplus and are different from those which would be obtained by applying the prevailing federal income tax rate to net gain from operations before federal income taxes. The significant items causing this difference are as follows:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Provision computed at statutory rate	\$ 1	\$ 3	\$ 5
Investment items	<u>(1)</u>	<u>(1)</u>	<u>(2)</u>
Total statutory income tax expense	<u>\$ -</u>	<u>\$ 2</u>	<u>\$ 3</u>
Federal and foreign income tax expense (benefit)	\$ (1)	\$ 1	\$ 3
Change in net deferred income taxes	<u>1</u>	<u>1</u>	<u>-</u>
Total statutory income tax expense	<u>\$ -</u>	<u>\$ 2</u>	<u>\$ 3</u>

The Company paid federal income taxes of \$2 million in 2023, received refunds of \$5 million in 2022, and paid federal income taxes of \$3 million in 2021.

The total income taxes incurred in the current and prior years that will be available for recoupment in the event of future net capital losses totaled \$0 million related to 2023, \$0 million related to 2022, and \$1 million related to 2021.

The Company is included in a consolidated U.S. federal income tax return with its parent, MassMutual, a mutual life insurance company domiciled in the Commonwealth of Massachusetts, and MassMutual's eligible U.S. subsidiaries. The Company also files income tax returns in various states and foreign jurisdictions. The Company, MassMutual, and MassMutual's eligible subsidiaries and certain affiliates (the Parties) have executed and are subject to a written tax allocation agreement (the Agreement). The Agreement sets forth the manner in which the total combined federal income tax is allocated among the Parties. The Agreement provides the Company with the enforceable right to recoup federal income taxes paid in prior years in the event of future net capital losses, which it may incur. Further, the Agreement provides the Company with the enforceable right to utilize its net losses carried forward as an offset to future net income subject to federal income taxes. In accordance with the Agreement, future corporate alternative minimum tax (CAMT) is outside of the scope of the general tax allocation method and, consequently any future CAMT liability of a subsidiary shall be allocated solely to MassMutual.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

Companies are generally required to disclose unrecognized tax benefits, which are the tax effect of positions taken on their tax returns that may be challenged by various taxing authorities, in order to provide users of financial statements more information regarding potential liabilities. The Company recognizes tax benefits and related reserves in accordance with existing statutory accounting practices for liabilities, contingencies and impairments of assets. As of December 31, 2023, the Company had no liabilities for unrecognized tax benefits.

The Internal Revenue Service (IRS) has completed its examination of MassMutual and its subsidiaries for the year 2013 and prior. The 2014-2016 tax years are in Appeals for 3 carryforward issues. The IRS completed its examination of the 2017-2018 tax years and is being transferred to Appeals. The adjustments resulting from these examinations are not expected to materially affect the position or liquidity of the Company.

As of December 31, 2023 and 2022, the Company did not recognize any protective deposits as admitted assets.

**7. *Deferred and uncollected life insurance premium***

Deferred and uncollected life insurance premium, net of loading and reinsurance, are included in other than invested assets in the Company's Statutory Statements of Financial Position.

The Company had \$3 million of ordinary renewal as of December 31, 2023 and had \$3 million as of December 31, 2022. As of December 31, 2023 and 2022, the Company did not have group life.

Deferred premium is the portion of the annual premium not earned at the reporting date. Loading on deferred premium is an amount obtained by subtracting the valuation net deferred premium from the gross deferred premium and generally includes allowances for acquisition costs and other expenses. Refer to *Note 2k*. "Policyholders' reserves" for information on the Company's accounting policies regarding gross premium and net premium.

Uncollected premium is gross premium net of reinsurance that is due and unpaid as of the reporting date, net of loading. Net premium is the amount used in the calculation of reserves. The change in deferred and uncollected life insurance premium is included in premium income. The change in loading is included as an expense and is not shown as a reduction to premium income.

Ordinary new business and ordinary renewal business consist of the basic amount of premium required on the underlying life insurance policies.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**8. Policyholders' liabilities**

**a. Policyholders' reserves**

The Company had life insurance in force of \$10,335 million as of December 31, 2023 and \$10,498 million as of December 31, 2022.

The following summarizes policyholders' reserves, net of reinsurance, and the range of interest rates by type of product:

	December 31,					2022				
	2023		Interest Rates			2022		Interest Rates		
	Amount	Interest Rates	(\$ In Millions)			Amount	Interest Rates	(\$ In Millions)		
Variable life	\$ 139	4.0%	-	5.5%		\$ 136	4.0%	-	5.5%	
Individual annuities	3	5.0%	-	7.3%		2	5.0%	-	7.3%	
<b>Total</b>	<b>\$ 142</b>					<b>\$ 138</b>				

**b. Liabilities for deposit-type contracts**

Supplementary contracts not involving life contingencies of \$11 million as of December 31, 2023 and \$13 million as of December 31, 2022 were included in liabilities for deposit-type contracts. The interest rate range on supplementary contracts was 3.00% to 3.00% as of December 31, 2023 and 3.00% to 3.00% as of December 31, 2022.

**c. Additional liability for annuity contracts**

Certain variable annuity contracts include additional death benefit features. Election of these benefits is generally only available at contract issue.

The following shows the liabilities for GMDBs (in millions):

Liability as of January 1, 2022	\$	1
Incurred guarantee benefits		-
Paid guarantee benefits		-
Liability as of December 31, 2022		1
Incurred guarantee benefits	(1)	
Paid guarantee benefits		-
Liability as of December 31, 2023	\$	-

The Company held reserves in accordance with the standard scenario as of December 31, 2023 and December 31, 2022.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The following summarizes the account values, net amount at risk and weighted average attained age for variable annuity contracts with GMDBs classified as policyholders' reserves and separate account liabilities. The net amount at risk is defined as the minimum guarantee less the account value calculated on a policy-by-policy basis, but not less than zero.

	December 31,					
	2023			2022		
	Account Value	Net Amount at Risk	Weighted Average Attained Age	Account Value	Net Amount at Risk	Weighted Average Attained Age
(\$ In Millions)						
GMDB	\$ 32	\$ 3	74	\$ 30	\$ 3	73

Account values of variable annuity contracts with GMDBs are summarized below:

	December 31,	
	2023	2022
	(In Millions)	
Separate account	\$ 31	\$ 28
General account	2	2
<b>Total</b>	<b>\$ 32</b>	<b>\$ 30</b>

#### 9. Reinsurance

The Company enters into reinsurance agreements with affiliated and unaffiliated insurers in the normal course of business in order to mitigate the impact of underwriting mortality and morbidity risks. Such transfers do not relieve the Company of its primary liability to its customers and, as such, failure of reinsurers to honor their obligations could result in credit losses that could arise if a reinsurer defaults. The Company reduces reinsurance default risk by evaluating the financial condition of reinsurers and monitoring for possible concentrations within the Company's reinsurers and using trust structures, when appropriate. The Company reinsurance a portion of its mortality risk in its life business under either a first dollar quota-share arrangement or an in excess of the retention limit arrangement with reinsurers. The amounts reinsurance are on a yearly renewable term or Modco basis. The Company's highest retention limit for new issues of life policies ranges from \$15 million to \$35 million.

Refer to Note 14, "Related party transactions" for information about the Company's affiliated ceded reinsurance transactions.

There are no reinsurance agreements in effect under which the reinsurer may unilaterally cancel any reinsurance for reasons other than for nonpayment of premium or other similar credits. The Company has no reinsurance agreements in effect such that the amount of losses paid or accrued through the statement date may result in a payment to the reinsurer of amounts which, in aggregate and allowing for offset of mutual credits from other reinsurance agreements with the same reinsurer, exceed the total direct premium collected under the reinsured policies.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

Reinsurance amounts included in the Statutory Statements of Operations were as follows:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Direct premium	\$ 17	\$ 28	\$ 40
Premium ceded	(26)	(26)	(28)
<b>Total net premium</b>	<b>\$ (9)</b>	<b>\$ 2</b>	<b>\$ 12</b>
Ceded reinsurance recoveries	\$ 56	\$ 116	\$ 50

Reinsurance amounts included in the Statutory Statements of Financial Position were as follows:

	December 31,	
	2023	2022
	(In Millions)	
Reinsurance reserves ceded	\$ (21)	\$ (21)
Ceded amounts recoverable	26	17

Reinsurance reserves ceded to affiliated and unaffiliated reinsurers as of December 31, 2023 include \$17 million associated with life insurance policies. Reinsurance reserves ceded to affiliated and unaffiliated reinsurers as of December 31, 2022 include \$21 million associated with life insurance policies.

As of December 31, 2023, one reinsurer accounted for 68% of the outstanding balance of the unaffiliated reinsurance recoverable and the next largest reinsurer had 13%. Overall, the Company believes that each of these exposures to a single reinsurer does not create an undue concentration of risk and the Company's business is not substantially dependent upon any single reinsurer.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**10. Withdrawal characteristics**

**a. Annuity actuarial reserves and liabilities for deposit-type contracts**

The withdrawal characteristics of the Company's annuity actuarial reserves and deposit-type contracts as of December 31, 2023 are illustrated below:

*Individual annuities*

	General Account	Separate Account with Guarantees	Separate Account Non- guaranteed	Total	% of Total
	(In Millions)				
<b>Subject to discretionary withdrawal:</b>					
With market value adjustment	\$ -	\$ -	\$ -	\$ -	0%
At fair value	- -	- -	31	31	92
Total with market value adjustment or at fair value	- -	- -	31	31	92
At book value without adjustment (minimal or no charge or adjustment)	1			1	3
Not subject to discretionary withdrawal	2	- -	- -	2	5
<b>Total</b>	<b>\$ 3</b>	<b>\$ -</b>	<b>\$ 31</b>	<b>\$ 34</b>	<b>100%</b>

*Deposit-type contracts*

	General Account	Separate Account with Guarantees	Separate Account Non- guaranteed	Total	% of Total
	(In Millions)				
<b>Subject to discretionary withdrawal:</b>					
At book value without adjustment (minimal or no charge or adjustment)	\$ 11	\$ -	\$ -	\$ 11	100%
<b>Total</b>	<b>\$ 11</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11</b>	<b>100%</b>

The following is a summary of total annuity actuarial reserves and liabilities for deposit-type contracts as of December 31, 2023 (in millions):

**Statutory Statements of Financial Position:**

Policyholders' reserves – individual annuities	\$ 3
Liabilities for deposit-type contracts	11
<b>Subtotal</b>	<b>14</b>
<b>Separate Account Annual Statement:</b>	
Annuities	31
<b>Total</b>	<b>\$ 45</b>

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**b. Analysis of life actuarial reserves by withdrawal characteristics**

The withdrawal characteristics of the Company's life actuarial reserves as of December 31, 2023 are illustrated below:

*General Account*

	Account Value	Cash Value	Reserve
Subject to discretionary withdrawal, surrender values, or policy loans:			
Variable life	\$ 3	\$ 3	\$ 1
Variable universal life	140	139	148
Not subject to discretionary withdrawal or no cash values:			
Disability - disabled lives	-	-	8
Miscellaneous reserves	-	-	3
Total (gross: direct + assumed)	143	142	160
Reinsurance ceded	-	-	21
<b>Total (net)</b>	<b>\$ 143</b>	<b>\$ 142</b>	<b>\$ 139</b>

*Separate Account with Guarantees*

	Account Value	Cash Value	Reserve
Subject to discretionary withdrawal, surrender values, or policy loans:			
Variable universal life	\$ 3,434	\$ 3,428	\$ 3,434
Not subject to discretionary withdrawal or no cash values:			
Total (gross: direct + assumed)	3,434	3,428	3,434
<b>Total (net)</b>	<b>\$ 3,434</b>	<b>\$ 3,428</b>	<b>\$ 3,434</b>

*Separate Account Nonguaranteed*

	Account Value	Cash Value	Reserve
Subject to discretionary withdrawal, surrender values, or policy loans:			
Variable life	\$ 7	\$ 7	\$ 12
Variable universal life	1,175	1,174	1,175
Not subject to discretionary withdrawal or no cash values:			
Total (gross: direct + assumed)	1,182	1,181	1,187
<b>Total (net)</b>	<b>\$ 1,182</b>	<b>\$ 1,181</b>	<b>\$ 1,187</b>

**c. Separate accounts**

The Company has guaranteed separate accounts classified as nonindexed to fund a long-term interest guarantee in excess of a year that does not exceed 4% rate of return. The Company has nonguaranteed separate accounts which are variable accounts where the benefit is determined by the performance and/or market value of the investments held in the separate account with incidental risk, notional expense and minimum death benefit guarantees.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

Information regarding the separate accounts of the Company as of and for the year ended December 31, 2023 is as follows:

	Guaranteed Nonindexed Less Than/ Equal to 4%	Non Guaranteed	Total
	(In Millions)		
Net premium, considerations or deposits for the year ended December 31, 2023	\$ -	\$ 24	\$ 24
<b>Reserves at December 31, 2023:</b>			
For accounts with assets at:			
Fair value	\$ -	\$ 1,218	\$ 1,218
Amortized cost/book value	3,434	-	3,434
Subtotal	3,434	1,218	4,652
Non policy liabilities	-	20	20
Total	\$ 3,434	\$ 1,238	\$ 4,672
<b>Reserves by withdrawal characteristics:</b>			
Subject to discretionary withdrawal:			
At fair value	\$ -	\$ 1,218	\$ 1,218
At book value without market value adjustment and current surrender charge of less than 5%	3,434	-	3,434
Subtotal	3,434	1,218	4,652
Non policy liabilities	-	20	20
Total	\$ 3,434	\$ 1,238	\$ 4,672

The Company does not have any reserves in separate accounts for asset default risk in lieu of AVR. The Company has a general account AVR of \$6 million for book value separate accounts.

The following is a reconciliation of amounts reported as transfers (from) to separate accounts in the Summary of Operations of the Company's NAIC Separate Account Annual Statement to the amounts reported as net transfers (from) to separate accounts in change in policyholders' reserves in the accompanying Statutory Statements of Operations:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
<b>From the Separate Account Annual Statement:</b>			
Transfers to separate accounts	\$ 24	\$ 26	\$ 26
Transfers from separate accounts	(86)	(123)	(116)
Net transfers from separate accounts	\$ (62)	\$ (97)	\$ (90)

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**11. Capital and surplus**

MassMutual has authorized the contribution of funds to the Company sufficient to meet the capital requirements of each state in the U.S. in which the Company is licensed to do business. Substantially all of the statutory capital and surplus is subject to dividend restrictions. Dividend restrictions, imposed by state regulations, limit the payment of dividends to the shareholder without prior approval from the Department. Under these regulations, \$23 million of capital and surplus is available for distribution to the shareholder in 2024 without prior regulatory approval. The Company declared and paid a \$25 million dividend to C.M. Life in 2023 and declared and paid a \$26 million dividend to C.M. Life in 2022. The Company declared and paid a \$27 million dividend to C.M. Life in 2021.

**12. Presentation of the Statutory Statements of Cash Flows**

The following table presents those transactions that have affected the Company's recognized assets or liabilities but have not resulted in cash receipts or payments during the years ended December 31, 2023, 2022 and 2021. Accordingly, the Company has excluded these non-cash activities from the Statutory Statement of Cash Flows for the years ended December 31, 2023, 2022 and 2021.

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Bond conversions and refinancing	\$ -	\$ 1	\$ -

**13. Business risks, commitments and contingencies**

**a. Risks and uncertainties**

The Company operates in a business environment subject to various risks and uncertainties. The principal risks include insurance and underwriting risks, investment and interest rate risks and credit risk.

*Insurance and underwriting risks*

The Company prices its products based on estimated benefit payments reflecting assumptions with respect to mortality, longevity, persistency, interest rates and other factors. If actual policy experience emerges that is significantly and adversely different from assumptions used in product pricing, the effect could be material to the profitability of the Company. The Company reinsures certain life insurance policies to mitigate the impact of its underwriting risk.

*Investment and interest rate risks*

The fair value, cash flows and earnings of investments can be influenced by a variety of factors including changes in interest rates, credit spreads, equity markets, portfolio asset allocation and general economic conditions. The Company employs a rigorous asset/liability management process to help mitigate the economic impacts of various investment risks, in particular interest rate risk. By effectively matching the market sensitivity of assets with the liabilities they support, the impact of interest rate changes is addressed, on an economic basis, as the change in the value of the asset is offset by a corresponding change in the value of the supported liability.

The levels of U.S. interest rates are influenced by U.S. monetary policies and by the relative attractiveness of U.S. markets to investors versus other global markets. As interest rates increase, certain debt securities may experience amortization or prepayment speeds that are slower than those assumed at purchase, impacting the expected maturity of these securities and the ability to reinvest the proceeds at the higher yields. Rising interest rates may also result in a decrease in the fair value of the investment portfolio. As interest rates decline, certain debt securities may experience accelerated amortization and prepayment speeds than what was assumed at purchase. During such periods, the Company is at risk of lower net investment income as it may not be able to reinvest the proceeds at comparable yields. Declining interest rates may also increase the fair value of the investment portfolio.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

Interest rates also have an impact on the Company's products with guaranteed minimum payouts and on interest credited to account holders. As interest rates decrease, investment spreads may contract as crediting rates approach minimum guarantees, resulting in an increased liability.

In periods of increasing interest rates, policy loans, surrenders and withdrawals may increase as policyholders seek investments with higher perceived returns. This could result in cash outflows requiring the Company to sell invested assets at a time when the prices of those assets are adversely affected by the increase in market interest rates, which could cause the Company to realize investment losses.

*Credit and other market risks*

The Company manages its investments to limit credit and other market risks by diversifying its portfolio among various security types and industry sectors as well as purchasing credit default swaps to transfer some of the risk.

Stressed conditions, volatility and disruptions in capital markets or financial asset classes can have an adverse effect on the Company, in part because the Company has a large investment portfolio and assets supporting the Company's insurance liabilities are sensitive to changing market factors. Market factors, including interest rates, credit spread, equity prices, consumer spending, business investment, government spending, the volatility and strength of the capital markets, deflation and inflation, all affect the business and economic environment and, ultimately, the profitability of the Company's business. Disruptions in one market or asset class can also spread to other markets or asset classes. Upheavals in the financial markets can also affect the Company's business through their effects on general levels of economic activity, employment and customer behavior.

The CMBS, RMBS and leveraged loan sectors are sensitive to evolving conditions that can impair the cash flows realized by investors and is subject to uncertainty. Management's judgment regarding OTTI and estimated fair value depends upon the evolving investment sector and economic conditions. It can also be affected by the market liquidity, a lack of which can make it difficult to obtain accurate market prices for RMBS and other investments, including CMBS and leveraged loans. Any deterioration in economic fundamentals, especially related to the housing sector could affect management's judgment regarding OTTI.

The Company has investments in structured products exposed primarily to the credit risk of corporate bank loans, corporate bonds or credit default swap contracts referencing corporate credit risk. Most of these structured investments are backed by corporate loans and are commonly known as collateralized loan obligations that are classified as CDO. The portfolios backing these investments are actively managed and diversified by industry and individual issuer concentrations. Due to the complex nature of CDO and the reduced level of transparency to the underlying collateral pools for many market participants, the recovery in CDO valuations generally lags the overall recovery in the underlying assets. Management believes its scenario analysis approach, based primarily on actual collateral data and forward looking assumptions, does capture the credit and most other risks in each pool. However, in a rapidly changing economic environment, the credit and other risks in each collateral pool will be more volatile and actual credit performance of CDO may differ from the Company's assumptions.

The Company continuously monitors its investments and assesses their liquidity and financial viability; however, the existence of the factors described above, as well as other market factors, could negatively impact the market value of the Company's investments. If the Company sells its investments prior to maturity or market recovery, these investments may yield a return that is less than the Company otherwise would have been able to realize.

Asset-based fees calculated as a percentage of the separate account assets are a source of revenue to the Company. Gains and losses in the investment markets may result in corresponding increases and decreases in the Company's separate account assets and related revenue.

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**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The long-term impact of the COVID-19 pandemic is dependent on numerous factors including, but not limited to, the length and severity of the pandemic, the efficacy and rate of vaccine adoption and therapeutics, the responses to the pandemic taken by governments and private sector businesses, and the impacts on MassMutual's policyholders, employees and counterparties. At its height, the pandemic led to significant economic disruption, including significant volatility in the U.S. and international markets, which had an adverse effect on MassMutual's business. The extent to which the COVID-19 pandemic continues to impact MassMutual's business will depend on future developments which are highly uncertain, including the emergence of future variants of COVID-19 and the efficacy of vaccines in the broader population (including with respect to future variants).

*Political Uncertainties*

Political events, domestically or internationally, may directly or indirectly trigger or exacerbate risks related to product offerings, profitability, or any of the risk factors described above. Whether those underlying risk factors are driven by geopolitics or not, the Company's dynamic approach to managing risks enables management to identify risks, internally and externally, develop mitigation plans, and respond to risks in an attempt to proactively reduce the potential impact of each underlying risk factor on the Company.

**b. Guaranty funds**

The Company is subject to state insurance guaranty fund laws. These laws assess insurance companies' amounts to be used to pay benefits to policyholders and policy claimants of insolvent insurance companies. Many states allow these assessments to be credited against future premium taxes. The Company believes such assessments in excess of amounts accrued will not materially impact its financial position, results of operations or liquidity.

**c. Litigation and regulatory matters**

In the normal course of business, the Company is involved in disputes, litigation and governmental or regulatory inquiries, administrative proceedings, examinations and investigations, both pending and threatened. These matters, if resolved adversely against the Company or settled, may result in monetary damages, fines and penalties or require changes in the Company's business practices. The resolution or settlement of these matters is inherently difficult to predict. Based upon the Company's assessment of these pending matters, the Company does not believe that the amount of any judgment, settlement or other action arising from any pending matter is likely to have a material adverse effect on the statement of financial position. However, an adverse outcome in certain matters could have a material adverse effect on the results of operations for the period in which such matter is resolved, or an accrual is determined to be required, on the financial statement financial position, or on our reputation.

The Company evaluates the need for accruals of loss contingencies for each matter. When a liability for a matter is probable and can be estimated, the Company accrues an estimate of the loss offset by related insurance recoveries or other contributions, if any. An accrual may be subject to subsequent adjustment as a result of additional information and other developments. The resolution of matters are inherently difficult to predict, especially in the early stages of matter. Even if a loss is probable, due to many complex factors, such as speed of discovery and the timing of court decisions or rulings, a loss or range of loss may not be reasonably estimated until the later stages of the matter. For matters where a loss is material and it is either probable or reasonably possible then it is disclosed. For matters where a loss may be reasonably possible, but not probable, or is probable but not reasonably estimated, no accrual is established, but the matter, if material, is disclosed.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**14. Related party transactions**

Pursuant to a management agreement, MassMutual, for a fee, furnishes the Company, as required, operating facilities, human resources, computer software development and managerial services. Investment and administrative services are also provided to the Company pursuant to a management services agreement with MassMutual. While management believes that these fees are calculated on a reasonable basis, these fees may not necessarily be indicative of the costs that would have been incurred on a stand-alone basis.

The following table summarizes the transactions between the Company and the related parties:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
<b>Fee income:</b>			
Recordkeeping and other services	\$ -	\$ 1	\$ 1
Investment advisory income	2	2	2
<b>Fee expense:</b>			
Management and service contracts and cost-sharing arrangements	9	7	9
Investment advisory services	-	-	1

The Company reported less than \$1 million as amounts due from affiliates as of December 31, 2023 and \$3 million as of December 31, 2022. The Company reported \$2 million as amounts due to affiliates as of December 31, 2023 and less than \$1 million as of December 31, 2022. Terms generally require settlement of these amounts within 30 to 90 days.

The Company has a Modco quota-share reinsurance agreement with MassMutual where the Company cedes 100% of the premium on certain bank-owned life insurance policies. In return, MassMutual pays the Company a stipulated expense allowance, death and surrender benefits. The Company retains the assets and related reserves for payment of future benefits on the ceded policies. The Modco adjustment is the mechanism by which MassMutual funds the reserve on the reinsured portion of the risk. It is needed to adjust for the financial effect of the Company holding the reserves on the ceded coverage rather than MassMutual.

The Company has a quota-share reinsurance agreement with MassMutual in which MassMutual assumes specific plans of insurance on a yearly renewable term basis.

As of December 31, 2023, the net amounts due from MassMutual for the various reinsurance agreements were \$11 million and as of December 31, 2022, the net amounts due from MassMutual were \$23 million. These outstanding balances are due and payable with terms ranging from monthly to annually, depending on the agreement in effect.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The following summarizes the related party reinsurance transactions between the Company and MassMutual:

	Years Ended December 31,		
	2023	2022	2021
	(In Millions)		
Premium ceded, related to:			
Quota-share reinsurance agreement	\$ (5)	\$ (5)	\$ (5)
Modco adjustments ceded, included in fees and other income	(24)	(12)	(11)
Expenses allowances on reinsurance ceded, included in fees and other income, related to:			
Modco agreement	7	6	6
Policyholders' benefits ceded, related to:			
Modco agreement	23	14	14
Quota-share reinsurance agreement	2	10	2
Experience refunds (paid) received, related to:			
Modco agreement	(1)	1	-

**15. Subsidiaries and affiliated companies**

A summary of ownership and relationship of the Company and its subsidiaries and affiliated companies as of December 31, 2023 is illustrated below. Subsidiaries are wholly owned, except as noted.

**Subsidiaries of MassMutual**

100 w. 3rd Street LLC  
300 South Tryon Hotel LLC  
300 South Tryon LLC  
5301 Wisconsin Avenue GP, LLC  
Barings Affordable Housing Mortgage Fund I LLC  
Barings Affordable Housing Mortgage Fund II LLC  
Barings Affordable Housing Mortgage Fund III LLC  
Barings California Mortgage Fund IV  
Barings CLO Investment Partners LP  
Barings Hotel Opportunity Venture I GP, LLC  
Berkshire Way LLC  
C.M. Life Insurance Company  
CML Global Capabilities LLC  
Cornbrook PRS Holdings LLC  
Cornerstone California Mortgage Fund I LLC  
Cornerstone California Mortgage Fund II LLC  
Cornerstone California Mortgage Fund III LLC  
Cornerstone Permanent Mortgage Fund II  
Cornerstone Permanent Mortgage Fund III LLC  
Cornerstone Permanent Mortgage Fund IV  
Cornerstone Permanent Mortgage Fund LLC  
Counterpointe Sustainable Advisors LLC  
CREA Ridge Apartments, LLC  
DPI Acres Capital SPV LLC  
DPI-ACRES Capital LLC  
DPI-ARES Mortgage Lending LLC

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

DPI-ARES Mortgage Lending SPV, LLC  
E2E Affordable Housing Debt Fund LLC  
EM Opportunities LLC  
GIA EU Holdings - Emerson JV Sarl  
GIA EU Holdings LLC  
Glidepath Holdings Inc.  
Insurance Road LLC  
ITPSHolding LLC  
JFIN Parent LLC  
Landmark Manchester Holdings LLC  
London Office JV Holdings LLC  
MALIC Debt Participations LLC  
Martello Re Limited – 27.45%  
Massachusetts Mutual Life Insurance Company (MMLIC)  
MassMutual 20/80 Allocation Fund  
MassMutual 40/60 Allocation Fund  
MassMutual 60/40 Allocation Fund  
MassMutual Balanced Fund  
MassMutual Blue Chip Growth Fund  
MassMutual Core Bond Fund  
MassMutual Disciplined Growth Fund  
MassMutual Disciplined Value Fund  
MassMutual Diversified Value Fund  
MassMutual Equity Opportunities Fund  
MassMutual External Benefits Group LLC  
MassMutual Growth Opportunities Fund  
MassMutual Holding LLC  
MassMutual Inflation-Protected and Income Fund  
MassMutual International LLC  
MassMutual MCAM Insurance Company, Inc.  
MassMutual Mid Cap Growth Fund  
MassMutual Mortgage Lending LLC  
MassMutual Premier Diversified Bond Fund  
MassMutual RetireSMART by JPMorgan 2065 Fund  
MassMutual Select 80/20 Allocation Fund  
MassMutual Select Fundamental Value Fund  
MassMutual Select Overseas Fund  
MassMutual Small Cap Growth Equity Fund  
MassMutual Small Cap Opportunities Fund  
MassMutual Small Cap Value Equity Fund  
MassMutual Strategic Bond Fund  
MassMutual Ventures Europe/APAC I GP, LLC  
Miami Douglas Three MM, LLC  
MM Ascend Mtg. Lending LLC  
MM CM Holding LLC  
MM Copper Hill Road LLC  
MM Debt Participations LLC  
MM Direct Private Investments Holding LLC  
MM Direct Private Invetment Holding  
MM Global Capabilities I LLC  
MM Global Capabilities II LLC  
MM Global Capabilities III LLC  
MM Investment Holding

**MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

MML Investment Advisers, LLC  
MML Private Equity Fund Investor LLC  
MML Private Placement Investment Company I, LLC  
MML Series International Equity Fund  
MML Special Situations Investor LLC  
MML Strategic Distributors, LLC  
MMV CTF I GP LLC  
MSP-SC, LLC  
Paco France Logistics LLC  
Pioneers Gate LLC  
Riverwalk MM Member, LLC  
Ten Fan Pier Boulevard LLC  
The MassMutual Trust Company, FSB  
Timberland Forest Holding LLC  
Tower Square Capital Partners IIIA, L.P.  
Unna, Dortmund Holding LLC  
Washington Pine LLC

**Subsidiaries of MassMutual Holding LLC**

Barings LLC  
Fern Street LLC  
Haven Life Insurance Agency, LLC  
HB Naples Golf Owner LLC  
Intermodal Holding II LLC  
LifeScore Labs, LLC  
Marco Hotel LLC  
MassMutual Assignment Company  
MassMutual Capital Partners LLC  
MassMutual Ventures Holding LLC  
MM Asset Management Holding LLC  
MM Catalyst Fund II LLC  
MM Catalyst Fund LLC  
MM Rothesay Holdco US LLC  
MML Investors Services, LLC  
RB Apartments LLC  
Sleeper Street LLC

**Subsidiaries of C.M. Life Insurance Company**

CM Life Mortgage Lending LLC  
CML Mezzanine Investor III, LLC  
CML Special Situations Investor LLC  
MML Bay State Life Insurance Company

**Subsidiaries of MML Bay State Life Insurance Company**

(No subsidiaries)

**Subsidiaries of MML Investment Advisers, LLC**

(No Subsidiaries)

**Subsidiaries of MassMutual International LLC**

MassMutual Asia Limited (SPV)  
MassMutual Solutions LLC

**Subsidiaries of MassMutual Solutions LLC**

Haven Technologies Asia Limited

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

Subsidiaries of Copper Hill Road LLC  
(No Subsidiaries)

Subsidiaries of MM Investment Holding  
MML Management Corporation  
MMIH Bond Holdings LLC – 99.61%

Subsidiaries of DPI Acres Capital SPV LLC  
(No Subsidiaries)

Subsidiaries of The MassMutual Trust Company, FSB  
(No Subsidiaries)

Subsidiaries of ITPS Holding LLC  
HITPS LLC

Subsidiaries of JFIN Parent LLC  
Apex Credit Holdings LLC  
Custom Ecology Holdco, LLC  
Tomorrow Parent, LLC  
Jefferies Finance LLC LLC – 50%

Subsidiaries of Glidepath Holdings Inc  
MassMutual Ascend Life Insurance Company

Subsidiaries of Martello Re Limited  
(No Subsidiaries)

Subsidiaries of MML Strategic Distributors, LLC  
(No Subsidiaries)

Subsidiaries of MML CM LLC  
Blueprint Income LLC  
Flourish Holding Company LLC

Subsidiaries of Insurance Road LLC  
MassMutual Intellectual Property LLC  
MassMutual Trad Private Equity LLC  
Trad Investments I LLC

Subsidiaries of MM Rothesay Holdco US LLC  
Rothesay Limited

Subsidiaries of Rothesay Limited  
Rothesay Asset Management UK Limited  
Rothesay Foundation  
Rothesay Life Plc  
Rothesay Mortgages Limited  
Rothesay Pensions Management Limited

Subsidiaries of Baring Asset Management Limited (an indirect subsidiary of Barings LLC)  
Baring Fund Managers Limited  
Baring International Investment Limited  
Baring Investment Services Limited  
Barings BME GP S.à.r.l.  
Barings Core Fund Feeder I GP S.à.r.l.

MML BAY STATE LIFE INSURANCE COMPANY  
NOTES TO STATUTORY FINANCIAL STATEMENTS, continued

Barings European Core Property Fund GP Sàrl  
Barings European Direct Lending 1 GP LLP  
Barings GPC GP S.à. r.l.  
Barings Investment Fund (LUX) GP S.à. r.l.  
Barings Umbrella Fund (LUX) GP S.à.r.l.  
GPLF4(S) GP S.à r. 1  
PREIF Holdings Limited Partnership

Subsidiaries of Baring International Investment Limited

(No subsidiaries)

**16. Subsequent events**

Management of the Company has evaluated subsequent events through February 27, 2024, the date the financial statements were available to be issued to state regulators and subsequently on the Company's website. No events have occurred subsequent to the date of the Statements of Financial Position.

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

**17. Impairment listing for loan-backed and structured securities**

The following are the total cumulative adjustments and impairments for loan-backed and structured securities since July 1, 2009:

Period Ended	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
December 31, 2023	\$ 135,844	\$ -	\$ 135,844	\$ 130,490	\$ (5,354)	\$ 130,490	\$ 105,515
September 30, 2023	74,507	-	74,507	72,723	(1,784)	72,723	67,736
June 30, 2023	64,028	-	64,028	63,592	(436)	63,592	57,835
March 31, 2023	66,564	-	66,564	63,566	(2,998)	63,566	59,093
December 31, 2022	166,637	-	166,637	158,762	(7,875)	158,762	153,083
September 30, 2022	134,938	-	134,938	125,495	(9,442)	125,495	114,620
June 30, 2022	64,745	-	64,745	62,370	(2,375)	62,370	62,586
March 31, 2022	140,707	-	140,707	129,983	(10,724)	129,983	128,496
December 31, 2021	85,732	-	85,732	81,911	(3,820)	81,912	76,952
June 30, 2021	152,001	-	152,001	147,872	(4,129)	147,872	151,665
March 31, 2021	93,988	-	93,988	90,012	(3,976)	90,012	80,737
December 31, 2020	95,926	-	95,926	94,337	(1,589)	94,337	85,603
March 31, 2019	21,072	-	21,072	19,523	(1,549)	19,523	572
December 31, 2018	18,632	-	18,632	1,599	(17,033)	1,599	1,903
June 30, 2017	342	-	342	267	(76)	267	2,967
March 31, 2017	94,424	-	94,424	53,149	(41,274)	53,149	89,279
December 31, 2016	110,964	-	110,964	109,147	(1,816)	109,147	104,908
September 30, 2016	118,384	-	118,384	117,539	(845)	117,539	112,771
June 30, 2016	76,837	-	76,837	70,385	(6,452)	70,385	72,517
September 30, 2015	79,533	-	79,533	77,197	(2,337)	77,197	76,961
December 31, 2014	7,387	-	7,387	5,752	(1,635)	5,752	24,010
March 31, 2014	11,682	-	11,686	11,342	(340)	11,342	13,573
December 31, 2013	8,955	-	8,955	7,967	(989)	7,967	11,477
September 30, 2013	5,947	-	5,947	5,842	(104)	5,842	5,478
June 30, 2013	456,120	-	456,120	445,397	(10,723)	445,397	340,977
December 31, 2012	1,242,596	-	1,242,596	1,144,981	(97,615)	1,144,981	1,195,405
September 30, 2012	2,265,156	-	2,265,156	2,103,073	(162,083)	2,103,073	2,115,759
June 30, 2012	1,884,018	-	1,884,018	1,845,692	(38,325)	1,845,692	1,521,643
March 31, 2012	3,900,635	-	3,900,635	3,788,244	(112,391)	3,788,244	3,066,813
December 31, 2011	3,900,658	-	3,900,658	3,740,566	(160,092)	3,740,566	3,217,415
September 30, 2011	2,070,737	-	2,070,737	2,014,121	(56,616)	2,014,121	1,664,099
June 30, 2011	4,933,708	-	4,933,708	4,626,546	(307,162)	4,626,546	3,860,445
March 31, 2011	3,031,095	-	3,031,095	2,949,182	(81,913)	2,949,182	2,370,633
December 31, 2010	2,843,613	-	2,843,613	2,795,486	(48,127)	2,795,486	2,189,661
September 30, 2010	3,666,523	-	3,666,523	3,544,040	(122,482)	3,544,040	2,935,440
June 30, 2010	2,331,449	-	2,331,449	2,200,016	(131,433)	2,200,016	1,658,548
March 31, 2010	3,606,733	-	3,606,733	3,269,444	(337,290)	3,269,444	2,259,717
December 31, 2009	4,888,306	-	4,888,306	4,101,773	(786,533)	4,101,773	2,994,613
September 30, 2009	10,338,099	207,960	10,546,059	9,768,287	(777,772)	9,768,287	6,661,983
Totals		\$ 207,960			\$ (3,359,509)		

The following is the impairment listing for loan-backed and structured securities for the three months ended December 31, 2023:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
40431KAE0	\$ 47,833	\$ -	\$ 47,833	\$ 46,563	\$ (1,270)	\$ 46,563	\$ 46,872
61750FAE0	88,011	-	88,011	83,927	(4,084)	83,927	58,643
Totals	\$ 135,844	\$ -	\$ 135,844	\$ 130,490	\$ (5,354)	\$ 130,490	\$ 105,515

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The following is the impairment listing for loan-backed and structured securities for the three months ended September 30, 2023:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
40431KAE0	\$ 48,017	\$ -	\$ 48,017	\$ 47,312	\$ (705)	\$ 47,312	\$ 45,025
86359A6A6	26,490	-	26,490	25,411	(1,079)	25,411	22,711
<b>Totals</b>	<b>\$ 74,507</b>	<b>\$ -</b>	<b>\$ 74,507</b>	<b>\$ 72,723</b>	<b>\$ (1,784)</b>	<b>\$ 72,723</b>	<b>\$ 67,736</b>

The following is the impairment listing for loan-backed and structured securities for the three months ended June 30, 2023:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
61750FAE0	\$ 64,028	\$ -	\$ 64,028	\$ 63,592	\$ (436)	\$ 63,592	\$ 57,835
<b>Totals</b>	<b>\$ 64,028</b>	<b>\$ -</b>	<b>\$ 64,028</b>	<b>\$ 63,592</b>	<b>\$ (436)</b>	<b>\$ 63,592</b>	<b>\$ 57,835</b>

The following is the impairment listing for loan-backed and structured securities for the three months ended March 31, 2023:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
61750FAE0	\$ 66,564	\$ -	\$ 66,564	\$ 63,566	\$ (2,998)	\$ 63,566	\$ 59,093
<b>Totals</b>	<b>\$ 66,564</b>	<b>\$ -</b>	<b>\$ 66,564</b>	<b>\$ 63,566</b>	<b>\$ (2,998)</b>	<b>\$ 63,566</b>	<b>\$ 59,093</b>

The following is the impairment listing for loan-backed and structured securities for the three months ended December 31, 2022:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
40431KAE0	\$ 50,627	\$ -	\$ 50,627	\$ 47,922	\$ (2,705)	\$ 47,922	\$ 48,236
61750FAE0	69,028	-	69,028	66,099	(2,928)	66,099	58,776
589929X29	46,982	-	46,982	44,740	(2,241)	44,740	46,071
<b>Totals</b>	<b>\$ 166,637</b>	<b>\$ -</b>	<b>\$ 166,637</b>	<b>\$ 158,762</b>	<b>\$ (7,875)</b>	<b>\$ 158,762</b>	<b>\$ 153,083</b>

The following is the impairment listing for loan-backed and structured securities for the three months ended September 31, 2022:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
40431KAE0	\$ 52,177	\$ -	\$ 52,177	\$ 50,186	\$ (1,991)	\$ 50,186	\$ 48,254
61750FAE0	76,177	-	76,177	68,740	(7,437)	68,740	59,722
22540VG71	6,584	-	6,584	6,569	(15)	6,569	6,644
<b>Totals</b>	<b>\$ 134,938</b>	<b>\$ -</b>	<b>\$ 134,938</b>	<b>\$ 125,495</b>	<b>\$ (9,442)</b>	<b>\$ 125,495</b>	<b>\$ 114,620</b>

The following is the impairment listing for loan-backed and structured securities for the three months ended June 30, 2022:

	Amortized Cost						
--	----------------	--	--	--	--	--	--

CUSIP	before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
589929X29	\$ 64,745	\$ -	\$ 64,745	\$ 62,370	\$ (2,375)	\$ 62,370	\$ 62,586

**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The following is the impairment listing for loan-backed and structured securities for the three months ended March 31, 2022:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
40431KAE0	\$ 58,570	\$ -	\$ 58,570	\$ 53,552	\$ (5,018)	\$ 53,552	\$ 58,296
61750FAE0	82,137	-	82,137	76,431	(5,706)	76,431	70,200
Totals	\$ 140,707	\$ -	\$ 140,707	\$ 129,983	\$ (10,724)	\$ 129,983	\$ 128,496

The following is the impairment listing for loan-backed and structured securities for the three months ended December 31, 2021:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
61750FAE0	\$ 85,732	\$ -	\$ 85,732	\$ 81,912	\$ (3,820)	\$ 81,912	\$ 76,952

The following is the impairment listing for loan-backed and structured securities for the three months ended June 30, 2021:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
40431KAE0	\$ 62,425	\$ -	\$ 62,425	\$ 61,595	\$ (830)	\$ 61,595	\$ 72,006
61750FAE0	89,576	-	89,576	86,277	(3,299)	86,277	79,659
Totals	\$ 152,001	\$ -	\$ 152,001	\$ 147,872	\$ (4,129)	\$ 147,872	\$ 151,665

The following is the impairment listing for loan-backed and structured securities for the three months ended March 31, 2021:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
61750FAE0	\$ 93,988	\$ -	\$ 93,988	\$ 90,012	\$ (3,976)	\$ 90,012	\$ 80,737

The following is the impairment listing for loan-backed and structured securities for the three months ended December 31, 2020:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
61750FAE0	\$ 95,926	\$ -	\$ 95,926	\$ 94,337	\$ (1,589)	\$ 94,337	\$ 85,603

There were no impairments on loan-backed or structured securities for the three months ended September 30, 2020.

There were no impairments on loan-backed or structured securities for the three months ended June 30, 2020.

There were no impairments on loan-backed or structured securities for the three months ended March 31, 2020.

There were no impairments on loan-backed or structured securities for the three months ended December 31, 2019.

There were no impairments on loan-backed or structured securities for the three months ended September 30, 2019.

There were no impairments on loan-backed or structured securities for the three months ended June 30, 2019.



**MML BAY STATE LIFE INSURANCE COMPANY**  
**NOTES TO STATUTORY FINANCIAL STATEMENTS, continued**

The following is the impairment listing for loan-backed and structured securities for the three months ended March 31, 2019:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
65106FAG7	\$ 21,072	\$ -	\$ 21,072	\$ 19,523	\$ (1,549)	\$ 19,523	\$ 572

The following is the impairment listing for loan-backed and structured securities for the three months ended December 31, 2018:

CUSIP	Amortized Cost before Cumulative Adjustment	Cumulative Adjustment	Amortized Cost before OTTI	Projected Cash Flow	Recognized OTTI	Amortized Cost after OTTI	Fair Value
65106FAG7	\$ 18,632	\$ -	\$ 18,632	\$ 1,599	\$ (17,033)	\$ 1,599	\$ 1,903

There were no impairments on loan-backed or structured securities for the three months ended September 30, 2018.

There were no impairments on loan-backed or structured securities for the three months ended June 30, 2018.

There were no impairments on loan-backed or structured securities for the three months ended March 31, 2018.



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 Policy Owners of MML Bay State Variable Life Separate Account I:

*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 Life Separate Account I (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, 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.

/s/ KPMG LLP

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

Boston, Massachusetts  
March 7, 2024

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KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

## Appendix A

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

### **Divisions**

American Century VP Disciplined Core Value Division  
Fidelity® VIP Contrafund® Division  
Invesco V.I. Capital Appreciation Division  
Invesco V.I. Discovery Mid Cap Growth Division  
Invesco V.I. Global Division  
Invesco V.I. Global Strategic Income Division  
MML Blend Division  
MML Equity Division  
MML Equity Index Division  
MML Managed Bond Division  
MML Small Cap Equity Division  
MML U.S. Government Money Market Division  
T. Rowe Price Mid-Cap Growth Division

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**MML Bay State Variable Life Separate Account I**

**STATEMENTS OF ASSETS AND LIABILITIES**

**December 31, 2023**

	American Century VP Disciplined Core Value Division	Fidelity® VIP Contrafund® Division	Invesco V.I. Capital Appreciation Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division	Invesco V.I. Global Strategic Income Division	MML Blend Division	MML Equity Division
<b>ASSETS</b>								
Investments								
Number of shares	1,409,290	807,436	1,789,395	1,186,560	2,420,291	1,268,113	4,725,294	10,536,162
Identified cost	\$ 12,586,011	\$ 30,951,378	\$ 85,904,775	\$ 87,274,883	\$ 90,028,206	\$ 6,122,451	\$ 99,293,951	\$ 273,329,495
Value	\$ 10,809,253	\$ 39,265,628	\$ 84,226,830	\$ 74,527,815	\$ 88,485,831	\$ 5,440,206	\$ 91,924,514	\$ 276,812,713
Receivable from MML Bay State Life Insurance Company	-	1	-	-	2	-	-	-
<b>Total assets</b>	<b>10,809,253</b>	<b>39,265,629</b>	<b>84,226,830</b>	<b>74,527,815</b>	<b>88,485,833</b>	<b>5,440,206</b>	<b>91,924,514</b>	<b>276,812,713</b>
<b>LIABILITIES</b>								
Payable to MML Bay State Life Insurance Company	1	-	-	-	-	-	27,534	2,704
<b>Total liabilities</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>27,534</b>	<b>2,704</b>
<b>NET ASSETS</b>	<b>\$ 10,809,252</b>	<b>\$ 39,265,629</b>	<b>\$ 84,226,830</b>	<b>\$ 74,527,815</b>	<b>\$ 88,485,833</b>	<b>\$ 5,440,206</b>	<b>\$ 91,924,514</b>	<b>\$ 276,812,713</b>
Outstanding units								
Policy owners	<b>3,059,546</b>	<b>5,758,525</b>	<b>7,311,210</b>	<b>9,594,551</b>	<b>9,409,770</b>	<b>1,657,094</b>	<b>10,895,854</b>	<b>33,654,588</b>
<b>UNIT VALUE</b>								
Variable Life (Note 3G)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Variable Life Plus	-	-	-	-	-	4.46	-	13.03
Variable Life Select	3.53	6.82	11.52	7.77	11.85	3.28	5.91	6.31

*See Notes to Financial Statements.*

**MML Bay State Variable Life Separate Account I**

**STATEMENTS OF ASSETS AND LIABILITIES (Continued)**

**December 31, 2023**

	<b>MML Equity Index Division</b>	<b>MML Managed Bond Division</b>	<b>MML Small Cap Equity Division</b>	<b>MML U.S. Government Money Market Division</b>	<b>T. Rowe Price Mid-Cap Growth Division</b>
<b>ASSETS</b>					
Investments					
Number of shares	972,286	1,018,815	878,993	6,269,825	1,643,837
Identified cost	\$ 27,046,502	\$ 12,581,182	\$ 8,463,240	\$ 6,269,720	\$ 46,124,765
Value	\$ 29,197,753	\$ 11,059,025	\$ 9,601,706	\$ 6,269,825	\$ 47,852,088
Receivable from MML Bay State Life Insurance Company	1	133	-	-	-
<b>Total assets</b>	<b>29,197,754</b>	<b>11,059,158</b>	<b>9,601,706</b>	<b>6,269,825</b>	<b>47,852,088</b>
<b>LIABILITIES</b>					
Payable to MML Bay State Life Insurance Company	-	-	-	3,444	1
<b>Total liabilities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,444</b>	<b>1</b>
<b>NET ASSETS</b>	<b>\$ 29,197,754</b>	<b>\$ 11,059,158</b>	<b>\$ 9,601,706</b>	<b>\$ 6,266,381</b>	<b>\$ 47,852,087</b>
Outstanding units					
Policy owners	6,581,093	3,062,200	1,582,716	3,834,968	5,755,726
<b>UNIT VALUE</b>					
Variable Life (Note 3G)	\$ -	\$ -	\$ -	\$ -	\$ -
Variable Life Plus	4.29	5.66	-	2.27	7.46
Variable Life Select	4.58	2.99	6.07	1.52	9.21

*See Notes to Financial Statements.*

**MML Bay State Variable Life Separate Account I**

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

	American Century VP Disciplined Core Value Division	Fidelity® VIP Contrafund® Division	Invesco V.I. Capital Appreciation Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division	Invesco V.I. Global Strategic Income Division	MML Blend Division	MML Equity Division
<b>Investment Income</b>								
Dividends	\$ 160,668	\$ 174,517	\$ -	\$ -	\$ 185,188	\$ -	\$ 1,486,901	\$ 5,668,534
Interest Income on Policy loans (Note 3F)	-	-	-	-	-	-	8,442	53,885
<b>Total Income</b>	<b>160,668</b>	<b>174,517</b>	<b>-</b>	<b>-</b>	<b>185,188</b>	<b>-</b>	<b>1,495,343</b>	<b>5,722,419</b>
<b>Expenses</b>								
Mortality and expense risk fees	57,356	193,990	416,340	397,208	422,139	29,108	406,980	1,305,204
<b>Net investment income (loss)</b>	<b>103,312</b>	<b>(19,473)</b>	<b>(416,340)</b>	<b>(397,208)</b>	<b>(236,951)</b>	<b>(29,108)</b>	<b>1,088,363</b>	<b>4,417,215</b>
<b>Net realized and unrealized gain (loss) on investments</b>								
Realized gain (loss) on sale of fund shares	(360,929)	684,812	(2,435,878)	365,252	(570,584)	(125,431)	(1,139,505)	3,522,856
Realized gain distribution	-	1,263,244	-	-	9,364,905	-	-	21,600,766
Realized gain (loss)	(360,929)	1,948,056	(2,435,878)	365,252	8,794,321	(125,431)	(1,139,505)	25,123,622
Change in net unrealized appreciation/depreciation of investments	1,067,087	8,003,339	25,359,194	8,627,500	14,726,296	578,741	13,879,972	(6,814,795)
<b>Net gain (loss) on investments</b>	<b>706,158</b>	<b>9,951,395</b>	<b>22,923,316</b>	<b>8,992,752</b>	<b>23,520,617</b>	<b>453,310</b>	<b>12,740,467</b>	<b>18,308,827</b>
<b>Net increase (decrease) in net assets resulting from operations</b>								
Capital transactions:								
Transfers of net premiums	309,944	922,680	2,095,996	2,236,876	2,498,875	323,480	3,172,570	9,365,897
Transfers due to death benefits	(202,173)	(340,643)	(1,219,972)	(510,359)	(582,350)	(97,023)	(844,421)	(3,711,743)
Transfers due to withdrawal of funds	(333,066)	(846,740)	(2,519,489)	(2,899,815)	(2,846,365)	(130,090)	(2,820,815)	(10,397,833)
Transfers due to policy loans, net of repayments	(197,638)	(327,738)	(562,983)	(765,147)	(1,018,601)	(37,928)	(550,404)	(2,381,281)
Transfers due to cost of insurance	-	-	-	-	-	-	(106,434)	(172,125)
Transfers due to administrative charges	(388,940)	(1,484,017)	(2,931,508)	(2,865,758)	(3,341,746)	(315,061)	(4,370,768)	(12,243,731)
Transfers between divisions and to/from General Account	69,458	(259,078)	(540,900)	(533,659)	3,944	34,451	(462,618)	(1,394,865)
Net increase (decrease) in net assets resulting from capital transactions	(742,415)	(2,335,536)	(5,678,856)	(5,337,862)	(5,286,243)	(222,171)	(5,982,890)	(20,935,681)
<b>Total increase (decrease)</b>	<b>67,055</b>	<b>7,596,386</b>	<b>16,828,120</b>	<b>3,257,682</b>	<b>17,997,423</b>	<b>202,031</b>	<b>7,845,940</b>	<b>1,790,361</b>
<b>NET ASSETS, at beginning of the year</b>	<b>10,742,197</b>	<b>31,669,243</b>	<b>67,398,710</b>	<b>71,270,133</b>	<b>70,488,410</b>	<b>5,238,175</b>	<b>84,051,040</b>	<b>275,019,648</b>
<b>NET ASSETS, at end of the year</b>	<b>\$ 10,809,252</b>	<b>\$ 39,265,629</b>	<b>\$ 84,226,830</b>	<b>\$ 74,527,815</b>	<b>\$ 88,485,833</b>	<b>\$ 5,440,206</b>	<b>\$ 91,896,980</b>	<b>\$ 276,810,009</b>

*See Notes to Financial Statements.*

**MML Bay State Variable Life Separate Account I**

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

	MML Equity Index Division	MML Managed Bond Division	MML Small Cap Equity Division	MML U.S. Government Money Market Division	T. Rowe Price Mid-Cap Growth Division
<b>Investment Income</b>					
Dividends	\$ 375,352	\$ 433,506	\$ 112,906	\$ 254,502	\$ -
Interest Income on Policy loans (Note 3F)	-	10,389	-	350	-
<b>Total Income</b>	<b>375,352</b>	<b>443,895</b>	<b>112,906</b>	<b>254,852</b>	<b>-</b>
<b>Expenses</b>					
Mortality and expense risk fees	128,225	54,511	48,622	29,237	215,976
<b>Net investment income (loss)</b>	<b>247,127</b>	<b>389,384</b>	<b>64,284</b>	<b>225,615</b>	<b>(215,976)</b>
<b>Net realized and unrealized gain (loss) on investments</b>					
Realized gain (loss) on sale of fund shares	606,206	(245,168)	(30,466)	12	41,922
Realized gain distribution	2,506,972	-	-	-	2,865,478
Realized gain (loss)	3,113,178	(245,168)	(30,466)	12	2,907,400
Change in net unrealized appreciation/depreciation of investments	2,730,324	522,454	1,405,798	(12)	5,281,871
<b>Net gain (loss) on investments</b>	<b>5,843,502</b>	<b>277,286</b>	<b>1,375,332</b>	<b>-</b>	<b>8,189,271</b>
<b>Net increase (decrease) in net assets resulting from operations</b>	<b>6,090,629</b>	<b>666,670</b>	<b>1,439,616</b>	<b>225,615</b>	<b>7,973,295</b>
Capital transactions:					
Transfers of net premiums	537,784	628,099	215,791	287,965	931,880
Transfers due to death benefits	(82,091)	(119,817)	(60,727)	(7,025)	(471,414)
Transfers due to withdrawal of funds	(903,521)	(372,774)	(313,546)	(1,388,464)	(1,343,577)
Transfers due to policy loans, net of repayments	(278,240)	(62,029)	(158,769)	(56,623)	(386,143)
Transfers due to cost of insurance	-	(15,866)	-	(5,955)	-
Transfers due to administrative charges	(951,331)	(878,519)	(329,251)	(375,829)	(1,515,712)
Transfers between divisions and to/from General Account	15,610	119,147	16,140	1,882,945	(256,277)
Net increase (decrease) in net assets resulting from capital transactions	(1,661,789)	(701,759)	(630,362)	337,014	(3,041,243)
<b>Total increase (decrease)</b>	<b>4,428,840</b>	<b>(35,089)</b>	<b>809,254</b>	<b>562,629</b>	<b>4,932,052</b>
<b>NET ASSETS, at beginning of the year</b>	<b>24,768,914</b>	<b>11,094,247</b>	<b>8,792,452</b>	<b>5,703,752</b>	<b>42,920,035</b>
<b>NET ASSETS, at end of the year</b>	<b>\$ 29,197,754</b>	<b>\$ 11,059,158</b>	<b>\$ 9,601,706</b>	<b>\$ 6,266,381</b>	<b>\$ 47,852,087</b>

*See Notes to Financial Statements.*

**MML Bay State Variable Life Separate Account I**

**STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS**

**For The Year Ended December 31, 2022**

	American Century VP Disciplined Core Value Division	Fidelity® VIP Contrafund® Division	Invesco V.I. Capital Appreciation Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division	Invesco V.I. Global Strategic Income Division	MML Blend Division	MML Equity Division
<b>Investment Income</b>								
Dividends	\$ 200,542	\$ 180,458	\$ -	\$ -	\$ -	\$ -	\$ 1,244,340	\$ 4,522,591
Interest Income on Policy loans (Note 3F)	-	-	-	-	-	-	9,746	53,190
<b>Total Income</b>	<b>200,542</b>	<b>180,458</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,254,086</b>	<b>4,575,781</b>
<b>Expenses</b>								
Mortality and expense risk fees	62,146	197,293	431,284	439,576	417,493	29,785	429,535	1,365,609
<b>Net investment income (loss)</b>	<b>138,396</b>	<b>(16,835)</b>	<b>(431,284)</b>	<b>(439,576)</b>	<b>(417,493)</b>	<b>(29,785)</b>	<b>824,551</b>	<b>3,210,172</b>
<b>Net realized and unrealized gain (loss) on investments</b>								
Realized gain (loss) on sale of fund shares	(40,104)	955,508	1,624,526	2,811,874	611,338	(134,829)	216,246	7,806,061
Realized gain distribution	2,769,312	1,710,057	27,089,061	21,929,745	13,573,877	-	1,666,249	30,231,328
Realized gain (loss)	2,729,208	2,665,565	28,713,587	24,741,619	14,185,215	(134,829)	1,882,495	38,037,389
Change in net unrealized appreciation/depreciation of investments	(4,527,452)	(14,828,211)	(59,859,483)	(58,437,613)	(48,431,532)	(566,238)	(20,949,370)	(56,926,654)
<b>Net gain (loss) on investments</b>	<b>(1,798,244)</b>	<b>(12,162,646)</b>	<b>(31,145,896)</b>	<b>(33,695,994)</b>	<b>(34,246,317)</b>	<b>(701,067)</b>	<b>(19,066,875)</b>	<b>(18,889,265)</b>
<b>Net increase (decrease) in net assets resulting from operations</b>								
Net increase (decrease) in net assets resulting from operations	(1,659,848)	(12,179,481)	(31,577,180)	(34,135,570)	(34,663,810)	(730,852)	(18,242,324)	(15,679,093)
Capital transactions:								
Transfers of net premiums	324,492	1,224,913	2,279,694	2,328,120	2,751,150	327,808	3,402,099	9,944,802
Transfers due to death benefits	(106,176)	(340,381)	(467,452)	(572,613)	(646,350)	(54,333)	(1,415,251)	(3,501,257)
Transfers due to withdrawal of funds	(164,878)	(1,279,670)	(2,406,177)	(2,596,576)	(1,888,459)	(187,175)	(2,269,264)	(7,368,865)
Transfers due to policy loans, net of repayments	(19,986)	(189,736)	(267,571)	(526,303)	(441,566)	(12,311)	(4,743,370)	(1,767,474)
Transfers due to cost of insurance	-	-	-	-	-	-	(113,074)	(169,073)
Transfers due to administrative charges	(397,117)	(1,468,193)	(2,883,707)	(2,947,401)	(3,181,756)	(305,984)	(4,346,324)	(12,199,223)
Transfers between divisions and to/from General Account	11,603	(64,528)	(124,400)	(150,210)	(469,334)	8,526	169,706	(37,368)
Net increase (decrease) in net assets resulting from capital transactions	(352,062)	(2,117,595)	(3,869,613)	(4,464,983)	(3,876,315)	(223,469)	(9,315,478)	(15,098,458)
<b>Total increase (decrease)</b>	<b>(2,011,910)</b>	<b>(14,297,076)</b>	<b>(35,446,793)</b>	<b>(38,600,553)</b>	<b>(38,540,125)</b>	<b>(954,321)</b>	<b>(27,557,802)</b>	<b>(30,777,551)</b>
<b>NET ASSETS, at beginning of the year</b>								
<b>NET ASSETS, at end of the year</b>	<b>\$ 10,742,197</b>	<b>\$ 31,669,243</b>	<b>\$ 67,398,710</b>	<b>\$ 71,270,133</b>	<b>\$ 70,488,410</b>	<b>\$ 5,238,175</b>	<b>\$ 84,051,040</b>	<b>\$ 275,019,648</b>

*See Notes to Financial Statements.*

**MML Bay State Variable Life Separate Account I**

**STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS (Continued)**

**For The Year Ended December 31, 2022**

	MML Equity Index Division	MML Managed Bond Division	MML Small Cap Equity Division	MML U.S. Government Money Market Division	T. Rowe Price Mid-Cap Growth Division
<b>Investment Income</b>					
Dividends	\$ 866,508	\$ 389,691	\$ 65,588	\$ 72,720	\$ -
Interest Income on Policy loans (Note 3F)	-	10,039	-	324	-
<b>Total Income</b>	<b>866,508</b>	<b>399,730</b>	<b>65,588</b>	<b>73,044</b>	<b>-</b>
<b>Expenses</b>					
Mortality and expense risk fees	313,504	62,306	51,019	31,141	223,690
<b>Net investment income (loss)</b>	<b>553,004</b>	<b>337,424</b>	<b>14,569</b>	<b>41,903</b>	<b>(223,690)</b>
<b>Net realized and unrealized gain (loss) on investments</b>					
Realized gain (loss) on sale of fund shares	(4,564,182)	(281,290)	15,082	7	348,906
Realized gain distribution	4,257,852	130,397	1,097,997	-	1,340,502
Realized gain (loss)	(306,330)	(150,893)	1,113,079	7	1,689,408
Change in net unrealized appreciation/depreciation of investments	(17,988,970)	(2,392,532)	(2,908,661)	(7)	(15,002,536)
<b>Net gain (loss) on investments</b>	<b>(18,295,300)</b>	<b>(2,543,425)</b>	<b>(1,795,582)</b>	<b>-</b>	<b>(13,313,128)</b>
<b>Net increase (decrease) in net assets resulting from operations</b>	<b>(17,742,296)</b>	<b>(2,206,001)</b>	<b>(1,781,013)</b>	<b>41,903</b>	<b>(13,536,818)</b>
Capital transactions:					
Transfers of net premiums	561,907	927,316	234,263	358,622	961,320
Transfers due to death benefits	(41,788,654)	(334,655)	(17,261)	(2,421)	(409,096)
Transfers due to withdrawal of funds	2,049,038	(436,104)	(305,212)	(504,790)	(1,371,714)
Transfers due to policy loans, net of repayments	(151,164)	(183,989)	(28,570)	(57,162)	(413,488)
Transfers due to cost of insurance	-	(17,487)	-	(6,266)	-
Transfers due to administrative charges	(1,488,436)	(878,334)	(334,157)	(371,756)	(1,540,086)
Transfers between divisions and to/from General Account	(23,984)	(77,234)	41,379	266,714	(607,665)
Net increase (decrease) in net assets resulting from capital transactions	(40,841,293)	(1,000,487)	(409,558)	(317,059)	(3,380,729)
<b>Total increase (decrease)</b>	<b>(58,583,589)</b>	<b>(3,206,488)</b>	<b>(2,190,571)</b>	<b>(275,156)</b>	<b>(16,917,547)</b>
<b>NET ASSETS, at beginning of the year</b>	<b>83,352,503</b>	<b>14,300,735</b>	<b>10,983,023</b>	<b>5,978,908</b>	<b>59,837,582</b>
<b>NET ASSETS, at end of the year</b>	<b>\$ 24,768,914</b>	<b>\$ 11,094,247</b>	<b>\$ 8,792,452</b>	<b>\$ 5,703,752</b>	<b>\$ 42,920,035</b>

*See Notes to Financial Statements.*

## ***MML Bay State Variable Life Separate Account I***

### ***Notes To Financial Statements***

#### **1. ORGANIZATION**

MML Bay State Variable Life Separate Account I (“the Separate Account”) is a separate investment account of MML Bay State Life Insurance Company (“MML Bay State”) established on June 9, 1982. 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 three segments within the Separate Account: Variable Life, Variable Life Plus, and Variable Life Select.

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 that invest in the following mutual funds. All of the funds may not be available to all of the three segments of the Separate Account:

<b>Divisions</b>	<b>The division listed in the first column invests in the fund in this column</b>
American Century VP Disciplined Core Value Division	American Century VP Disciplined Core Value Fund <sup>1</sup>
Fidelity® VIP Contrafund® Division	Fidelity® VIP Contrafund® Portfolio <sup>2</sup>
Invesco V.I. Capital Appreciation Division	Invesco V.I. Capital Appreciation Fund <sup>3</sup>
Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Discovery Mid Cap Growth Fund <sup>3</sup>
Invesco V.I. Global Division	Invesco V.I. Global Fund <sup>3</sup>
Invesco V.I. Global Strategic Income Division	Invesco V.I. Global Strategic Income Fund <sup>3</sup>
MML Blend Division	MML Blend Fund <sup>4</sup>
MML Equity Division	MML Equity Fund <sup>4</sup>
MML Equity Index Division	MML Equity Index Fund <sup>4</sup>
MML Managed Bond Division	MML Managed Bond Fund <sup>4</sup>
MML Small Cap Equity Division	MML Small Cap Equity Fund <sup>4</sup>
MML U.S. Government Money Market Division	MML U.S. Government Money Market Fund <sup>4</sup>
T. Rowe Price Mid-Cap Growth Division	T. Rowe Price Mid-Cap Growth Portfolio <sup>5</sup>

In addition to the thirteen divisions, some policy owners may also allocate funds to the Guaranteed Principal Account (“GPA”), 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 GPA are not registered under the Securities Act of 1933, and the General Account and the GPA are not registered as an investment company under the 1940 Act.

<sup>1</sup>American Century Investment Management, Inc. is the investment adviser to this Fund.

<sup>2</sup>Fidelity Management & Research Company LLC is the investment adviser to this Portfolio.

<sup>3</sup>Invesco Advisers, Inc. is the investment adviser to this Fund.

<sup>4</sup>MML Investment Advisers, LLC is the investment adviser to this Fund.

<sup>5</sup>T. Rowe Price Associates, Inc. is the investment adviser to this Portfolio.

**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 Life Separate Account I 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 policies, 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. Policy Charges**

See Note 8B for charges associated with the policies.

**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. Policy Loans**

When a policy loan is made, the Separate Account transfers the amount of the loan to MML Bay State, thereby decreasing both the investments and the net assets of the Separate Account by an equal amount. The policy owner is charged interest on the outstanding policy loan amount generally equal to either a fixed interest rate of 5% to 6% per year or (in all jurisdictions except Arkansas) an adjustable loan rate. The adjustable loan rate is determined each year for the following policy year.

As long as a loan is outstanding, a portion of the policy account value equal to the loan is invested in the GPA. The amount of the loan earns interest at a rate equal to the greater of either a fixed interest rate generally equal to 3% to 4% of the loan or the policy loan rate less the loan interest rate expense charge. The loan interest rate expense charge represents the difference (cost) between the loan interest rate charged and the interest credited on loaned amounts. This amount does not participate in the Separate Account's investment performance.

Interest income is earned on loans on the accrual basis. Interest income presented in the Statement of Operations represents interest credited by MML Bay State to policyholders of the Variable Life product on their outstanding loan balance.

## **Notes To Financial Statements (Continued)**

### **G. Policy Owner's Share of Net Assets**

The policy owner's share of net assets in the Variable Life Segment is expressed in terms of dollars rather than shares or units of investments. Charges assessed by the Separate Account, for the Variable Life Segment as noted in Note 8B, shown as a reduction in units, or a redemption of units, are a reduction of assets.

### **H. Life Reserves**

Life reserves are developed by using accepted actuarial methods and are computed using the 1958 CSO or 1980 CSO mortality tables.

## **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 policies sold by its registered representatives, and MML Strategic Distributors, LLC ("MSD") serves as principal underwriter of the policies 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 policies by MMLIS registered representatives are paid on behalf of MMLIS to its registered representatives. Commissions for sales of policies 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 policies.

The policies are no longer offered for sale to the public. Policy owners may continue, however, to make premium payments under existing policies.

### **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. PURCHASES 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:

	<u>American Century VP Disciplined Core Value Division</u>	<u>Fidelity® VIP Contrafund® Division</u>	<u>Invesco V.I. Capital Appreciation Division</u>	<u>Invesco V.I. Discovery Mid Cap Growth Division</u>	<u>Invesco V.I. Global Division</u>
<b><u>2023</u></b>					
Cost of purchases	\$ 411,205	\$ 3,108,614	\$ 830,069	\$ 902,847	\$ 10,562,563
Proceeds from sales	(1,050,306)	(4,200,381)	(6,925,265)	(6,637,918)	(6,720,853)
<b><u>2023 (continued)</u></b>					
Cost of purchases	\$ 227,618	\$ 2,789,545	\$ 30,929,186	\$ 3,668,640	\$ 985,956
Proceeds from sales	(478,897)	(7,658,537)	(25,813,740)	(2,576,333)	(1,298,560)
<b><u>2023 (continued)</u></b>					
Cost of purchases	\$ 282,114	\$ 2,756,049	\$ 3,408,126		
Proceeds from sales	(848,192)	(2,189,901)	(3,799,867)		
<b><u>2022</u></b>					
Cost of purchases	\$ 3,251,956	\$ 3,175,761	\$ 28,323,295	\$ 22,927,847	\$ 15,212,035
Proceeds from sales	(696,309)	(3,600,133)	(5,535,133)	(5,902,664)	(5,931,963)
<b><u>2022 (continued)</u></b>					
Cost of purchases	\$ 234,620	\$ 4,423,137	\$ 38,791,652	\$ 5,399,385	\$ 1,881,263
Proceeds from sales	(487,874)	(11,249,893)	(20,473,010)	(41,429,821)	(2,413,815)
<b><u>2022 (continued)</u></b>					
Cost of purchases	\$ 1,359,177	\$ 1,699,951	\$ 1,735,485		
Proceeds from sales	(656,170)	(1,975,195)	(3,999,407)		

**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:

	American Century VP Disciplined Core Value Division	Fidelity® VIP Contrafund® Division	Invesco V.I. Capital Appreciation Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division
<b>2023</b>					
Units purchased	107,833	378,107	240,402	342,023	323,291
Units withdrawn	(353,243)	(752,279)	(769,174)	(1,017,428)	(957,171)
Units transferred between divisions and to/from General Account	19,353	(31,532)	(36,845)	(55,070)	(1,307)
Net increase (decrease)	(226,057)	(405,704)	(565,617)	(730,475)	(635,187)
<b>2023 (continued)</b>					
	Invesco V.I. Global Strategic Income Division	MML Blend Division	MML Equity Division	MML Equity Index Division	MML Managed Bond Division
Units purchased	108,182	494,208	1,406,288	155,609	196,377
Units withdrawn	(188,429)	(1,196,816)	(4,017,730)	(554,761)	(427,382)
Units transferred between divisions and to/from General Account	9,553	(64,410)	(191,243)	(14,830)	35,016
Net increase (decrease)	(70,694)	(767,018)	(2,802,685)	(413,982)	(195,989)
<b>2023 (continued)</b>					
	MML Small Cap Equity Division	Government Money Market Division	T. Rowe Price Mid-Cap Growth Division	MML U.S.	
Units purchased	45,400	178,873	128,750		
Units withdrawn	(162,072)	(1,171,825)	(478,397)		
Units transferred between divisions and to/from General Account	1,285	1,228,225	(52,781)		
Net increase (decrease)	(115,387)	235,273	(402,428)		
<b>2022</b>					
	American Century VP Disciplined Core Value Division	Fidelity® VIP Contrafund® Division	Invesco V.I. Capital Appreciation Division	Invesco V.I. Discovery Mid Cap Growth Division	Invesco V.I. Global Division
Units purchased	118,872	238,073	277,921	356,749	385,178
Units withdrawn	(226,051)	(630,886)	(672,313)	(944,855)	(821,590)
Units transferred between divisions and to/from General Account	7,258	311	(2,751)	(12,407)	(126,296)
Net increase (decrease)	(99,921)	(392,502)	(397,143)	(600,513)	(562,708)
<b>2022 (continued)</b>					
	Invesco V.I. Global Strategic Income Division	MML Blend Division	MML Equity Division	MML Equity Index Division	MML Managed Bond Division
Units purchased	121,503	510,237	1,512,974	176,254	286,998
Units withdrawn	(195,664)	(1,865,112)	(3,421,615)	(11,892,808)	(561,260)
Units transferred between divisions and to/from General Account	3,376	16,606	(63,253)	(35,781)	(37,071)
Net increase (decrease)	(70,785)	(1,338,269)	(1,971,894)	(11,752,335)	(311,333)

*Notes To Financial Statements (Continued)*

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

<b>2022 (continued)</b>	<b>MML Small Cap Equity Division</b>	<b>MML U.S. Government Money Market Division</b>	<b>T. Rowe Price Mid- Cap Growth Division</b>
Units purchased	53,024	337,688	137,762
Units withdrawn	(137,057)	(733,064)	(486,666)
Units transferred between divisions and to/from General Account	7,568	194,101	(116,429)
Net increase (decrease)	<b>(76,465)</b>	<b>(201,275)</b>	<b>(465,333)</b>

**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 <sup>4</sup>	Unit Value <sup>3</sup> (Lowest to Highest)		Net Assets	Investment Income Ratio <sup>1</sup>	Expense Ratio <sup>2</sup> (Lowest to Highest)		Total Return <sup>3</sup> (Lowest to Highest)	
<b>American Century VP Disciplined Core Value Division</b>									
2023	3,059,546	\$ 3.53	\$ 10,809,252	1.54 %	%	0.55 %	%	8.06 %	
2022	3,285,604	3.27	10,742,197	1.77		0.55		(13.21)	
2021	3,385,525	3.77	12,754,107	1.08		0.55		22.97	
2020	3,536,742	3.06	10,834,755	1.95		0.55		11.20	
2019	3,820,817	2.76	10,526,528	2.06		0.55		23.27	
<b>Fidelity® VIP Contrafund® Division</b>									
2023	5,758,525	6.82	39,265,629	0.49		0.55		32.72	
2022	6,164,228	5.14	31,669,243	0.50		0.55		(26.72)	
2021	6,556,730	7.01	45,966,319	0.06		0.55		27.13	
2020	7,003,775	5.51	38,620,967	0.25		0.55		29.85	
2019	7,335,899	4.25	31,153,035	0.46		0.55		30.86	
<b>Invesco V.I. Capital Appreciation Division</b>									
2023	7,311,210	11.52	84,226,830	-		0.55		34.64	
2022	7,876,827	8.56	67,398,710	-		0.55		(31.16)	
2021	8,273,970	12.43	102,845,503	-		0.55		21.90	
2020	8,840,729	10.20	90,150,677	-		0.55		35.84	
2019	9,487,440	7.51	71,220,795	0.06		0.55		35.45	
<b>Invesco V.I. Discovery Mid Cap Growth Division</b>									
2023	9,594,551	7.77	74,527,815	-		0.55		12.53	
2022	10,325,027	6.90	71,270,133	-		0.55		(31.36)	
2021	10,925,539	10.06	109,870,686	-		0.55		18.45	
2020	11,695,792	8.49	99,300,006	0.04		0.55		39.92	
2019	12,544,680	6.07	76,121,664	-		0.55		38.60	
<b>Invesco V.I. Global Division</b>									
2023	9,409,770	4.46 to	11.85	88,485,833	0.23	0.40 to	0.55	34.00 to 34.20	
2022	10,044,958	3.32 to	8.84	70,488,410	-	0.40 to	0.55	(32.14) to (32.04)	
2021	10,607,666	4.89 to	13.03	109,028,535	-	0.40 to	0.55	14.86 to 15.03	
2020	11,350,295	4.25 to	11.34	101,575,950	0.70	0.40 to	0.55	26.94 to 27.13	
2019	12,281,128	3.34 to	8.94	86,639,327	0.90	0.40 to	0.55	31.06 to 31.26	
<b>Invesco V.I. Global Strategic Income Division</b>									
2023	1,657,094	3.28	5,440,206	-		0.55		8.29	
2022	1,727,789	3.03	5,238,175	-		0.55		(11.95)	
2021	1,798,574	3.44	6,192,496	4.69		0.55		(3.94)	
2020	1,881,821	3.58	6,745,062	5.85		0.55		2.83	
2019	2,033,209	3.49	7,086,866	1.90		0.55		10.20	
<b>MML Blend Division</b>									
2023	10,895,854	5.91 to	13.03	91,896,980	1.70	0.25 to	0.55	16.97 to 17.32	
2022	11,662,871	5.05 to	11.13	84,051,040	1.35	0.25 to	0.55	(17.05) to (16.80)	
2021	13,001,141	6.09 to	13.39	111,608,842	2.13	0.25 to	0.55	14.39 to 14.74	
2020	13,705,648	5.32 to	11.69	103,264,742	-	0.25 to	0.55	12.25 to 12.58	
2019	14,297,666	4.74 to	10.40	96,542,455	2.44	0.25 to	0.55	20.72 to 21.08	
<b>MML Equity Division</b>									
2023	33,654,588	6.31 to	14.94	276,810,009	2.12	0.25 to	0.55	8.73 to 9.05	
2022	36,457,273	5.80 to	13.72	275,019,648	1.62	0.25 to	0.55	(5.17) to (4.88)	
2021	38,429,166	6.12 to	14.45	305,797,199	1.66	0.25 to	0.55	29.55 to 29.93	
2020	40,808,306	4.72 to	11.14	252,043,339	2.32	0.25 to	0.55	2.46 to 2.77	
2019	43,648,905	4.61 to	10.85	265,009,336	2.04	0.25 to	0.55	25.23 to 25.61	

**Notes To Financial Statements (Continued)**

**8. FINANCIAL HIGHLIGHTS (Continued)**

	At December 31,			For the Years Ended December 31,					
	Units <sup>4</sup>	Unit Value <sup>3</sup> (Lowest to Highest)		Net Assets	Investment Income Ratio <sup>1</sup>	Expense Ratio <sup>2</sup> (Lowest to Highest)		Total Return <sup>3</sup> (Lowest to Highest)	
		Units	Value			Expense Ratio	Total Return		
<b>MML Equity Index Division</b>									
2023	6,581,093	\$ 4.29	to \$ 4.58	\$ 29,197,754	1.40 %	0.40 %	to 0.55 %	25.24 %	to 25.43 %
2022	6,995,075	3.42	to 3.66	24,768,914	1.44	0.40	to 0.55	(18.80)	to (18.67)
2021	18,747,410	4.20	to 4.50	83,352,503	1.44	0.40	to 0.55	27.67	to 27.86
2020	19,320,454	3.29	to 3.53	67,249,189	1.87	0.40	to 0.55	17.57	to 17.74
2019	20,017,308	2.79	to 3.00	59,241,756	3.30	0.40	to 0.55	30.34	to 30.53
<b>MML Managed Bond Division</b>									
2023	3,062,200	2.99	to 5.66	\$ 11,059,158	3.94	0.25	to 0.55	6.12	to 6.43
2022	3,258,190	2.82	to 5.33	11,094,247	3.11	0.25	to 0.55	(15.47)	to (15.22)
2021	3,569,522	3.34	to 6.30	14,300,735	3.18	0.25	to 0.55	0.26	to 0.56
2020	3,716,764	3.33	to 6.27	14,862,437	0.10	0.25	to 0.55	7.12	to 7.44
2019	3,775,576	3.11	to 5.85	14,034,634	3.69	0.25	to 0.55	9.21	to 9.54
<b>MML Small Cap Equity Division</b>									
2023	1,582,716		6.07	\$ 9,601,706	1.27		0.55		17.17
2022	1,698,104		5.18	8,792,452	0.71		0.55		(16.34)
2021	1,774,568		6.19	10,983,023	0.44		0.55		22.08
2020	1,828,590		5.07	9,270,552	0.54		0.55		20.03
2019	1,946,939		4.22	8,223,169	0.47		0.55		25.77
<b>MML U.S. Government Money Market Division</b>									
2023	3,834,968	1.52	to 2.27	\$ 6,266,381	4.51	0.25	to 0.55	4.06	to 4.38
2022	3,599,695	1.46	to 2.18	5,703,752	1.21	0.25	to 0.55	0.66	to 0.96
2021	3,800,969	1.45	to 2.16	5,978,908	-	0.25	to 0.55	(0.55)	to (0.25)
2020	3,846,528	1.46	to 2.17	6,167,190	0.18	0.25	to 0.55	(0.32)	to (0.02)
2019	2,673,499	1.46	to 2.17	4,413,233	1.70	0.25	to 0.55	1.15	to 1.45
<b>T. Rowe Price Mid-Cap Growth Division</b>									
2023	5,755,726	7.46	to 9.21	\$ 47,852,087	-	0.40	to 0.55	19.30	to 19.48
2022	6,158,154	6.25	to 7.72	42,920,035	-	0.40	to 0.55	(23.00)	to (22.89)
2021	6,623,487	8.10	to 10.02	59,837,582	-	0.40	to 0.55	14.22	to 14.39
2020	7,224,874	7.08	to 8.78	57,004,665	-	0.40	to 0.55	23.13	to 23.31
2019	7,927,541	5.74	to 7.13	50,852,827	0.14	0.40	to 0.55	30.57	to 30.77

<sup>1</sup>The 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 policy 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.

<sup>2</sup>The expense ratios represent the annualized policy 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 in unit values. Charges made directly to policy owner accounts through the redemption of units and expenses of the underlying fund have been excluded.

<sup>3</sup>The total returns are for the periods indicated, including changes in the value of the underlying fund, and the expenses assessed through the reduction in unit values. These ratios do not include any expenses assessed through the redemption of units. As the total return table is presented as a range of minimum to maximum values, based on the product grouping representing the minimum and maximum expense ratio amounts, some individual policy total returns and unit values are not within the ranges presented.

<sup>4</sup>See note 3G with respect to Variable Life.

## Notes To Financial Statements (Continued)

### 8. FINANCIAL HIGHLIGHTS (Continued)

**B.** The Separate Account assesses “current” charges associated with each policy. These charges are either assessed as a direct reduction in unit values or through the redemption of units for all policies contained within the Separate Account (see note 3G). Charges shown below state charges assessed at a monthly rate unless otherwise specified.

<b>Administrative Charge</b> This charge is assessed through the redemption of units.	\$2.50 to \$6.00 per month
<b>Mortality and Expense Risk Charge</b> This charge is assessed through reduction of unit values.	Effective annual rate of 0.25% to 0.55% of the policy’s average daily net assets in the Separate Account.
<b>Mortality Charge</b> This charge is assessed through the redemption of units.	\$0.01688 to \$63.89 per \$1,000 of insurance risk
<b>Additional Mortality Fees</b> This charge is assessed through the redemption of units.	\$0.0042 to \$83.33 per \$1,000 of insurance risk \$0.08 to \$83.33 per \$1,000 of face amount
<b>Loan Interest Rate Expense Charge</b> This charge is assessed through the redemption of units.	Effective annual rate of 0.90% to 1.00% of the loan amount

<b>Rider Charges:</b>	
The rider charges do not apply to all segments within the Separate Account. These charges are assessed through the redemption of units.	
<b>A. Accidental Death Benefit</b>	\$0.06591 to \$1.42 per \$1,000 of coverage
<b>B. Death Benefit Guarantee</b>	\$0.01 per \$1,000 of face amount
<b>C. Insurability Protection</b>	\$0.043 to \$0.179 per \$1,000 of coverage
<b>D. Children’s Term</b>	\$5.00 per \$1,000 of insurance risk
<b>E. Disability Benefit</b>	\$0.041 to \$0.266 per \$1 of monthly deductions \$0.009 to \$0.149 per \$1 of specified premium
<b>F. Renewal Term</b>	\$1.53 to \$39.37 per \$1,000 of insurance risk
<b>G. Waiver of Monthly Charges</b>	\$0.036 to \$0.349 per \$1 of monthly deductions
<b>H. Waiver of Premium</b>	\$0.11 to \$3.51 per \$1,000 of insurance risk

### 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.

## PART C OTHER INFORMATION

### Item 30. Exhibits

<b>Exhibit (a)</b>	<a href="#"><u>Resolution of the Board of Directors of MML Bay State Life Insurance Company, establishing the Separate Account – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a>
<b>Exhibit (b)</b>	Not Applicable
<b>Exhibit (c)</b>	<ul style="list-style-type: none"><li>i. <a href="#"><u>Underwriting and Servicing Agreement dated December 16, 2014 by and between MML Investors Services, LLC and MML Bay State Life Insurance Company – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>ii. <a href="#"><u>Underwriting and Servicing Agreement (Distribution Servicing Agreement) dated April 1, 2014 between MML Strategic Distributors, LLC and MML Bay State Life Insurance Company – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>iii. <a href="#"><u>Template for Insurance Product Distribution Agreement (version 4/2021) (MML Strategic Distributors, LLC, Massachusetts Mutual Life Insurance Company and C.M. Life Insurance Company) – Incorporated by reference to Post-Effective Amendment No. 2 to Registration Statement File No. 333-255824 filed April 25, 2023</u></a></li></ul>
<b>Exhibit (d)</b>	<ul style="list-style-type: none"><li>i. <a href="#"><u>Form of Flexible Premium, Variable, Whole Life Insurance Policy – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>ii. <a href="#"><u>Form of Accelerated Death Benefit Rider – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>iii. <a href="#"><u>Form of Accidental Death Benefit Rider – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>iv. <a href="#"><u>Form of Death Benefit Guarantee Rider – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>v. <a href="#"><u>Form of Disability Benefit Rider – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>vi. <a href="#"><u>Form of Insurability Protection Rider – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>vii. <a href="#"><u>Form of Right to Exchange Insured Endorsement – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li></ul>
<b>Exhibit (e)</b>	<a href="#"><u>Form of application for Flexible Premium, Variable, Whole Life Insurance Policy – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a>
<b>Exhibit (f)</b>	<ul style="list-style-type: none"><li>i. <a href="#"><u>Amended and Restated Certificate of Incorporation of MML Bay State Life Insurance Company – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li><li>ii. <a href="#"><u>By-Laws of MML Bay State Life Insurance Company – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022</u></a></li></ul>
<b>Exhibit (g)</b>	Reinsurance Contracts <ul style="list-style-type: none"><li>i. American United Life Insurance Company</li></ul>

- a. [Automatic and Facultative YRT Agreement \(MML Bay State Life Insurance Company and Massachusetts Mutual Life Insurance Company\) effective February 8, 1999 and amendments dated February 8, 1999, February 8, 1999, February 8, 1999 and October 1, 1999 – Incorporated by reference to Post-Effective Amendment No. 20 to Registration Statement File No. 033-82060 filed April 25, 2012](#)
  - 1. [Amendment dated February 8, 1999 – Incorporated by reference to Post-Effective Amendment No. 20 to Registration Statement File No. 033-89798 filed April 26, 2012](#)
  - 2. [Amendments dated January 1, 1999, September 1, 1999, June 15, 2001, February 29, 2004, February 29, 2004, April 10, 2006 and September 1, 2006 – Incorporated by reference to Post-Effective Amendment No. 16 to Registration Statement File No. 333-49457 filed April 25, 2012](#)
  - 3. [Amendments effective May 1, 2012 – Incorporated by reference to Post-Effective Amendment No. 17 to Registration Statement File No. 333-49457 filed April 23, 2013](#)
  - 4. [Amendment effective March 12, 2013 – Incorporated by reference to Post-Effective Amendment No. 22 to Registration Statement File No. 033-82060 filed April 28, 2014](#)

- ii. General & Cologne Life Re

- a. [Automatic and Facultative YRT Agreement \(MML Bay State Life Insurance Company and Massachusetts Mutual Life Insurance Company\) effective February 8, 1999, and amendments dated February 8, 1999, February 8, 1999, February 8, 1999 and October 1, 1999 – Incorporated by reference to Post-Effective Amendment No. 20 to Registration Statement File No. 033-82060 filed April 25, 2012](#)
  - 1. [Amendments dated January 1, 1999, September 1, 1999, June 15, 2001, February 19, 2002, March 1, 2004, September 1, 2006, January 1, 2009, August 1, 2009 and August 1, 2011 – Incorporated by reference to Post-Effective Amendment No. 16 to Registration Statement File No. 333-49457 filed April 25, 2012](#)
  - 2. [Amendments effective January 1, 2012 and July 30, 2012 – Incorporated by reference to Post-Effective Amendment No. 17 to Registration Statement File No. 333-49457 filed April 23, 2013](#)
  - 3. [Amendment effective February 8, 1999 – Incorporated by reference to Post-Effective Amendment No. 18 to Registration Statement File No. 333-49457 filed April 28, 2014](#)
  - 4. [Amendment effective May 1, 2012 and May 21, 2013 – Incorporated by reference to Post-Effective Amendment No. 22 to Registration Statement File No. 033-82060 filed April 28, 2014](#)
  - 5. [Amendments effective August 28, 2014 and August 28, 2014 – Incorporated by reference to Post-Effective Amendment No. 23 to Registration Statement File No. 033-82060 filed April 29, 2015](#)
  - 6. [Amendment effective December 31, 2016 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-82060 filed April 28, 2021](#)
  - 7. [Amendment effective October 1, 2018 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-89798 filed April 28, 2022](#)
  - 8. [Amendment effective August 1, 2019 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-89798 filed April 28, 2022](#)

- iii. Lincoln National Life Insurance Company

- a. [Automatic and Facultative YRT Agreement \(MML Bay State Life Insurance Company and Massachusetts Mutual Life Insurance Company\) effective February 8, 1999 and amendments dated February 8, 1999, February 8, 1999, February 8, 1999 and October 1, 1999 – Incorporated by reference to Post-Effective Amendment No. 20 to Registration Statement File No. 033-82060 filed April 25, 2012](#)
  - 1. [Amendments dated January 1, 1999, September 1, 1999, June 15, 2001, March 1, 2004, November 30, 2005, September 1, 2006, October 1, 2007, January 1, 2009, August 1, 2009 and July 31, 2011 – Incorporated by reference to Post-Effective Amendment No. 16 to Registration Statement File No. 333-49457 filed April 25, 2012](#)
  - 2. [Amendments effective February 8, 1999 and July 30, 2012 – Incorporated by reference to Post-Effective Amendment No. 17 to Registration Statement File No. 333-49457 filed April 23, 2013](#)
  - 3. [Amendments effective May 1, 2012 and May 21, 2013 – Incorporated by reference to Post-Effective Amendment No. 22 to Registration Statement File No. 033-82060 filed April 28, 2014](#)
  - 4. [Amendment effective December 31, 2016 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-82060 filed April 28, 2021](#)
  - 5. [Amendments effective October 1, 2018 and August 1, 2019 – Incorporated by reference to Post-Effective Amendment No. 26 to Registration Statement File No. 333-49457 filed April 28, 2021](#)

iv. Munich American Reassurance Company

- a. [Automatic and Facultative YRT Agreement \(MML Bay State Life Insurance Company and Massachusetts Mutual Life Insurance Company\) effective February 8, 1999 and amendments dated February 8, 1999, February 8, 1999, February 8, 1999 and October 1, 1999 – Incorporated by reference to Post-Effective Amendment No. 20 to Registration Statement File No. 033-82060 filed April 25, 2012](#)
  1. [Amendments dated September 1, 2006, January 1, 2009 and August 1, 2009 – Incorporated by reference to Post-Effective Amendment No. 21 to Registration Statement File No. 333-50410 filed April 26, 2011](#)
  2. [Amendments dated January 1, 1999, September 1, 1999, June 15, 2001 and March 1, 2004 – Incorporated by reference to Post-Effective Amendment No. 16 to Registration Statement File No. 333-49457 filed April 25, 2012](#)
  3. [Amendments dated August 1, 2011 – Incorporated by reference to Post-Effective Amendment No. 4 to Registration Statement File No. 333-150916 filed April 25, 2012](#)
  4. [Amendments effective February 8, 1999 and July 30, 2012 – Incorporated by reference to Post-Effective Amendment No. 5 to Registration Statement File No. 333-150916 filed April 23, 2013](#)
  5. [Amendments effective May 1, 2012 and May 21, 2013 – Incorporated by reference to Post-Effective Amendment No. 22 to Registration Statement File No. 033-82060 filed April 29, 2014](#)
  6. [Amendments effective August 28, 2014 and August 28, 2014 – Incorporated by reference to Post-Effective Amendment No. 23 to Registration Statement File No. 033-82060 filed April 29, 2015](#)
  7. [Amendment effective December 31, 2016 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-82060 filed April 28, 2021](#)
  8. [Amendments effective October 1, 2018 and August 1, 2019 – Incorporated by reference to Post-Effective Amendment No. 17 to Registration Statement File No. 333-150916 filed April 28, 2020](#)
  9. Amendment effective January 1, 2022 – Incorporated by reference to Post-Effective Amendment No. 35 to Registration Statement File No. 333-22557 filed on or about April 25, 2024

v. RGA Reinsurance Company

- a. [Automatic and Facultative YRT Agreement \(MML Bay State Life Insurance Company and Massachusetts Mutual Life Insurance Company\) effective February 8, 1999 and amendments dated February 8, 1999, February 8, 1999, February 8, 1999 and October 1, 1999 – Incorporated by reference to Post-Effective Amendment No. 20 to Registration Statement File No. 033-82060 filed April 25, 2012](#)
  1. [Amendments dated September 1, 2006, January 1, 2009 and August 1, 2009 – Incorporated by reference to Post-Effective Amendment No. 21 to Registration Statement File No. 333-50410 filed April 26, 2011](#)
  2. [Amendments dated January 1, 1999, September 1, 1999, August 3, 2000, June 15, 2001, July 1, 2001 and March 1, 2004 – Incorporated by reference to Post-Effective Amendment No. 16 to Registration Statement File No. 333-49457 filed April 25, 2012](#)
  3. [Amendments dated August 1, 2011 – Incorporated by reference to Post-Effective Amendment No. 4 to Registration Statement File No. 333-150916 filed April 25, 2012](#)
  4. [Amendments effective January 1, 2012 and July 30, 2013 – Incorporated by reference to Post-Effective Amendment No. 5 to Registration Statement File No. 333-150916 filed April 23, 2013](#)
  5. [Amendment effective February 8, 1999 – Incorporated by reference to Post-Effective Amendment No. 6 to Registration Statement File No. 333-150916 filed April 28, 2014](#)
  6. [Amendment effective May 1, 2012 and May 21, 2013 – Incorporated by reference to Post-Effective Amendment No. 22 to Registration Statement File No. 033-82060 filed April 28, 2014](#)
  7. [Amendment effective August 1, 2013 – Incorporated by reference to Post-Effective Amendment No. 24 to Registration Statement File No. 333-50410 filed April 28, 2014](#)
  8. [Amendments effective August 28, 2014 and August 28, 2014 – Incorporated by reference to Post-Effective Amendment No. 23 to Registration Statement File No. 033-82060 filed April 29, 2015](#)
  9. [Amendment effective December 31, 2016 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-82060 filed April 28, 2021](#)
  10. [Amendments effective October 1, 2018 and August 1, 2019 – Incorporated by reference to Post-Effective Amendment No. 17 to Registration Statement File No. 333-150916 filed April 28, 2020](#)

vi. Swiss Re Life & Health America Inc.

a. [BST Modified Coinsurance Agreement \(MML Bay State Life Insurance Company and Swiss Re Life & Health America Inc.\) dated December 29, 2016 \(Portions of this exhibit have been omitted pursuant to a request for confidential treatment filed with the SEC on November 21, 2017\) – Incorporated by reference to Post-Effective Amendment No. 26 to Registration Statement File No. 033-82060 filed November 21, 2017](#)

1. [Amendment effective December 29, 2016 – Incorporated by reference to Post-Effective Amendment No. 31 to Registration Statement File No. 033-82060 filed April 28, 2021](#)
2. [Amendment effective July 1, 2021 \(\\*\)](#)

**Exhibit (h) i. Participation, Selling, Servicing Agreements:**

a. AIM Funds (Invesco Funds)

1. [Participation Agreement dated April 30, 2004 \(AIM Variable Insurance Funds, Inc., AIM Distributors, Inc. and C.M. Life Insurance Company\) – Incorporated by reference to Initial Registration Statement to Registration Statement File No. 333-259818 filed September 27, 2021](#)
  - i. [Amendment No. 1 dated April 30, 2010 – Incorporated by reference to Initial Registration Statement to Registration Statement File No. 333-259818 filed September 27, 2021](#)
  - ii. [Amendment No. 2 effective May 24, 2019 \(MML Bay State Life Insurance Company becomes a party\) – Incorporated by reference to Post-Effective Amendment No. 35 to Registration Statement File No. 333-49457 filed April 28, 2021](#)
  - iii. [Amendment dated May 3, 2021 regarding Rules 30e-3 and 498A - Incorporated by reference to Post-Effective Amendment No. 1 to Registration Statement File No. 333-259818 filed April 28, 2022](#)
2. [Financial Support Agreement dated October 1, 2016 \(Invesco Distributors, Inc. and C.M. Life Insurance Company and MML Bay State Life Insurance Company becomes a party\) – Incorporated by reference to Post-Effective Amendment No. 21 to Registration Statement File No. 333-49457 filed April 26, 2017](#)
  - i. [Amendment No. 1 effective May 24, 2019 – Incorporated by reference to Post-Effective Amendment No. 35 to Registration Statement File No. 333-49457 filed April 28, 2021](#)
  - ii. [Amendment No. 2 dated April 1, 2022 – Incorporated by reference to Post-Effective Amendment No. 1 to Registration Statement File No. 333-259818 filed April 25, 2023](#)
3. [Administrative Services Agreement dated October 1, 2016 \(Invesco Advisers, Inc. and C.M. Life Insurance Company and MML Bay State Life Insurance Company becomes a party\) – Incorporated by reference to Pre-Effective Amendment No. 1 to Registration Statement File No. 333-259818 filed December 17, 2021](#)
  - i. [Amendment No. 1 effective May 24, 2019 – Incorporated by reference to Post-Effective Amendment No. 35 to Registration Statement File No. 333-49457 filed April 28, 2021](#)

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b. Fidelity® Funds

1. [Participation Agreement dated June 1, 1999 \(Variable Insurance Products Fund II, Fidelity Distributors Corporation and MML Bay State Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022](#)
2. [Letter of Consent and Amendment dated May 16, 2007 – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022](#)
3. [Summary Prospectus Agreement effective May 1, 2011 \(Fidelity Distributors Corporation and Massachusetts Mutual Life Insurance Company, C.M. Life Insurance Company, and MML Bay State Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
4. [Service Contract dated January 1, 2004 \(MML Investors Services, LLC, MML Strategic Distributors, LLC, and MML Distributors, LLC and Massachusetts Mutual Life Insurance Company\) – Incorporated by reference to Pre-Effective Amendment No. 2 to Registration Statement File No. 333-215823 filed June 14, 2017](#)
  - i. [First Amendment dated October 1, 2008 – Incorporated by reference to Pre-Effective Amendment No. 2 to Registration Statement File No. 333-215823 filed June 14, 2017](#)
  - ii. [Second Amendment dated May 22, 2017 – Incorporated by reference to Post-Effective Amendment No. 11 to Registration Statement File No. 333-206438 filed November 15, 2021](#)
  - iii. [Third Amendment dated November 1, 2018 – Incorporated by reference to Initial Registration Statement to Registration Statement File No. 333-259818 filed September 27, 2021](#)
  - iv. [Fourth Amendment dated September 28, 2021 \(C.M. Life Insurance Company becomes a party to the Agreement\) – Incorporated by reference to Registration Statement File No. 333-206438 filed November 15, 2021](#)
5. [Service Agreement effective September 28, 2021 – Incorporated by reference to Pre-Effective Amendment No. 1 to Registration Statement File No. 333-259818 filed December 17, 2021](#)

c. Lincoln Funds

1. [Fund Participation Agreement as of May 1, 2023 \(Lincoln Variable Insurance Products Trust, Lincoln Financial Distributors, Inc., Lincoln Investment Advisors Corporation, Massachusetts Mutual Life Insurance Company and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 13 to Registration Statement No. 333-215823 filed April 25, 2023](#)
  - i. Amendment effective April 29, 2024 – Incorporated by reference to Post-Effective Amendment No. 3 to Registration Statement No. 333-259818 filed on or about April 25, 2024
2. [Administrative Services Agreement as of May 1, 2023 \(Lincoln Investment Advisors Corporation, Massachusetts Mutual Life Insurance Company and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 13 to Registration Statement No. 333-215823 filed April 25, 2023](#)
  - i. First Amendment to Administrative Services Agreement effective April 29, 2024 – Incorporated by reference to Post-Effective Amendment No. 3 to Registration Statement No. 333-259818 filed on or about April 25, 2024
3. [Distribution Services Agreement as of April 29, 2024 \(Lincoln Financial Distributors, Inc., MML Investors Services, LLC and MML Strategic Distributors, LLC\) – Incorporated by reference to Post-Effective Amendment No. 3 to Registration Statement No. 333-259818 filed on or about April 25, 2024](#)

d. MML Funds

1. [Participation Agreement dated November 17, 2005 \(MML Series Investment Fund, Massachusetts Mutual Life Insurance Company and MML Bay State Life Insurance Company and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - i. [First Amendment effective November 17, 2005 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - ii. [Second Amendment dated as of August 26, 2008 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - iii. [Third Amendment dated April 9, 2010 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - iv. [Fourth Amendment dated and effective July 23, 2010 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - v. [Fifth Amendment dated August 28, 2012 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)

- vi. [Sixth Amendment dated April 1, 2014 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
- vii. [Seventh Amendment dated August 11, 2015 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)

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- viii. [Eighth Amendment dated February 20, 2020 – Incorporated by reference to Post-Effective Amendment No. 7 to Registration Statement File No. 333-202684 filed April 28, 2020](#)
- ix. [Ninth Amendment dated June 2, 2021 regarding Rules 30e-3 and 498A – Incorporated by reference to Pre-Effective Amendment No. 1 to Registration Statement File No. 333-255824 filed August 24, 2021](#)

e. MML II Funds

- 1. [Participation Agreement dated November 17, 2005 \(MML Series Investment Fund II, Massachusetts Mutual Life Insurance Company and MML Bay State Life Insurance Company and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - i. [First Amendment effective November 17, 2005 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - ii. [Second Amendment dated as of August 26, 2008 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - iii. [Third Amendment dated as of April 9, 2010 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - iv. [Fourth Amendment dated and effective July 23, 2010 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - v. [Fifth Amendment dated August 1, 2011 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - vi. [Sixth Amendment dated and effective August 28, 2012 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - vii. [Seventh Amendment dated and effective November 12, 2012 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - viii. [Eighth Amendment dated April 1, 2014 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - ix. [Ninth Amendment dated August 11, 2015 – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)
  - x. [Tenth Amendment dated February 20, 2020 – Incorporated by reference to Post-Effective Amendment No. 7 to Registration Statement File No. 333-202684 filed April 28, 2020](#)
  - xi. [Eleventh Amendment dated June 2, 2021 regarding Rules 30e-3 and 498A – Incorporated by reference to Pre-Effective Amendment No. 1 to Registration Statement File No. 333-255824 filed August 24, 2021](#)

f. T. Rowe Price Funds

- 1. [Participation Agreement dated as of April 28, 1999 \(T. Rowe Price Equity Series, Inc., T. Rowe Price Investment Services, Inc. and MML Bay State Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022](#)
  - i. [Amendment effective August 1, 2000 – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022](#)
  - ii. [Amendment effective March 21, 2013 – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022](#)
  - iii. [Amendment dated April 7, 2021 regarding Rules 30e-3 and 498 – Incorporated by reference to Post-Effective Amendment No. 33 to Registration Statement File No. 033-82060 filed April 25, 2023](#)
- 2. [Administrative Fee Letter Agreement effective May 1, 2024 \(T. Rowe Price Services, Inc. and Massachusetts Mutual Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 3 to Registration Statement No. 333-259818 filed on or about April 25, 2024](#)
- 3. [Supplement to the Variable Insurance Portfolio Administrative Fee Agreement dated May 1, 2024 \(T. Rowe Price Associates, Inc. and Massachusetts Mutual Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 3 to Registration Statement No. 333-259818 filed on or about April 25, 2024](#)
- 4. [Distribution Services Agreement dated September 1, 2016 among T. Rowe Price Investment Services, Inc., Massachusetts Mutual Life Insurance Company, MML Investors Services, LLC and MML Distributors, LLC. – Incorporated by reference to Pre-Effective Amendment No. 1 to Registration Statement File No. 333-259818 filed December 17, 2021](#)



i. [Amendment dated December 9, 2021 – Incorporated by reference to Post-Effective Amendment No. 27 to Registration Statement File No. 333-49457 filed April 21, 2022](#)

ii. Shareholder Information Agreements (Rule 22c-2 Agreements)

a. [AIM Investment Services, Inc. effective October 16, 2007 \(Massachusetts Mutual Life Insurance Company, and C.M. Life Insurance Company\) – Incorporated by reference to Initial Registration Statement to Registration Statement File No. 333-259818 filed September 27, 2021](#)

1. [Amendment No. 1 dated June 30, 2020 – Incorporated by reference to Pre-Effective Amendment 3 to Registration Statement File No. 333-229670 filed October 2, 2020](#)

b. [Fidelity Distributors Corporation effective October 16, 2007 \(Massachusetts Mutual Life Insurance Company, MML Bay State Life Insurance Company, and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)

c. [MML Series Investment Fund effective October 16, 2007 \(Massachusetts Mutual Life Insurance Company, MML Bay State Life Insurance Company, and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)

d. [MML Series Investment Fund II effective October 16, 2007 \(Massachusetts Mutual Life Insurance Company, MML Bay State Life Insurance Company, and C.M. Life Insurance Company\) – Incorporated by reference to Post-Effective Amendment No. 28 to Registration Statement File No. 333-45039 filed June 25, 2021](#)

e. [T. Rowe Price Services, Inc., T. Rowe Price Investment Services, Inc. effective October 16, 2007 \(Massachusetts Mutual Life Insurance Company, MML Bay State Life Insurance Company and C.M. Life Insurance Company\) – Incorporated by reference to Initial Registration Statement to Registration Statement File No. 333-259818 filed September 27, 2021](#)

1. [Amendment dated as of March 1, 2017 \(T. Rowe Price Fixed Income Series, Inc. and T. Rowe Price Equity Series, Inc. are each made a party to the agreement\) – Incorporated by reference to Post-Effective Amendment No. 23 to Registration Statement File No. 333-22557 filed April 26, 2017](#)

2. [Amendment dated November 11, 2020 – Incorporated by reference to Post-Effective Amendment No. 26 to Registration Statement File No. 333-49457 filed April 28, 2021](#)

**Exhibit (i)** Not Applicable

**Exhibit (j)** Not Applicable

**Exhibit (k)** [Opinion and Consent of Counsel as to the legality of the securities being registered – Incorporated by reference to Post-Effective Amendment No. 32 to Registration Statement File No. 033-82060 filed April 28, 2022](#)

**Exhibit (l)** Not Applicable

**Exhibit (m)** Not Applicable

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**Exhibit (n)**    i.    [Auditor Consents:](#)

- Company Financial Statements (\*)
- Separate Account Financial Statements (\*)

ii.    a. Powers of Attorney for:

- Roger W. Crandall
- Paul LaPiana
- Michael J. O'Connor
- Elizabeth A. Ward

– [Incorporated by reference to Initial Registration Statement 333-274306 filed September 1, 2023](#)

b. Power of Attorney for Keith McDonagh

– Incorporated by reference to Post-Effective Amendment No. 3 to Registration Statement File No. 333-259818 filed on or about April 25, 2024

**Exhibit (o)**    Not Applicable

**Exhibit (p)**    Not Applicable

**Exhibit (q)**    SEC Procedures Memorandum dated April 29, 2024, describing Massachusetts Mutual Life Insurance Company issuance, transfer, and redemption procedures for the Policy – Incorporated by reference to Post-Effective Amendment No. 10 to Registration Statement File No. 333-229670 filed on or about April 25, 2024

(\*) filed herewith

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**Item 31. Directors and Officers of the Depositor**

**Directors of MML Bay State Life Insurance Company**

*Roger W. Crandall, Director (Chairman), President, and Chief Executive Officer*  
1295 State Street  
Springfield, MA 01111

*Michael J. O'Connor, Director, Senior Vice President, and General Counsel*  
1295 State Street  
Springfield, MA 01111

*Paul LaPiana, Director and Executive Vice President*  
1295 State Street  
Springfield, MA 01111

*Elizabeth A. Ward, Director, Executive Vice President, and Chief Financial Officer*  
1295 State Street  
Springfield, MA 01111

**Principal Officers of MML Bay State Life Insurance Company** (other than those who are also Directors, as referenced above):

*Keith McDonagh, Corporate Controller*  
10 Fan Pier Boulevard  
Boston, MA 02210

*Akintokunbo Akinbajo, Corporate Secretary*  
1295 State Street  
Springfield, MA 01111

*Julieta Sinisgalli, Treasurer*  
1295 State Street  
Springfield, MA 01111

*Eric Partlan, Executive Vice President*  
1295 State Street  
Springfield, MA 01111

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**Item 32. Persons Controlled by or Under Common Control with the Depositor or the Registrant**

– Incorporated by reference to Item 32 on Form N-6 in Post-Effective Amendment No. 3 to Registration Statement File No. 333-259818 filed on or about April 25, 2024

**Item 33. Indemnification**

MML Bay State directors and officers are indemnified under Article V of the By-laws of MML Bay State, as set forth below.

ARTICLE V of the By-laws of MML Bay State provide for indemnification of directors and officers as follows:

“ARTICLE V.

**INDEMNIFICATION**

The corporation shall, to the fullest extent and under the circumstances permitted by Connecticut law, as amended from time to time, indemnify any person serving or who has served (a) as a director, officer, employee or agent of the corporation or (b) at the corporation’s request, as a director, trustee, officer, partner, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, against all liabilities and expenses incurred by him in connection with the defense or disposition of any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative and whether formal or informal, while serving or thereafter, by reason of his having been such a director, trustee, officer, partner, employee or agent, except (unless otherwise permitted by Connecticut law) (c) in connection with a proceeding by or in the right of the corporation in which he was adjudged liable to the corporation or (d) in connection with any other proceeding charging improper personal benefit to him in which he was adjudged liable on the basis that personal benefit was improperly received by him.

Expenses, including counsel fees, reasonably incurred by any such director, trustee, officer, partner, employee or agent who is a party to a proceeding may be paid by the corporation in advance of the final disposition thereof upon receipt of a written affirmation of the person’s good faith belief that he has met the standard of conduct permitting indemnification and a written undertaking to repay the advance upon a determination that he did not meet the standard of conduct; provided, however, that a determination is also made that on the basis of the facts then known indemnification would not be precluded.

The right of indemnification hereby provided shall not be exclusive of or affect any other right to which any such director, trustee, officer, partner, employee or agent may be entitled. Nothing contained in this Article shall affect any other right to indemnification to which such persons may be entitled by contract or otherwise under law.”

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To provide certainty and more clarification regarding the indemnification provisions of the Bylaws set forth above, MassMutual has entered into indemnification agreements with certain officers who serve as a director of a subsidiary of MassMutual (a “Subsidiary Director”). Pursuant to the Agreements, MassMutual agrees to indemnify a Subsidiary Director, to the extent legally permissible, against (a) all expenses, judgments, fines and settlements (“Costs”), liabilities, and penalties paid in connection with a proceeding involving the Subsidiary Director because he or she is a director of a subsidiary of MassMutual if the Subsidiary Director (i) acted in good faith, (ii) reasonably believed the conduct was in the subsidiary’s best interests; (iii) had no reasonable cause to believe the conduct was unlawful (in a criminal proceeding); and, (iv) engaged in conduct for which the Subsidiary Director shall not be liable under MassMutual’s Charter or By-Laws. MassMutual further agrees to indemnify a Subsidiary Director, to the extent permitted by law, against all Costs paid in connection with any proceeding (i) unless the Subsidiary Director breached a duty of loyalty, (ii) except for liability for acts or omissions not in good faith, involving intentional misconduct or a knowing violation of law, (iii) except for liability under Section 6.40 of Chapter 156D of Massachusetts Business Corporation Act (“MBCA”), or (iv) except for liability related to any transaction from which the Subsidiary Director derived an improper benefit. MassMutual will also indemnify a Subsidiary Director, to the fullest extent authorized by the MBCA, against all expenses to the extent the Subsidiary Director has been successful on the merits or in defense of any proceeding. If any court determines that despite an adjudication of liability to the relevant subsidiary that the Subsidiary Director is entitled to indemnification, MassMutual will indemnify the Subsidiary Director to the extent permitted by law. Subject to the Subsidiary Director’s obligation to pay MassMutual in the event that the Subsidiary Director is not entitled to indemnification, MassMutual will pay the expenses of the Subsidiary Director prior to a final determination as to whether the Subsidiary Director is entitled to indemnification.

#### **Item 34. Principal Underwriters**

- (a) MML Investors Services, LLC (“MMLIS”) acts as principal underwriter of the contracts/policies/certificates sold by its registered representatives and MML Strategic Distributors, LLC (“MSD”) serves as principal underwriter of the contracts/policies/certificates sold by registered representatives of other broker-dealers who have entered into distribution agreements with MSD.

MMLIS and MSD either jointly or individually act as principal underwriters for:

Massachusetts Mutual Variable Life Separate Account I, Massachusetts Mutual Variable Annuity Separate Account 1, Massachusetts Mutual Variable Annuity Separate Account 2, Massachusetts Mutual Variable Annuity Separate Account 3, Massachusetts Mutual Variable Annuity Separate Account 4, Panorama Separate Account, Connecticut Mutual Variable Life Separate Account I, MML Bay State Variable Life Separate Account I, MML Bay State Variable Annuity Separate Account 1, Panorama Plus Separate Account, C.M. Multi-Account A, C.M. Life Variable Life Separate Account I, Massachusetts Mutual Variable Life Separate Account II.

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(b) MMLIS and MSD are the principal underwriters for this policy. The following people are officers and directors of MMLIS and officers and directors of MSD:

## DIRECTORS AND OFFICERS OF MML INVESTORS SERVICES, LLC

Name	Positions and Offices	Principal Business Address
John Vaccaro	Director, Chief Executive Officer, Chairman of the Board, and Agency Field Force Supervisor	(*)
Vaughn Bowman	Director and President	(*)
Geoffrey Craddock	Director	10 Fan Pier Boulevard Boston, MA 02210
Paul LaPiana	Director	(*)
Jennifer Reilly	Director	10 Fan Pier Boulevard Boston, MA 02210
David Mink	Vice President and Chief Operations Officer	11215 North Community House Rd. Charlotte, NC 28277
Frank Rispoli	Chief Financial Officer and Treasurer	(*)
Edward K. Duch, III	Chief Legal Officer, Vice President, and Secretary	(*)
Courtney Reid	Chief Compliance Officer	(*)
James P. Puhala	Deputy Chief Compliance Officer	(*)
Michael Gilliland	Deputy Chief Compliance Officer	(*)
Thomas Bauer	Chief Technology Officer	(*)
Anthony Frogameni	Chief Privacy Officer	(*)
Linda Bestepe	Vice President	(*)
Daken Vanderburg	Vice President	(*)
Brian Foley	Vice President	(*)
James Langham	Vice President	(*)
Mary B. Wilkinson	Vice President	11215 North Community House Rd. Charlotte, NC 28277
David Holtzer	Field Risk Officer	11215 North Community House Rd. Charlotte, NC 28277
Amy Francella	Assistant Secretary	(*)
Alyssa O'Connor	Assistant Secretary	(*)
Pablo Cabrera	Assistant Treasurer	(*)
Jeffrey Sajdak	Assistant Treasurer	(*)
Julieta Sinisgalli	Assistant Treasurer	(*)
Kevin Lacomb	Assistant Treasurer	(*)
Tricia Cohen	Continuing Education Officer	(*)
Mario Morton	Registration Manager	(*)
Kelly Pirrotta	AML Compliance Officer	(*)
John Rogan	Regional Vice President	(*)
Michelle Pedigo	Regional Vice President	(*)

(\*) 1295 State Street, Springfield, MA 01111-0001

## OFFICERS AND DIRECTORS OF MML STRATEGIC DISTRIBUTORS, LLC

Name	Positions and Offices	Principal Business Address
Dominic Blue	Director and Chairman of the Board	(*)
Matthew DiGangi	Director and Chief Executive Officer and President	(*)
Geoffrey Craddock	Director	10 Fan Pier Boulevard Boston, MA 02210
Jennifer Reilly	Director	10 Fan Pier Boulevard Boston, MA 02210
Frank Rispoli	Chief Financial Officer and Treasurer	(*)
Edward K. Duch, III	Chief Legal Officer, Vice President, and Secretary	(*)
James P. Puhala	Vice President and Chief Compliance Officer	(*)
Vincent Baggetta	Chief Risk Officer	(*)
Paul LaPiana	Vice President	(*)
Lisa Todd	Vice President	(*)
Delphine Soucie	Vice President	(*)
Alyssa O'Connor	Assistant Secretary	(*)
Pablo Cabrera	Assistant Treasurer	(*)
Jeffrey Sajdak	Assistant Treasurer	(*)
Julieta Sinisgalli	Assistant Treasurer	(*)
Mario Morton	Registration Manager	(*)
Kelly Pirrotta	AML Compliance Officer	(*)

(\*) 1295 State Street, Springfield, MA 01111-0001

**(c) Compensation From the Registrant**

For information about all commissions and other compensation received by each principal underwriter, directly or indirectly, from the Registrant during the Registrant's last fiscal year, refer to the "Underwriters" section of the Statement of Additional Information.

**Item 35. Location of Accounts and Records**

All accounts, books, or other documents required to be maintained by Section 31(a) of the Investment Company Act of 1940 and the rules promulgated thereunder are maintained by the Registrant through Massachusetts Mutual Life Insurance Company, 1295 State Street, Springfield, Massachusetts 01111.

**Item 36. Management Services**

Not Applicable

**Item 37. Fee Representation**

### **REPRESENTATION UNDER SECTION 26(f)(2)(A) OF THE INVESTMENT COMPANY ACT OF 1940**

MML Bay State Life Insurance Company hereby represents that the fees and charges deducted under the Variable Life Select ("VLS") policy described in this Registration Statement, in the aggregate, are reasonable in relation to the services rendered, the expenses expected to be incurred, and the risks assumed by MML Bay State Life Insurance Company.

## SIGNATURES

Pursuant to the requirements of Securities Act of 1933 and the Investment Company Act of 1940, the Registrant certifies that it meets all of the requirements for effectiveness of this registration statement under Rule 485(b) under the Securities Act and has duly caused this registration statement to be signed on its behalf by the undersigned, duly authorized, in the City of Wilmington, and the State of North Carolina on this 24<sup>th</sup> day of April, 2024.

MML BAY STATE VARIABLE LIFE SEPARATE ACCOUNT I  
(Registrant)

MML BAY STATE LIFE INSURANCE COMPANY  
(Depositor)

By ROGER W. CRANDALL\*  
Roger W. Crandall  
President and Chief Executive Officer  
(principal executive officer)  
MML Bay State Life Insurance Company

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>ROGER W. CRANDALL *</u> Roger W. Crandall	Director, President and Chief Executive Officer (principal executive officer)	April 24, 2024
<u>ELIZABETH A. WARD *</u> Elizabeth A. Ward	Chief Financial Officer (principal financial officer)	April 24, 2024
<u>KEITH MCDONAGH *</u> Keith McDonagh	Corporate Controller (principal accounting officer)	April 24, 2024
<u>MICHAEL J. O'CONNOR *</u> Michael J. O'Connor	Director	April 24, 2024
<u>PAUL LAPIANA *</u> Paul LaPiana	Director	April 24, 2024
<u>/s/ GARY F. MURTAGH</u> * Gary F. Murtagh Attorney-in-Fact pursuant to Powers of Attorney		

## **INDEX TO EXHIBITS**

<b>Item No.</b>	<b>Exhibit</b>
Item 30.	Exhibit (g)   vi. a. 2. <a href="#">Swiss Amendment effective July 1, 2021</a>
Item 30.	Exhibit (n)   i. Auditor Consents <ul style="list-style-type: none"><li>• <a href="#">Company Financial Statements</a></li><li>• <a href="#">Separate Account Financial Statements</a></li></ul>

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**AMENDMENT NO. [ ]**  
(this "Amendment")  
to the  
**BST MODIFIED COINSURANCE AGREEMENT (VL BUSINESS)**  
**Dated as of December 29, 2016**  
(the "Agreement")

between

**MML BAY STATE LIFE INSURANCE COMPANY**  
(the "Cedant")

and

**SWISS RE LIFE & HEALTH AMERICA INC.**  
(the "Reinsurer")

**Reinsurer Treaty ID: [ ]**

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Effective July 1, 2021 (the "Amendment Effective Date"), the Cedant and the Reinsurer agree to amend the Agreement in the following manner:

1. Amendment to Section 1.1 of the Agreement.

The definition of "Monthly Accounting Period" is hereby deleted and restated as follows (any reference in the Agreement to "Monthly Accounting Period" shall be updated with the below restated defined term):

"**Quarterly Accounting Period**" means each calendar-quarter period ending after the Effective Time and prior to the termination of this Agreement; provided, that (a) the initial Quarterly Accounting Period shall commence at the Effective Time and (b) the final Quarterly Accounting Period shall commence with the first calendar day of the applicable calendar quarter and end at the end of the Termination Date.

2. Amendment to Schedule 1.1(a)(i) of the Agreement. Schedule 1.1(a)(i) of the Agreement is hereby amended and restated in its entirety as follows:

**SCHEDULE 1.1(a)(i)**

Cedant Net Settlement Dispute Representatives

3. Amendment to Schedule 1.1(a)(ii) of the Agreement. Schedule 1.1(a)(ii) of the Agreement is hereby amended and restated in its entirety as follows:

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**SCHEDULE 1.1(a)(ii)**

Reinsurer Net Settlement Dispute Representatives

*(The remainder of this page is intentionally left blank.)*

IN WITNESS WHEREOF, both Parties hereby execute this Amendment:

**MML BAY STATE LIFE INSURANCE COMPANY**

By: /s/ Chad Madore  
Chad Madore  
Head of Reinsurance Development

Date: September 30, 2021

**SWISS RE LIFE & HEALTH AMERICA INC.**

By: /s/ Rob O'Hara  
Rob O'Hara  
Vice President

Date: September 30, 2021

By: /s/ Natalie Gleed  
Natalie Gleed  
Senior Vice President

Date: September 29, 2021

[KPMG letterhead appears here]

**Consent of Independent Registered Public Accounting Firm**

We consent to the use of our report dated February 27, 2024, with respect to the statutory financial statements of MML Bay State Life Insurance Company, included herein, and to the reference to our firm under the heading “Experts” in the Statement of Additional Information.

/s/ KPMG LLP

Hartford, Connecticut  
April 22, 2024

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*[KPMG letterhead appears here]*

**Consent of Independent Registered Public Accounting Firm**

We consent to the use of our report dated March 7, 2024, with respect to the financial statements of MML Bay State Variable Life Separate Account I, included herein, and to the reference to our firm under the heading "Experts" in the Statement of Additional Information.

/s/ KPMG LLP

Boston, Massachusetts

April 22, 2024

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