

∴ MassMutual

MassMutual RetirePaySM

An Optional Living Benefit Available
with the MassMutual EnvisionSM
Variable Annuity



MassMutual EnvisionSM with RetirePaySM

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DID YOU KNOW?



39%

Only 39% of pre-retirees
feel confident that they will
be able to live the retirement
lifestyle they want.¹

NOT FDIC/NCUA INSURED • NO BANK/CREDIT UNION GUARANTEE • MAY LOSE VALUE • NOT INSURED
BY ANY GOVERNMENT AGENCY • NOT A BANK/CREDIT UNION DEPOSIT OR OTHER OBLIGATION

¹ Retirement Confidence and Sentiment, LIMRA Fact Book on Retirement Income 2022.

Envision your retirement

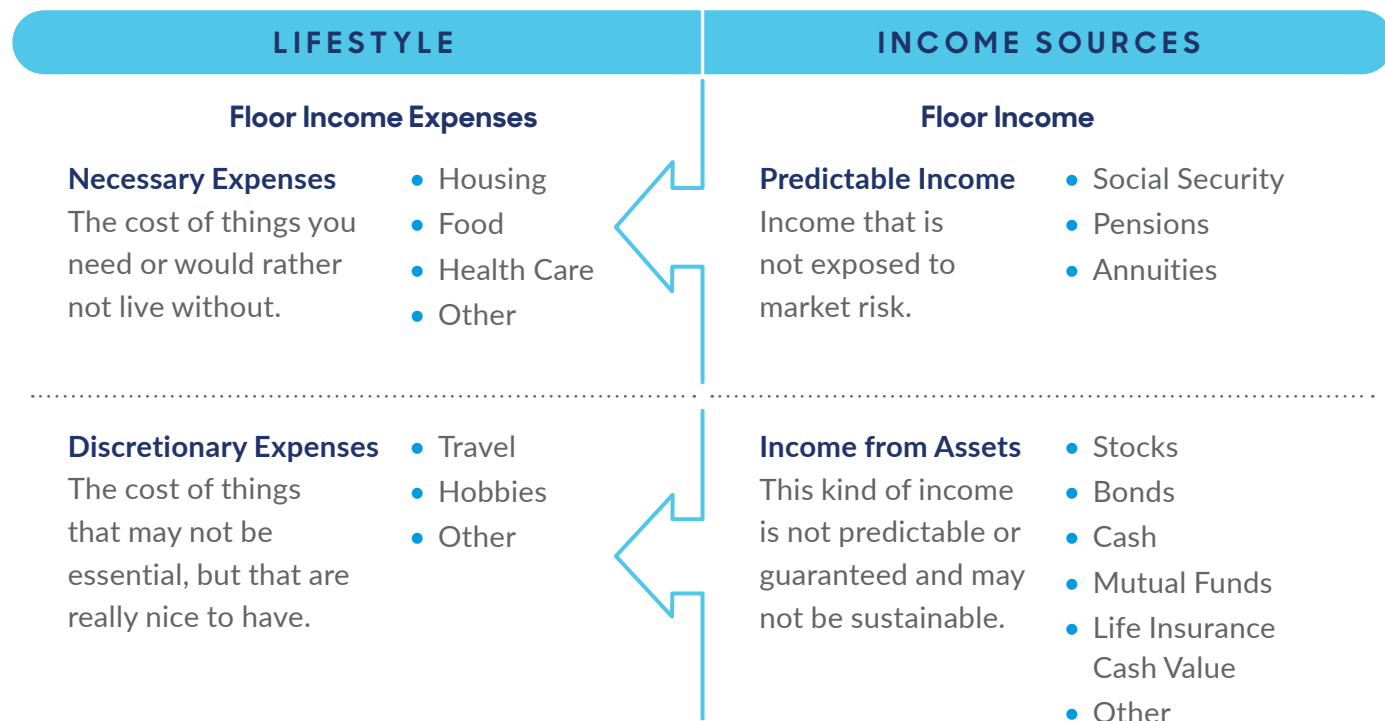
Everyone’s retirement goals may look different: some retire and travel, some retire from one job and continue to work or volunteer, and others retire and spend more time with their family. Some do all of that and more!

Retirement may look different for everyone, but most of us want a retirement strategy that will help our savings last a lifetime. Today, only defined benefit plans (pensions), Social Security, and annuities can provide predictable and guaranteed income for life.²

A good way to plan for your finances in retirement is by aligning your predictable income with your fixed or necessary expenses and aligning your discretionary expenses with other sources of income.

The 4 Box Strategy[®] of income planning is a simple way to identify projected income and expenses in retirement. The diagram below shows some typical necessary and discretionary expenses and the income sources that could be used to pay for them.

With this strategy, predictable income is used to cover your necessary expenses, while income from other assets is used for discretionary expenses.



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¹ Retirement Confidence and Sentiment, LIMRA Fact Book on Retirement Income 2022.

² Guarantees are subject to the claims paying ability of Massachusetts Mutual Life Insurance Company.

Retirement concerns

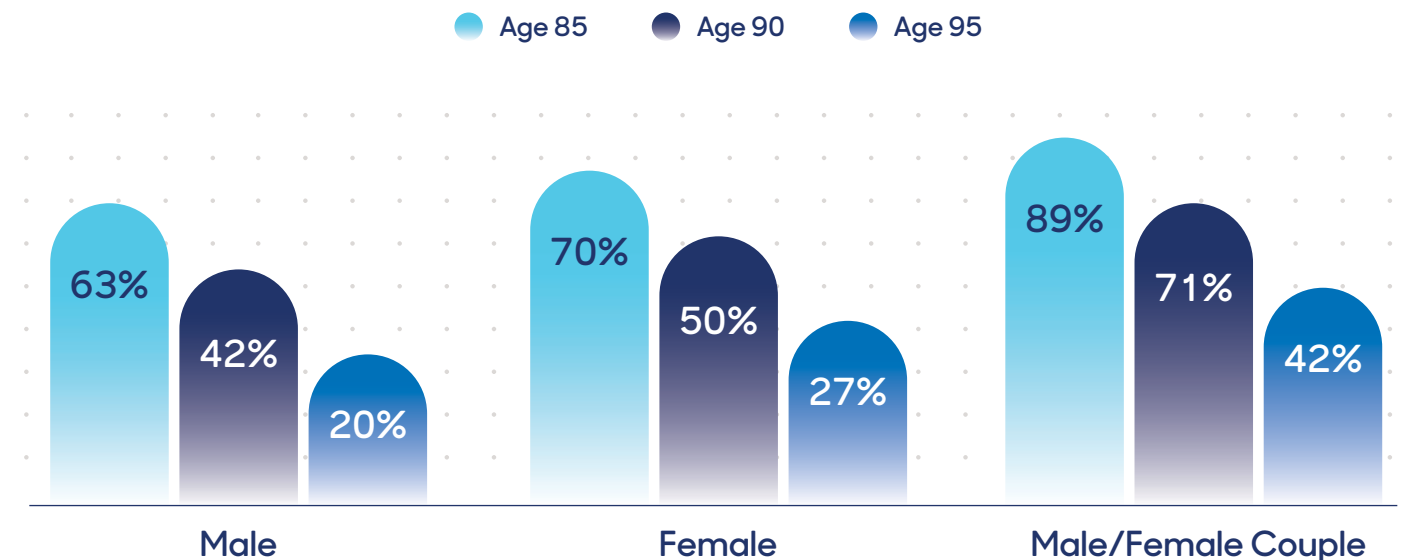
Retirement can bring about a host of new life opportunities, excitement, and fun. However, along with those opportunities are concerns that need to be planned for.

Longevity

When planning for retirement, it’s important to consider how many years you will need retirement income. The chart below highlights the probability of 65-year-old couples living to certain ages.

For couples, there is a 71% chance that one or both persons who are currently age 65 will live to age 90. That adds up to 25 years in retirement.

PROBABILITY OF 65-YEAR-OLDS LIVING TO CERTAIN AGES



Source: Society of Actuaries 2012 IAM Period Mortality Table; Mortality Improvement Scale MI-2023V Massachusetts Mutual Life Insurance Company

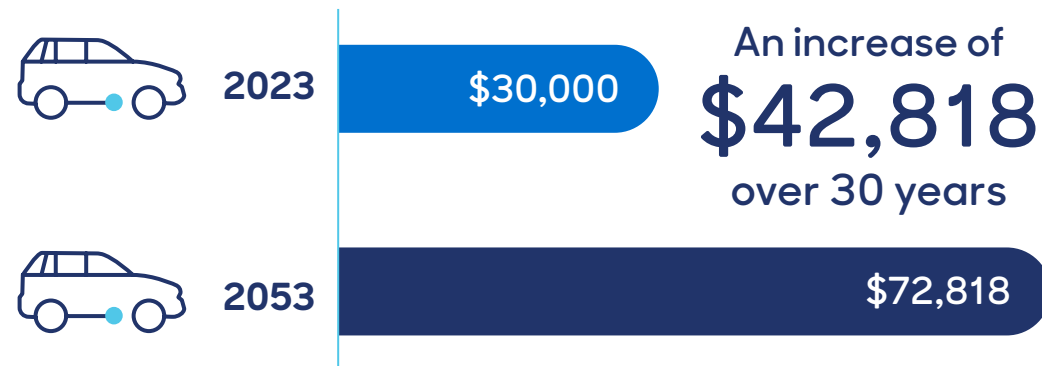
Inflation

Even small rates of inflation can have a significant impact over time. For example, \$100 in 1992 would only purchase \$48.58 worth of goods and services 30 years later in 2022.³



HOW ABOUT GOING FORWARD?

With a 3% inflation rate, a new car that costs \$30,000 in 2023 is equivalent in purchasing power to about \$72,818 in 2053, an increase of \$42,818 or 143% over 30 years.⁴



Health care costs

The trade-off for increased life expectancy may be having to spend more money on health care. The cost of health care may be a concern for many of us — especially as we get older. It's important to think about the potential out-of-pocket costs as you consider your predictable income needs.



The estimated savings a 65-year-old couple would need for a 90% chance of covering out-of-pocket health care expenses throughout their retirement.⁵

³ The Inflation Calculator, westegg.com, October 5, 2022.

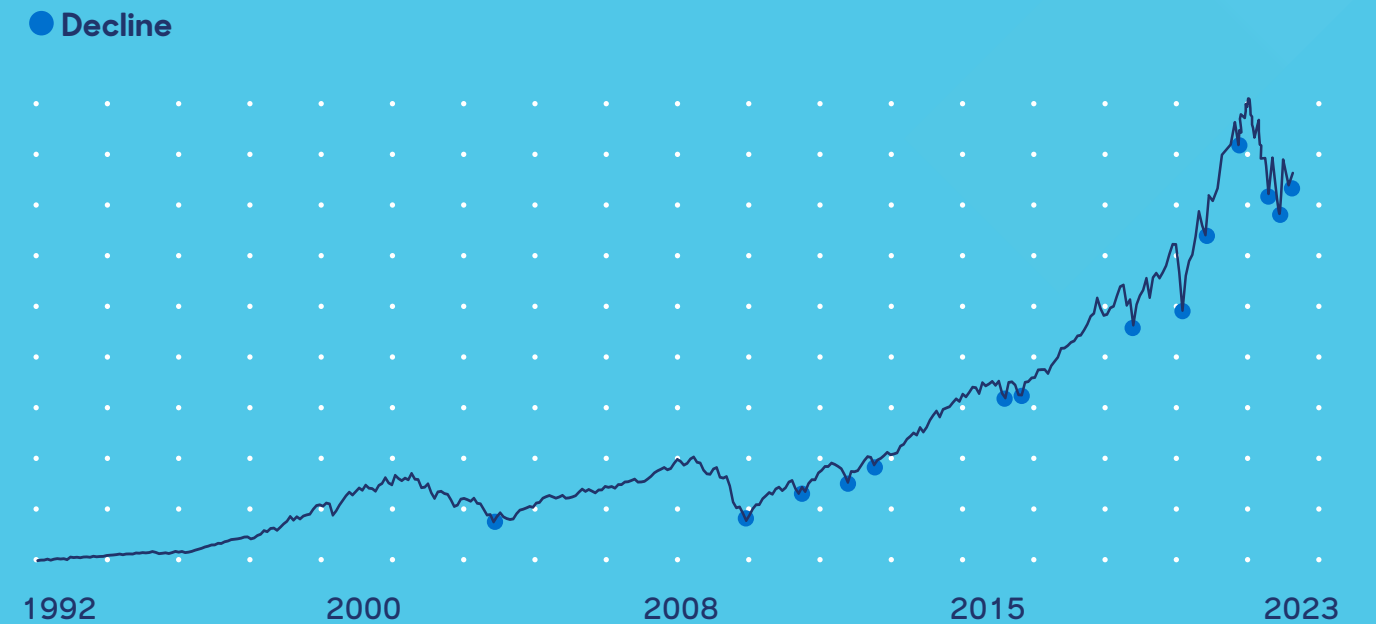
⁴ Smart Asset Inflation Calculator <https://smartasset.com/investing/inflation-calculator#pRo5R2yesx>.

⁵ "Savings Medicare Beneficiaries Need for Health Expenses in 2019: Some Couples Could Need as Much as \$363,000" EBRI Issue Brief, May 16, 2019. marketwatch.com; "How to pay for health care costs in retirement" by Robert Powell, April 10, 2021.

Financial market uncertainty

When you plan to retire, you never know how the markets and your investments will perform throughout retirement. Over the history of the markets, there are many periods of time when the markets have declined. Market declines, no matter when they occur, can hinder your ability to generate reliable income throughout retirement.

S&P 500 RETURN (1992 - 2023)



The S&P 500 Index is a list of securities frequently used as a measure of U.S. stock market performance. These investment results and account values are historical. They do not reflect fees and charges associated with an actual investment or product. Had fees and charges been reflected, the values would be lower. You cannot invest directly in an index. Past performance does not guarantee future results.

What if there was a way to ensure your retirement income never declined, had the opportunity to increase while you were saving for retirement, and lasted a lifetime?

MassMutual RetirePaySM

Retirement shouldn't just be the end of something. It should be the beginning. It should be a time of security and stability, and also one of opportunity and growth. To help, MassMutual® has introduced MassMutual RetirePay (RetirePay), an optional living benefit available for an additional cost with our MassMutual Envision Variable Annuity.

RetirePay can help you:

- Secure a guaranteed annual lifetime income that you can count on.
- Potentially increase future income amounts with positive investment performance.
- Protect your future income from market declines.



Please note: Withdrawals in excess of your Annual Lifetime Benefit Amount will reduce and may eliminate the value of the guarantees provided by RetirePay.

Any guarantees explicitly referenced herein are based on the claims-paying ability of the issuing insurance company.

Key terms

While RetirePay is in effect, your **Annual Lifetime Benefit Amount (ALBA)** is the maximum amount of Contract Value that you can withdraw annually without it being considered an Excess Withdrawal. A withdrawal of the Annual Lifetime Benefit Amount will reduce your Contract Value, but not the Benefit Base.

The **Benefit Base** is the amount we use to determine your Annual Lifetime Benefit Amount while RetirePay is in effect. The **Benefit Base** is only used to calculate your Annual Lifetime Benefit Amount.

The **Withdrawal Rate** is the percentage we multiply by the Benefit Base to determine the Annual Lifetime Benefit Amount prior to the Settlement Phase while RetirePay is in effect.

The **Lifetime Guarantee Rate** is a percentage we multiply by the Benefit Base to determine the Annual Lifetime Benefit Amount once the contract enters the Settlement Phase while RetirePay is in effect. For contracts issued in New York, the Withdrawal Rate prior to and once the contract enters the settlement phase.

Covered Person. The person(s) whose life is used to determine the duration of the Annual Lifetime Benefit Amount provided under RetirePay.

Guaranteed Lifetime Withdrawal Date. The date on which the company guarantees the Withdrawal Rate and Lifetime Guarantee Rate under the benefit, and on which you may begin receiving payments of the Annual Lifetime Benefit Amount while RetirePay is in effect. This date must be selected by the Owner and cannot be prior to the youngest Covered Person attaining age 59½.

Excess Withdrawal. Any withdrawal prior to the Guaranteed Lifetime Withdrawal Date; and after the Guaranteed Lifetime Withdrawal Date, the portion of a withdrawal (including contingent deferred sales charges applicable to the withdrawal) from the Contract Value that causes the total withdrawals to exceed the Annual Lifetime Benefit Amount in that Contract Year, unless the withdrawal is taken as a part of the company's systematic withdrawal program established for the payment of RMDs, under which the RMD is calculated by the company for the current calendar year based solely on the fair market value of the contract as defined in IRC Section 401(a)(9) and no other withdrawals are taken within the Contract Year. An Excess Withdrawal is also any withdrawal that occurs after the total withdrawals exceed the Annual Lifetime Benefit Amount in the Contract Year. An Excess Withdrawal will result in a reduction to the Benefit Base and the Annual Lifetime Benefit Amount. An Excess Withdrawal could reduce the Benefit Base by more than the dollar amount of the Excess Withdrawal.

Rate Sheet Prospectus Supplement. A periodic supplement which sets forth the current Withdrawal Rates, Lifetime Guarantee Rates, RetirePay Charges, and investment allocation restrictions under RetirePay. For contracts issued in New York, there is a separate Rate Sheet Prospectus Supplement.

Required Minimum Distribution (RMD). An RMD is a minimum amount the federal tax law requires to be withdrawn from certain Qualified Contracts each year, beginning during the year the owner turns 73.⁶

⁶ 70½ if you were born before July 1, 1949, and age 72 if you were born after June 30, 1949 and before January 1, 1951. The RMD age will increase again in 2033 to age 75.

Getting started with RetirePay

RetirePay offers guaranteed income, in the form of the Annual Lifetime Benefit Amount, that you will receive regardless of market conditions – even if your Contract Value goes to zero – as long as there is still a positive Benefit Base. It's retirement income you can count on for life. Prior to electing RetirePay, consider the following:

Investment choice

You must either be invested 100% in one of the allowable MML Asset Allocation funds or invested 100% in the Custom Allocation Program while RetirePay is in effect. If you choose the MML Asset Allocation funds you can invest up to 80% in equities in a specific fund. The Custom Allocation Program allows you to invest up to 70% in equities.

The Contract Value in the Custom Allocation Program will be rebalanced based on your elected frequency. If no election is made, rebalancing will occur quarterly during each calendar year.

Automatic step-ups

Depending on how your investment options perform, your Benefit Base amount may increase due to a step-up. You must elect one of the following step-up options.

1 Highest Anniversary Value Step-Up

If you elect the highest anniversary value step-up option, an automatic step-up will occur on the Contract Anniversary, provided that on the last calendar day of the prior Contract Year the Contract Value exceeds the Benefit Base.

2 Highest Quarterly Value Step-Up

If you elect the highest quarterly value step-up option, an automatic step-up will occur on the Contract Anniversary, provided that the Contract Value, on the last calendar day of any Contract Year quarter within the prior Contract Year, exceeds the Benefit Base immediately before the automatic step-up.

Any applicable automatic step-up will increase the Benefit Base to the highest quarterly Contract Value that occurred during the prior Contract Year. When calculating the automatic step-up, the Contract Value for each Contract Year quarter that is compared to the Benefit Base will be determined after processing any transactions on the last calendar day of that Contract Year quarter.

Please note: The highest quarterly value step-up costs more than the highest anniversary value step-up because it provides more step-up opportunities.

If an automatic step-up occurs, the cost of your RetirePay benefit will increase because the RetirePay charge will be calculated on a higher Benefit Base.

Withdrawal Rates and Lifetime Guarantee Rates

When you select RetirePay, a schedule of Withdrawal Rates and Lifetime Guarantee Rates will be provided. The rates typically increase by age band and the number of full years you deferred electing the Guaranteed Lifetime Withdrawal Date.

The rates used to determine your Annual Lifetime Benefit Amount will either be for a single or joint life based on whether you elected the single life or joint life version of RetirePay. When you select your Guaranteed Lifetime Withdrawal Date, you will lock-in your Withdrawal Rate and your Lifetime Guarantee Rate that will be used to determine your Annual Lifetime Benefit Amount.

What could change your Benefit Base and Annual Lifetime Benefit Amount?

We recalculate the Benefit Base on each Contract Anniversary, and it, along with the Annual Lifetime Benefit Amount, may increase or decrease depending upon the following:

Additional Purchase Payments – Any additional purchase payments will increase your Benefit Base and ultimately your Annual Lifetime Benefit Amount. When you select RetirePay, your annual purchase payments are limited to \$10,000 per Contract Year after the first Contract Year, and no purchase payments are allowed after the Guaranteed Lifetime Withdrawal Date.

Step-Ups – With positive investment performance, your Benefit Base can increase on your Contract Anniversary. Any step-ups will positively impact your Annual Lifetime Benefit Amount.

Excess Withdrawals will reduce and may eliminate the value of the guarantees provided by RetirePay. If your Contract Value is reduced to zero due to an Excess Withdrawal, the Annual Lifetime Benefit Amount is no longer available, and RetirePay will terminate.

Waiting to take the Annual Lifetime Benefit Amount will generally increase your Withdrawal Rate and lifetime guarantee rate, but may lower the value of the RetirePay feature due to a decreased number of years you will receive the Annual Lifetime Benefit Amount.

For current Withdrawal Rates, Lifetime Guarantee Rates, investment option availability, and fees with RetirePay, please ask your Financial Professional for the most recent Rate Sheet Prospectus Supplement.

RetirePay – Don't just look toward your future, look forward to it.

Let's see how RetirePay could work over time.

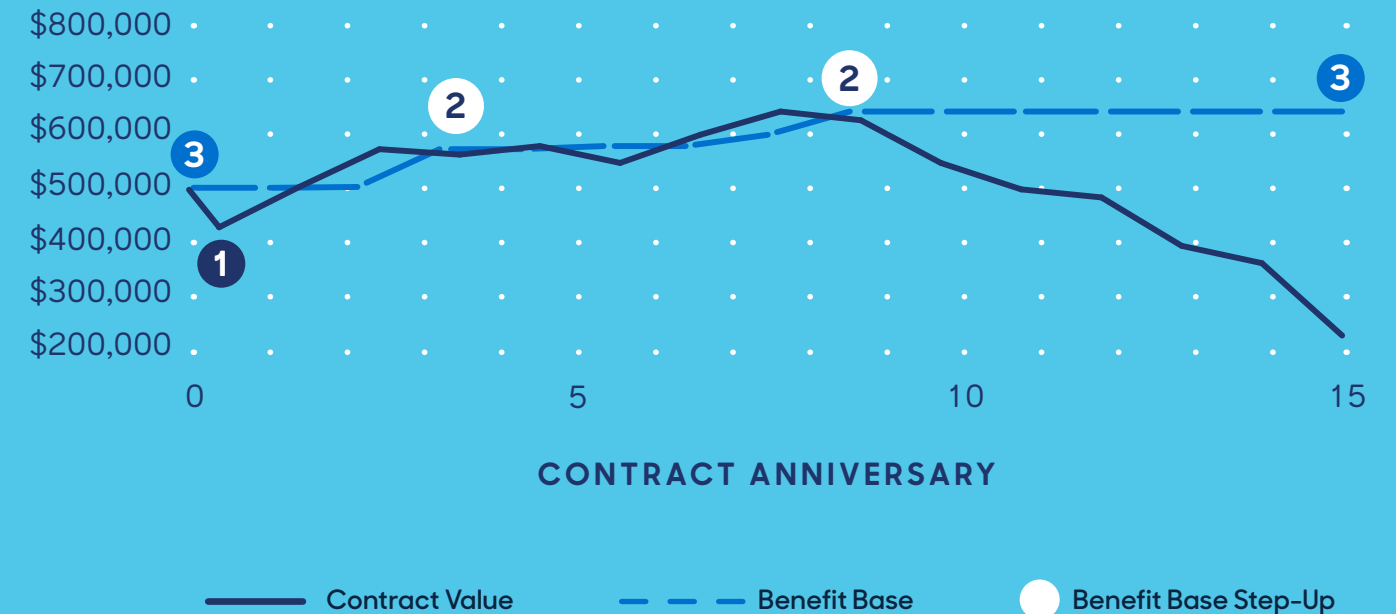
Meet Megan

Megan, age 60, is looking to protect her retirement income savings from market downturns while still being able to invest for growth. She is looking to retire at age 67, at which point she will need reliable retirement income. Megan purchases a MassMutual Envision Variable Annuity along with RetirePay based on a single life for income protection. Megan elects the highest anniversary value step-up.



STEPS BEFORE MEGAN SELECTS HER GUARANTEED WITHDRAWAL DATE AND TAKES ANY WITHDRAWALS

- 1** Megan's Benefit Base will equal her initial purchase payment. If her Contract Value declines due to market performance, her Benefit Base will never decrease below her purchase payments.
- 2** If her Contract Value increases, her Benefit Base has the potential to step up to a higher amount automatically on each Contract Anniversary. A higher Benefit Base will ultimately increase her Annual Lifetime Benefit Amount. It will also increase the cost because the RetirePay charge will be assessed against a higher benefit base.
- 3** Once a new Benefit Base is set it will remain at that higher value and may increase even higher with additional step-ups assuming no excess withdrawals occur. The Benefit Base is then used to calculate her Annual Lifetime Benefit Amount.



This portion of the example is to show how step-ups can increase Megan's Benefit Base over time and how the Benefit Base is protected against market downturns. It assumes no withdrawals and does not predict or guarantee actual results.

WHEN MEGAN ELECTS HER GUARANTEED LIFETIME WITHDRAWAL DATE

When Megan decides to take income, her Annual Lifetime Benefit Amount will equal her applicable Withdrawal Rate multiplied by her Benefit Base.

Income at 67

If Megan began income at age 67, she would look up her age along with how many years she deferred income (Year 7) on the table to find her Withdrawal Rate. Her Benefit Base has grown to \$667,987, Megan's Annual Lifetime Benefit Amount would equal \$47,093.

Income at 69

If Megan waited until age 69 to begin income, her Annual Lifetime Benefit Amount would be even higher, because her withdrawal rate would have **grown to 7.45%**.

$$\$667,987 \times 7.05\% = \$47,093$$

Single life withdrawal rates by YEAR

	0	1	2	3	4	5	6	7	8	9	10+
59½-61	4.65%	4.85%	5.05%	5.25%	5.45%	5.65%	5.85%	6.05%	6.25%	6.45%	6.65%
62-66	5.15%	5.35%	5.55%	5.75%	5.95%	6.15%	6.35%	6.55%	6.75%	6.95%	7.15%
67-71	5.65%	5.85%	6.05%	6.25%	6.45%	6.65%	6.85%	7.05%	7.25%	7.45%	7.65%
72-76	6.15%	6.35%	6.55%	6.75%	6.95%	7.15%	7.35%	7.55%	7.75%	7.95%	8.15%
77+	6.65%	6.85%	7.05%	7.25%	7.45%	7.65%	7.85%	8.05%	8.25%	8.45%	8.65%

Megan will continue to take her Annual Lifetime Benefit amount every year starting at 67, even after her Contract Value reaches \$0, until she passes away at age 94.

By age 94, she will have received a cumulative amount of

\$1,467,185.⁷



Please note: Rates shown are hypothetical and are intended to demonstrate how to calculate your Annual Lifetime Benefit Amount. Please be sure to ask your Financial Professional and refer to the current prospectus rate sheet supplement for actual rates. Postponing withdrawals may positively impact the Annual Lifetime Benefit Amount (e.g., because of higher Withdrawal Rates when you are older). However, if you postpone taking withdrawals, you may limit the value of this feature because your remaining life expectancy shortens as you age.

⁷ Total amount includes a step-up in year 8 which raises her Annual Lifetime Benefit Amount to \$52,596.

Guaranteed income from a company you can count on

MassMutual is a mutual life insurance company that is managed for the long-term benefit of its customers.

Through the most prosperous and turbulent of financial times, our mutual form of ownership has been the foundation of our business strategy. And for more than 170 years, we have focused on providing long-term value to our policyowners and customers while maintaining strength and stability for the future.

Financial Strength Ratings

Massachusetts Mutual Life Insurance Company and its subsidiaries, C.M. Life Insurance Company and MML Bay State Life Insurance Company, enjoy financial strength ratings that are among the highest in any industry.⁸

A++ Superior

A.M. Best Company

AA+ Very Strong

Standard & Poor's

AA+ Very Strong

Fitch Ratings

Aa3 High Quality

Moody's Investors Service

Comdex Ranking⁹

MassMutual, C.M. Life Insurance Company, and MML Bay State Life Insurance Company have a Comdex ranking of 98 out of 100, which is a composite score of all the current financial strength ratings received from A.M. Best, Standard & Poor's, Moody's Investors Service, and Fitch. The Comdex ranking is not a rating itself.



⁸ Ratings are as of 2/1/2024 and apply to Massachusetts Mutual Life Insurance Company and its subsidiaries, C.M. Life Insurance Company and MML Bay State Life Insurance Company. These ratings are subject to change and do not apply to the separate account.

⁹ The Comdex ranking is a measure of financial strength compiled by VitalSigns, a product of EbixExchange. The ranking is a composite of the average percentile ranking of ratings received by each insurer from the rating agencies.

Comdex rankings data is as of March 28, 2024. Rankings are subject to change.

RETIREPAY SPECIFICATIONS

MassMutual Envision Fees and Charges

Mortality and Expense (M&E) Risk Charge: 1.15%
 Administrative Charge: 0.15%
 Contract Maintenance Charge: \$40 on Contract Value of less than \$100,000
 Investment Option Fees: Varies by investment option(s) elected

Adding RetirePay

RetirePay may only be elected at time of contract issue.

Minimum Issue Age (Owner and Covered Person[s])

45
 The Annual Lifetime Benefit Amount is not available until youngest Covered Person attains age 59½.

Maximum Issue Age (Owner only and Covered Person[s])

80

Maximum Annual Step-Up Age

90 – beginning on the Contract Anniversary following the youngest Covered Person attaining Age 90. Benefit Base will no longer increase due to Automatic Step-ups.

RetirePay Choices and Charges

Assessed quarterly in arrears on the last calendar day of each quarter during the Contract Year:

- Single Life with Highest Anniversary Value Step-Up: 1.45%
- Single Life with Highest Quarterly Value Step-Up: 1.60%
- Joint Life with Highest Anniversary Value Step-Up: 1.45%
- Joint Life with Highest Quarterly Value Step-Up: 1.60%

Please note: Rates are shown on an annualized basis. MassMutual reserves the right to increase the RetirePay charges up to a maximum of 2.50%.¹⁰

¹⁰ You have the right to opt-out of a RetirePay Charge increase. By electing to opt-out of a RetirePay Charge increase you will establish the Guaranteed Lifetime Withdrawal Date, if not previously established, determine the Lifetime Guarantee Rate, if not previously established, terminate the right to any future Automatic Step-ups, and terminate the right to make subsequent purchase payments.



Important considerations

RetirePay may not be appropriate for all Contract Owners. You should understand RetirePay completely before you elect this feature. In particular, please note the following important considerations:

- RetirePay does not in any way guarantee the performance of any of the investment choices available under the Contract. The guarantees apply to the Benefit Base and the Annual Lifetime Benefit Amount, which are subject to limitations in terms of your ability to access those values.
- Postponing withdrawals may positively impact the Annual Lifetime Benefit Amount (e.g., because of higher Withdrawal Rates when you are older). However, if you postpone taking withdrawals, you may limit the value of this feature because your remaining life expectancy shortens as you age.
- Because the RetirePay Charge is a percentage of the Benefit Base, the positive effect of an increase in the Benefit Base will be partially offset by an increase in the cost of the benefit.
- Payments of the Annual Lifetime Benefit Amount will first be made from your Contract Value. Our obligation to pay you more than your Contract Value, while RetirePay is in effect, will only arise if your Contract Value is reduced to zero and there is still a Benefit Base remaining.
- If you plan on making additional purchase payments, you should consider the limitations on subsequent purchase payments when RetirePay is in effect.
- If the joint life version of RetirePay is purchased, a later divorce may adversely impact the benefits of RetirePay, including possibly terminating the benefit or resulting in a payment for only a single life, even though the joint life version was selected.
- The Benefit Base is the amount that we use to determine your Annual Lifetime Benefit Amount. The Benefit Base cannot be withdrawn or paid as a death benefit and is not an amount that is guaranteed to be returned to you.
- If a requested change in your allocations or a transfer of any portion of your Contract Value does not comply with these investment restrictions, you will be required to terminate RetirePay by Written Request before the allocation change or transfer can be processed. We reserve the right, upon 30 calendar days advance notice to you, to change the investment restrictions. If we change the investment restrictions, you must change your allocations to comply within 30 calendar days of the restrictions becoming effective, or we will terminate RetirePay.
- In states where a change of ownership does not terminate RetirePay, such a change may adversely impact the benefits provided by RetirePay.
- Please consult with a qualified Financial Professional when evaluating RetirePay.



MassMutual..

Helping you secure what matters most.

Since 1851, MassMutual has been building a reputation for financial strength and integrity. At MassMutual, we operate for the benefit of our customers. Our business decisions are based on a single guiding principle: to help people secure their future and protect the ones they love.

Talk to your Financial Professional to learn more.

This material does not constitute a recommendation to engage in or refrain from a particular course of action.

The information within has not been tailored for any individual.

The information provided is not written or intended as specific tax or legal advice. MassMutual and its subsidiaries, employees, and representatives are not authorized to give tax or legal advice. Individuals are encouraged to seek advice from their own tax or legal counsel.

Before purchasing MassMutual Envision, you should carefully consider the investment objectives, risks, charges, and expenses of the variable annuity. For this and other information, obtain the MassMutual Envision prospectus from your registered representative. Please read the prospectus carefully before investing or sending money. You may also obtain the prospectuses (or summary prospectuses, if available) for the annuity's underlying investment choices from your registered representative or online at www.MassMutual.com/envision.

This product and/or certain features and investment options may not be available in all states or firms.

MassMutual Envision (Contract Form #FPVDA21 and ICC21-FPVDA in certain states, including North Carolina) is a flexible premium deferred variable annuity contract issued by Massachusetts Mutual Life Insurance Company, Springfield, MA 01111-0001.

Variable annuities offered through registered representatives of MML Investors Services, LLC, Springfield, MA 01111-0001 or a broker-dealer that has a selling agreement with MML Strategic Distributors, LLC, Springfield, MA 01111-0001.

Principal Underwriters: MML Investors Services, LLC (MMLIS), Member **SIPC**[®], and MML Strategic Distributors, LLC (MSD), are both Members **FINRA** and subsidiaries of Massachusetts Mutual Life Insurance Company, Springfield, MA 01111-0001.

