MML VIP Barings Core Bond Service

Product Name
MassMutual Envision Variable Annuity

Morningstar Category
Intermediate Core Bond

Benchmark
Bloomberg US Agg Bond TR USD

Overall Morningstar Rating™ ★★★
Out of 2571 Intermediate Core Bond investments. **An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.**

Morningstar Return High

Morningstar Risk High

Investment Information

Objective & Strategy from investment's prospectus
The investment seeks to achieve as high a total rate of return on an annual basis as is considered consistent with the preservation of capital.

The fund invests at least 80% of its net assets in investment grade fixed income securities (rated Baa3 or higher by Moody's, BBB- or higher by S&P or the equivalent by any NRSRO, or, if unrated, determined to be of comparable quality by the subadviser). It may (but is not obligated to) use a wide variety of exchange-traded and over-the-counter derivatives. The fund may invest in money market securities, including commercial paper.

Fees and Expenses as of 04-24-26

12b-1 Fee	0.25%
Prospectus Gross Expense Ratio	0.70%
Prospectus Net Expense Ratio	0.70%

Waiver Data	Type	Exp. Date	%
—	—	—	—

Portfolio Manager(s)
Stephen Ehrenberg, CFA. Since 2019.
Charles Sanford. Since 2020.
Rishi Kapur. Since 2025.

Advisor
MML Investment Advisers, LLC

Subadvisor
Barings LLC
Baring International Investment Ltd

Operations and Management

Fund Inception Date	02-28-22
Initial Class Inception Date	12-16-81

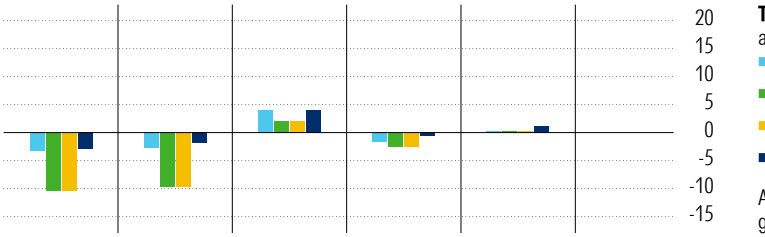
Risk Evaluation as of 09-30-26

3-Yr Risk Measures	Port Avg	Bmark	Cat Avg
Standard Deviation	5.79	5.62	5.70
Sharpe Ratio	-0.08	-0.07	-0.33
Information Ratio	-0.10	—	-6.88
R-Squared	97.87	—	99.87
Beta	1.02	—	1.01
Alpha	-0.06	—	-1.47

Best 3 Month Return
19.28%
(Oct '22 - Dec '22)

Worst 3 Month Return
-13.27%
(Apr '22 - Jun '22)

Performance



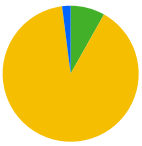
YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	
-3.25	-2.69	3.98	-1.64	0.29	—	Non-Std Tot Ret %
-10.32	-9.77	2.02	-2.60	0.22	2.53	Std Total Ret %
-10.32	-9.77	2.02	-2.60	0.22	—	Non-Std CDSC TR %
-2.91	-1.84	4.06	-0.64	1.14	—	Benchmark Return %
-4.11	-3.52	2.53	-2.13	-0.36	—	Category Average %
—	—	★★★★★	★★★	★★★	—	Morningstar Rating™
—	—	2571	2396	1754	—	# Funds in Category

Past performance is no indication of future results. Since performance changes daily, the current performance may be lower or higher than the performance reflected in this update. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. For the most recent month- end performance information, visit our website at http://www.massmutual.com/envision or call the MassMutual Customer Service Center at (800) 272-2216.

Investing involves risk, including the loss of principal. Each investment choice underlying the variable annuity contract has broad risks that apply to all investment choices, such as market risk, as well as specific risks inherent in particular types of investment choices that may subject your variable annuity contract to greater risk and volatility than the general market risk.

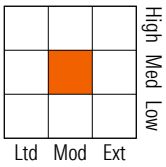
Portfolio Analysis

Composition as of 06-30-26



	% Assets
U.S. Stocks	0.0
Non-U.S. Stocks	0.0
Bonds	89.8
Cash	8.2
Other	2.0

Morningstar Fixed Income Style Box™ as of 06-30-26



Avg Eff Duration	5.76
Avg Eff Maturity	13.12

Top 10 Holdings as of 06-30-26

	% Assets
10 Year Treasury Note Future Sep 09-21-26	4.62
2 Year Treasury Note Future Sept 09-30-26	4.33
Federal National Mortgage Asso 2% 07-13-56	3.31
Us Long Bond(Cbt) Sep26 Xcbt 202 09-21-26	2.17
Ultra US Treasury Bond Future Se 09-21-26	1.98
United States Treasury Bond 2.25% 08-15-49	1.66
Federal National Mortgage Asso 5% 07-13-56	1.25
United States Treasury Bond 4.25% 11-15-40	1.24
Government National Mortgage A 5% 12-20-54	1.04
Government National Mortgage A 5% 11-20-54	1.03

Total Number of Stock Holdings	0
Total Number of Bond Holdings	366
Annual Turnover Ratio %	122
Total Fund Assets ($mil)	652.47

Morningstar F-I Sectors as of 06-30-26

	% Fund	% Cat
Government	18.40	35.64
Corporate	34.31	24.84
Securitized	39.12	31.94
Municipal	0.00	2.15
Cash/Cash Equivalents	8.17	2.99
Derivative	0.00	2.43

Credit Analysis: % Bonds as of 06-30-26

AAA	21	BB	3
AA	29	B	0
A	11	Below B	0
BBB	36	Not Rated	0

NOT FDIC INSURED · MAY LOSE VALUE · NO BANK GUARANTEE

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Disclosure

Morningstar Category
Intermediate-term core bond portfolios invest primarily in investment-grade U.S. fixed-income issues including government, corporate, and securitized debt, and hold less than 5% in below-investment-grade exposures. Their durations (a measure of interest-rate sensitivity) typically range between 75% and 125% of the three-year average of the effective duration of the Morningstar Core Bond Index.

Benchmark: Bloomberg US Agg Bond TR USD
The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollardenominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, fixedrate agency MBS, ABS and CMBS (agency and non-agency). Provided the necessary inclusion rules are met, US Aggregate-eligible securities also contribute to the multi-currency Global Aggregate Index and the US Universal Index. The US Aggregate Index was created in 1986, with history backfilled to January 1, 1976.

Indices are unmanaged, have no identifiable objectives and cannot be purchased. Performance of indices does not reflect the deduction of any fees and charges. Past performance does not guarantee future results.

Non-Standard Total Returns
Non-Standard Total Return reflects, a one-time purchase payment of $1000 and would have generated the above returns taking into consideration separate account expenses and all fund level expenses including 12b-1 fees, but not any other charges associated with the contract. These returns are measured from the inception date of the fund and predate the offering of the fund an investment choice in the deferred variable annuity. Therefore, this is hypothetical performance. This hypothetical representation depicts how the variable annuity might have reacted had the fund been available in the variable annuity during the time period. These returns assume the contract was not surrendered. These returns do not reflect the charges for any optional contract features or premium taxes, if any. Their inclusion would reduce the returns shown.

Non-Standard Total Returns with CDSC
Non-Standard Total Returns with CDSC reflect a one-time purchase payment of $1000 and would have generated the above returns taking into consideration separate account expenses and all fund level expenses including 12b-1 fees, but not any other charges associated with the contract. These returns are measured from the inception date of the fund and predate the offering of the fund an investment choice in the deferred variable annuity. Therefore, this is hypothetical performance. This hypothetical representation depicts how the variable annuity might have reacted had the fund been available in the variable annuity during the time period. It also assumes the contract is surrendered in the year noted and the assessment of any applicable CDSC. These returns do not reflect the charges for any optional contract features or premium taxes, if any. Their inclusion would reduce the returns shown.

Standardized Total Returns
Standardized Total Returns assume a one-time purchase payment of $1,000 would have generated the above returns. These returns are measured from the date the subaccount was made available to the product and assume the surrender of the contract occurred in the year noted and the assessment of any applicable CDSC. These Return reflects all fund level expenses including 12b-1 fees and all contract charges except the charges for any optional contract features or premium taxes, if any. Their inclusion would reduce the returns shown.

The fund's performance is compared with that of an index. The index is an unmanaged portfolio of specified securities, has no identifiable objectives, cannot be purchased, and does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index.

Best and Worst 3 Month Performance
Morningstar uses the standardized total returns to calculate the best and worst 3-month period (in percentage) in-house on a monthly basis.

Best 3-month Period: The highest total return the fund has posted in a consecutive three-month period over the trailing 15 years, or if a fund does not have 15 years of history, it will go back as far as the inception date.

Worst 3-month Period: The lowest total return the fund has posted in a consecutive three-month period over the trailing 15 years, or if a fund does not have 15 years of history, it will go back as far as the inception date.

Fund Fees and Expenses
This is the percentage of fund assets paid for operating expenses and management fees. The expense ratio typically includes the following types of fees: accounting, administrator, advisor, auditor, board of directors, custodial, distribution (payment of 12b-1), legal, organizational, professional, registration, shareholder reporting, sub-advisor, and transfer agency. The expense ratio does not reflect the fund's brokerage costs or any investor sales charges. In contrast to the net expense ratio, the Gross Expense Ratio does not reflect any fee waivers in effect during the time period. With the Gross Expense Ratio, Morningstar pulls the Gross Expense Ratio from the fund's most recent prospectus. Prospectus expense ratios reflect material changes to the expense structure for the current period.

Waiver Data
Pursuant to an expense limitation agreement, the fund's management will waive fees or reimburse expenses as shown in the Waiver Data section. The expense waivers or reimbursements are contractual or voluntary, listed in the Type column. If contractual, the waiver will continue to the date listed in the Exp. Date column. The expense limitations are subject to change by the Boards of Trustees/Directors of the funds.

Morningstar Rating™
The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

Morningstar Return
The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Avg), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk
Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product.

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Disclosure

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Risk Measures
R-squared reflects the percentage of a fund's movements that are explained by movements in its benchmark index, showing the degree of correlation between the fund and the benchmark.

Beta is a measure of a fund's sensitivity to market movements. A portfolio with a beta greater than 1 is more volatile than the market, and a portfolio with a beta less than 1 is less volatile than the market.

Alpha measures the difference between a fund's actual returns and its expected performance, given its level of risk (as measured by beta).

Sharpe ratio uses standard deviation and excess return to determine reward per unit of risk.

Standard deviation is a statistical measure of the volatility of the fund's returns.

Information ratio is a risk-adjusted performance measure. The information ratio is a special version of the Sharpe Ratio in that the benchmark doesn't have to be the risk-free rate. The Israelson method is an adjustment of the Information Ratio to take into account the inconsistency of the IR when excess returns are negative.

Morningstar Style Box™
The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.
For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened cell in the style box matrix indicates the weighted average style of the portfolio.
For portfolios holding fixed-income investments, a Fixed Income Style Box is calculated. The vertical axis shows the credit quality based on credit ratings and the horizontal axis shows interest-rate sensitivity as measured by effective duration. There are three credit categories - "High", "Medium", and "Low"; and there are three interest rate sensitivity categories - "Limited", "Moderate", and "Extensive"; resulting in nine possible combinations. As in the Equity Style Box, the combination of credit and interest rate sensitivity for a portfolio is represented by a darkened square in the matrix. Morningstar uses credit rating information from credit rating agencies (CRAs) that have been designated Nationally Recognized Statistical Rating Organizations (NRSROs) by the Securities and Exchange Commission (SEC) in the United States. For a list of all NRSROs, please visit https://www.sec.gov/ocr/ocr-current-nrsros.html. Additionally, Morningstar will use credit ratings from CRAs which have been recognized by foreign regulatory institutions that are deemed the equivalent of the NRSRO designation. To determine the rating applicable to a holding and the subsequent holding weighted value of a portfolio two methods may be employed. First is a common methodology approach where if a case exists such that two CRAs have rated a holding, the lower rating of the two should be applied; if three or more CRAs have rated a holding, the median rating should be applied; and in cases where there are more than two ratings and a median rating cannot be determined, the lower of the two middle ratings should be applied. Alternatively, if there is more than one rating available an average can be calculated from all and applied. Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. Credit ratings for any security held in a portfolio can change over time.
Morningstar uses the credit rating information to calculate a weighted-average credit quality value for the portfolio. This value is based only upon those holdings which are considered to be classified as "fixed income", such a government, corporate, or securitized issues. Other types of holdings such as equities and many, though not all, types of derivatives are excluded. The weighted-average credit quality value is represented by a rating symbol which corresponds to the long-term rating symbol schemas employed by most CRAs. Note that this value is not explicitly published but instead serves as an input in the Style Box calculation. This symbol is then used to map to a Style Box credit quality category of "low," "medium," or "high". Funds with a "low" credit quality category are those whose weighted-average credit quality is determined to be equivalent to the commonly used High Yield classification, meaning a rating below "BBB", portfolios assigned to the "high" credit category have either a "AAA" or "AA+" average credit quality value, while "medium" are those with an average rating of "AA-" inclusive to "BBB-". It is expected and intended that the majority of portfolios will be assigned a credit category of "medium".
For assignment to an interest-rate sensitivity category, Morningstar uses the average effective duration of the portfolio. From this value there are three distinct methodologies employed to determine assignment to category. Portfolio which are assigned to Morningstar municipal-bond categories employ static breakpoints between categories. These breakpoints are: "Limited" equal to 4.5 years or less, "Moderate" equal to 4.5 years to less than 7 years; and "Extensive" equal to more than 7 years. For portfolios assigned to Morningstar categories other than U.S. Taxable, including all domiciled outside the United States, static duration breakpoints are also used: "Limited" equals less than or equal to 3.5 years, "Moderate" equals greater than 3.5 years but less than or equal to 6 years, and "Extensive" is assigned to portfolios with effective durations of more than 6 years.
Note: Interest-rate sensitivity for non-U.S. domiciled portfolios (excluding those in Morningstar convertible categories) may be assigned using average modified duration when average effective duration is not available.
For portfolios Morningstar classifies as U.S. Taxable Fixed-Income, interest-rate sensitivity category assignment is based on the effective duration of the Morningstar Core Bond Index (MCBI). The classification assignment is dynamically determined relative to the benchmark index value. A "Limited" category will be assigned to portfolios whose average effective duration is between 25% to 75% of MCBI average effective duration, where the average effective duration is between 75% to 125% of the MCBI the portfolio will be classified as "Moderate", and those portfolios with an average effective duration value 125% or greater of the average effective duration of the MCBI will be classified as "Extensive".

Additional Information
MML VIP Barings Core Bond Fund formerly known as MML Managed Bond Fund.

This fund is only available as an investment option in variable annuity products issued by Massachusetts Mutual Life Insurance Company (MassMutual). It is not offered or made available directly to the public.

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® (www.SIPC.org), and MML Strategic Distributors, LLC (MSD), are both Members FINRA (www.FINRA.org) and subsidiaries of Massachusetts Mutual Life Insurance Company, Springfield, MA 01111-0001.

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.

Before purchasing MassMutual Envision, investors should carefully consider the investment objectives, risks, charges and expenses of the variable annuity contract. For this and other information, obtain the MassMutual Envision prospectus and the prospectuses for its underlying funds from your registered representative or by calling 1-(800)-272-2216 or online at www.massmutual.com/envision. Please read these documents carefully before investing or sending money.

The fund established a new class of shares, which is available with this contract, after it began its initial investment operations. The performance for the period prior to offering the new class shows the historical returns for the original class of shares, which were not subject to a 12b-1 fee. The performance shown from the inception date of the class available with this contract includes the fees and expenses of that share class, including a 12b-1 fee. A 12b-1 fee reduces a fund's performance.

Investing involves risk including loss of principal. Rising interest rates will generally cause the price of bonds to fall which could affect the value of any subaccount holding bonds. There are specific risks associated with

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Disclosure

each underlying investment; these are addressed in detail in the underlying fund prospectuses.

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