

Performance Update

As of January 31, 2024

Variable Universal Life II
(VUL II)
Variable Life Insurance

- **Not a bank or credit union deposit or obligation**
- **Not insured by any federal government agency**
- **Not FDIC or NCUA-insured**
- **Not guaranteed by any bank or credit union**
- **May go down in value**



Variable Universal Life II (VUL II)

VUL II is a permanent life insurance policy that combines death benefit protection with the opportunity to accumulate policy value through investments in a separate account with underlying investment funds, and a guaranteed principal account. This report gives information only about the performance of the investment options available through the policy. It does not give, and should not be understood to give, information about the overall performance of any VUL II policy. **It is strongly urged that you request a current illustration of policy values from your financial representative to see how policy charges can impact the performance of your policy.** The illustration will reflect the deduction of mortality and expense risk charges, premium expense charges, surrender charges, and the monthly administrative, face amount, and insurance charges, as well as any applicable rider charges specific to your policy. To request an illustration, simply contact your personal financial representative, or click on “contact us” on our web site, or call the MassMutual Customer Service Center at (800) 272-2216, Monday - Friday, 8 a.m. to 8 p.m. Eastern Time.

The investment performance figures in this report are based on actual historical performance of the investment options for the periods shown, including for those time periods that begin prior to this policy's availability date. In most states, the policy first became available on May 1, 2001. For periods of one year or less, the total return is not annualized. For periods greater than one year, the average annual total return for the time periods is shown.

Past performance is no indication of future results. This update contains the most recent month-end performance. 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 www.massmutual.com or call the MassMutual Customer Service Center at (800) 272-2216, Monday - Friday, 8 a.m. to 8 p.m. Eastern Time.

Investing involves risk, including the loss of principal. Each investment choice underlying the policy 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 policy to greater risk and volatility than the general market.

This material must be preceded or accompanied by the [current prospectuses for the VUL II insurance policy and the prospectuses \(or summary prospectuses, if available\) for its underlying investment choices](#). Before purchasing a policy, investors should carefully consider the investment objectives, risks, charges and expenses of the policy and its underlying investment choices. Please read the prospectuses carefully before investing or sending money. Please note that VUL II is closed to new business. Existing policy owners, however, may continue to make premium payments under existing policies.

Interest Rates - Guaranteed Principal Account

The following are effective annual rates used to credit interest on amounts in the Guaranteed Principal Account. These rates do not apply to any policy loan amounts. Current Interest Rate as of: 3/1/23 3.00%; 4/1/23 3.00%; 5/1/23 3.00%; 6/1/23 3.00%; 7/1/23 3.00%; 8/1/23 3.00%; 9/1/23 3.00%; 10/1/23 3.00%; 11/1/23 3.00%; 12/1/23 3.00%; 1/1/24 3.00%; 2/1/24 3.00%.

Market Indices as of January 31, 2024

	YTD	1 Year	3 Years	5 Years	10 Years
S&P 500 Index	1.68%	20.82%	10.99%	14.30%	12.62%
MSCI ACWI Ex USA NR USD	-0.99%	5.88%	1.14%	5.32%	4.21%
Russell 2000 Total Return Index	-3.89%	2.40%	-0.76%	6.80%	7.03%
Bloomberg U.S. Aggregate Bond Index	-0.27%	2.10%	-3.17%	0.83%	1.63%

Market indices have been provided for informational purposes only; they are unmanaged and reflect no fees or expenses. Individuals cannot invest directly in an index.

The Standard & Poor's 500 Index is an unmanaged measure of common stock total return performance in the U.S.

The Russell 2000 Total Return Index is a broad based, unmanaged index comprised of 2000 of the smallest U.S. domiciled company common stocks (on the basis of capitalization) that are traded in the United States on the New York Stock Exchange, the American Stock Exchange, and NASDAQ.

The Bloomberg U.S. Aggregate Bond Index is an unmanaged index of U.S. corporate bond issues, U.S. Government Securities and mortgage-backed securities.

Total Returns

For the Period Ending: January 31, 2024

Total Returns for each fund are the actual historical rates and are net of all fund management fees and other operating expenses. These returns do not reflect the Separate Account Mortality and Expense Risk Charges or policy charges. Policy charges include: premium expense charges, surrender charges, and the monthly administrative, face amount, and insurance charges. If these charges were deducted, the returns would be significantly lower.

Separate Account Sub-account	Fund Inception Date	Endnotes	Cumulative	Average Annual				Since Inception
			YTD	1 Year	3 Years	5 Years	10 Years	
Money Market								
MML U.S. Government Money Market <i>7-day yield 4.87%</i>	12/15/1981	1, 2	0.41%	4.73%	2.07%	1.60%	0.99%	*
Fixed Income								
Invesco V.I. Global Strategic Income Fund - SERIES I	5/3/1993	4	0.47%	4.87%	-2.06%	0.59%	1.55%	*
MML II Inflation-Protected and Income Fund - Initial	8/30/2002		0.46%	3.64%	-0.99%	3.01%	2.32%	*
MML II Managed Bond Fund - Initial	12/16/1981		0.39%	3.37%	-2.79%	1.38%	1.92%	*
Balanced								
American Funds Asset Allocation Fund - 2	4/30/1997	5	0.93%	10.54%	5.04%	8.26%	7.61%	*
Janus Henderson VIT Balanced Portfolio - Service	12/31/1999	5	1.91%	12.19%	5.13%	8.86%	8.12%	*
MML II Blend Fund - Initial	2/2/1984		0.69%	12.34%	4.55%	8.10%	7.82%	*
Large Cap Value								
American Century VP Disciplined Core Value Fund	10/30/1997		1.43%	4.39%	6.26%	8.87%	8.78%	*
American Century VP Value Fund	5/1/1996		-0.08%	3.44%	10.85%	10.10%	8.90%	*
MML II Equity Fund - Initial	12/31/1973	7	1.63%	6.86%	11.27%	10.63%	8.93%	*
T Rowe Price Equity Income Portfolio Fund	3/31/1994		-0.22%	3.59%	10.03%	9.60%	8.26%	*
Large Cap Blend								
American Funds Growth-Income Fund - 2	4/30/1997	5	1.48%	21.07%	10.29%	12.13%	11.33%	*
Fidelity VIP Contrafund Portfolio - Initial	1/3/1995	5	4.57%	31.46%	9.89%	15.60%	12.41%	*
Invesco V.I. Diversified Dividend Fund Series I	3/1/1990	8	-0.12%	5.08%	8.85%	8.45%	8.12%	*
Invesco V.I. Main Street Fund - SERIES I	7/5/1995		1.37%	18.30%	8.43%	11.99%	10.56%	*
MFS Investors Trust Fund	10/9/1995		1.64%	14.71%	8.96%	12.13%	10.84%	*
MML Equity Index Fund - II	5/1/2000	9	1.63%	20.45%	10.67%	13.99%	12.31%	*
Large Cap Growth								
Goldman Sachs Strategic Growth Fund	4/30/1998	10	1.44%	33.39%	6.20%	15.51%	13.63%	*
Invesco V.I. Capital Appreciation Fund - SERIES I	4/3/1985		4.46%	34.68%	7.08%	15.05%	12.38%	*
Janus Henderson VIT Forty Portfolio - Inst	5/1/1997	11	3.67%	33.63%	6.41%	15.67%	14.57%	*
MML Blue Chip Growth Fund - Initial	5/1/2006	6	3.56%	41.38%	3.41%	11.34%	12.70%	*
T Rowe Price Blue Chip Growth Portfolio Fund	12/29/2000		3.57%	41.20%	4.25%	11.91%	12.97%	*
Small/Mid Cap Growth								
Invesco V.I. Discovery Mid Cap Growth Fund - SERIES I	8/15/1986		1.61%	10.72%	-1.66%	11.11%	9.98%	*
MFS New Discovery Series Fund	5/1/1998		-1.24%	2.08%	-7.37%	8.48%	8.05%	*
MML Small Cap Growth Equity Fund - Initial	5/3/1999		-2.97%	4.56%	-2.38%	8.62%	8.61%	*
T Rowe Mid-Cap Growth Portfolio Fund	12/31/1996	12	-0.07%	10.87%	2.32%	9.53%	10.52%	*
Small/Mid Cap Value								
Franklin Small Cap Value VIP Fund	1/6/1999	5	-2.94%	0.31%	6.84%	8.41%	7.31%	*
Small/Mid Cap Blend								
DWS Small Cap Index VIP - A	8/22/1997		-3.96%	2.18%	-1.05%	6.50%	6.76%	*
MML II Small Cap Equity Fund - Initial	6/1/1998		-2.70%	5.74%	4.84%	10.09%	8.93%	*
International/Global								
Invesco Oppenheimer V.I. International Growth Fund - SERIES I	5/13/1992	3	-0.50%	11.20%	-0.52%	7.18%	4.33%	*
Invesco V.I. Global Fund - SERIES I	11/12/1990		2.63%	25.78%	3.49%	10.67%	9.16%	*
Janus Henderson VIT Global Res Portfolio - Inst	9/13/1993		2.45%	20.32%	8.03%	12.13%	9.55%	*
Templeton Foreign VIP Fund	5/1/1997	5	-4.71%	3.74%	3.70%	2.78%	1.26%	*
Specialty								
Invesco V.I. Health Care Fund Series I (4452)	5/1/1997		3.20%	7.91%	1.29%	7.78%	6.96%	*
Invesco V.I. Technology Fund Series I (4455)	5/20/1997		3.95%	40.88%	1.56%	13.54%	12.68%	*
MML Managed Volatility Fund - Initial	5/1/2000	11, 13	0.85%	10.41%	3.90%	5.25%	4.57%	*

Endnotes

- 1 An investment in the Fund is neither insured nor guaranteed by the Federal Deposit Insurance Corporation or by any other government agency. Although the Fund seeks to maintain a stable net asset value per share, it is possible to lose money by investing in the Fund. The yield quotation more closely reflects the current earnings of the Fund than the total return quotation. It is an annualized rate based on results over the last seven days of the period, and is net of all recurring contract fees and charges.
- 2 The MML U.S. Government Money Market Fund does not have a 12b-1 fee.
- 3 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.
- 4 Unavailable in contracts issued on or after May 1, 2009. For contracts issued prior to May 1, 2009, you may not allocate any new money to this fund via purchase payments or transfers.
- 5 The fund established a new class of shares, which is available with this policy, 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 policy includes the fees and expenses of that share class, including a 12b-1 fee. A 12b-1 fee reduces a fund's performance.
- 6 The historical performance shown reflects a combination of the current underlying fund's performance, as well as the performance of a prior fund. The current fund's performance is reflected beginning on 5/1/06. The prior fund's performance covers the period between the date listed in the performance table and 4/30/06. This Allocation Fund does not make an investment in the underlying fund. The Fund's allocation is below 0.5%. When the fund has 10 years of performance history the Since Inception return is no longer shown.
- 7 Although the MML Equity Fund commenced operations on 9/15/1971, the information necessary to calculate returns is available only for 1974 and later years.
- 8 Effective April 29, 2011, Invesco V.I. Financial Services Fund merged into Invesco V.I. Dividend Growth Fund. Performance prior to that day reflects performance of the Invesco V.I. Financial Services Fund and performance on and after that date reflects performance of the Invesco V.I. Dividend Growth Fund.
- 9 The fund established a new class of shares, which is available with this policy, after it began its initial investment operations. The performance for the period prior to May 1, 2000 shows the historical returns for Class I shares. Performance for periods after May 1, 2000 shows the historical returns for the share class available with this policy and reflects the fees and expenses of that share class.
- 10 The underlying MML Fund does not buy investment securities directly, but instead invests in shares of a corresponding American Funds® "master" fund, which in turn purchases investment securities. The performance of the MML Fund will be lower than the American Funds® master fund because it represents an investment in the American Funds® master fund reduced by the MML Fund's fees. The performance for the period prior to inception of the MML Fund on August 15, 2008, shows the historical returns for the American Funds® master fund adjusted to reflect the MML Fund's fees at its inception (0.70%).
- 11 The portfolio is classified as "non-diversified", meaning it has the ability to take larger positions in a smaller number of issuers than a "diversified" fund. Non-diversified portfolios may experience greater price volatility.
- 12 T. Rowe Price Mid-Cap Growth is not available as an investment choice for policies issued on May 1, 2004 or later.
- 13 Formerly known as MML Large Cap Value Fund. The Fund's name, investment objective, and investment strategy changed on April 29, 2013. The performance results prior to April 29, 2013 would not necessarily have been achieved had the Fund's current strategy been in effect during that period.
- * When the fund has 10 years of performance history the Since Inception return is no longer shown.

Variable Universal Life II (VUL II) (Policy Form P2-2001 in most states and P2-2001NC in North Carolina) is an individual, participating, flexible premium, adjustable, variable life insurance policy. Dividends are not expected to be paid. VUL II was issued by Massachusetts Mutual Life Insurance Company (MassMutual), Springfield, MA 01111-0001, in all states where available. We no longer offer this policy for sale to the public. Policy owners may continue, however, to make premium payments to their policies.

Principal Underwriters:

MML Investors Services, LLC
MML Strategic Distributors, LLC

Subsidiaries of Massachusetts Mutual Life Insurance Company, 1295 State Street, Springfield, MA 01111-0001

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