

Performance Update

As of October 31, 2020

Large Case Variable Life Plus[®]

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

Large Case Variable Life Plus®

Large Case Variable Life Plus® is a flexible premium variable whole life insurance policy. 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 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.** A personalized illustration will reflect the deduction of mortality and expense risk charges, premium charges (i.e. sales load and DAC tax charges), and the monthly administrative, face amount, and insurance charges. Additionally, if you currently own a policy, you can request current illustrations of policy values by contacting your personal financial representative, or by clicking on "contact us" on our web site, or by calling us at us at (800) 548-0073, Monday – Friday, 8 a.m. to 5 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 March 30, 1990. 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 5 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 \(or summary prospectuses, if available\) for the Large Case Variable Life Plus underlying investment funds](#). The funds' prospectuses contain more information about the funds' charges, expenses, risks and investment objectives. Please read the prospectuses carefully before investing or sending money. If you wish to receive additional prospectuses, request them from your personal financial representative or call the MassMutual Customer Service Center at (800) 272-2216, press 2, 8:00 a.m. to 8:00 p.m. (ET). Please note that Large Case Variable Life Plus 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: 12/1/19 4.00%; 1/1/20 4.00%; 2/1/20 4.00%; 3/1/20 4.00%; 4/1/20 4.00%; 5/1/20 4.00%; 6/1/20 4.00%; 7/1/20 4.00%; 8/1/20 4.00%; 9/1/20 4.00%; 10/1/20 4.00%; 11/1/20 4.00%.

For policies with the Alternate Annual Rate endorsement, the following quarterly current interest rates have been effective as of: 12/15/19 4.00%; 3/15/20 4.00%; 6/15/20 4.00%; 9/15/20 4.00%.

Market Indices as of October 31, 2020

	YTD	1 Year	3 Years	5 Years	10 Years
S&P 500 Index	2.77%	9.71%	10.42%	11.71%	13.01%
Morgan Stanley Capital International World Index	-1.42%	4.36%	5.96%	8.13%	8.64%
Russell 2000 Total Return Index	-6.77%	-0.14%	2.19%	7.27%	9.64%
Bloomberg Barclays U.S. Aggregate Bond Index	6.32%	6.19%	5.06%	4.08%	3.55%

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 Morgan Stanley Capital International World Index is an unmanaged measure of total return performance in the global securities market.

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 Barclays 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 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 charges (i.e. sales load and DAC tax charges), and the monthly administrative, face amount, and insurance charges. If these charges were deducted, the returns would be significantly lower.

Asset Category	Investment Fund	Fund Inception Date	Endnotes	Cumulative YTD	Average Annual				
					1 Year	3 Years	5 Years	10 Years	Since Inception
Money Market	MML U.S. Government Money Market (Initial Class) <i>7-day yield: 0.00%</i>	12/16/1981	1	0.23%	0.42%	1.12%	0.75%	0.37%	3.77%
Fixed Income	Invesco Oppenheimer V.I. Global Strategic Income (Series I)	5/3/1993		-8.45%	-7.14%	-3.67%	-0.36%	1.35%	4.79%
	MML Managed Bond (Initial Class)	12/16/1981		4.85%	3.96%	2.60%	2.68%	3.00%	7.01%
Balanced	MML Blend (Initial Class)	2/3/1984		2.43%	6.53%	5.63%	7.29%	8.94%	8.66%
Large Cap Value	MML Equity (Initial Class)	12/31/1973	2	-13.99%	-8.74%	-0.85%	3.61%	7.75%	9.46%
Large Cap Blend	MML Equity Index (Class II)	5/1/1997	3	0.89%	7.66%	7.84%	10.01%	12.01%	7.60%
Small / Mid Cap Growth	Invesco Oppenheimer V.I. Discovery Mid Cap Growth (Series I)	8/15/1986		18.56%	25.98%	16.49%	15.23%	15.14%	10.11%
International / Global	Invesco Oppenheimer V.I. Global (Series I)	11/12/1990		5.42%	13.36%	7.01%	9.60%	9.82%	9.93%

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.

- 2 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.
- 3 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.

Large Case Variable Life Plus® (Policy Form 975-9300 in most states and 975-NC-9300 in North Carolina) is participating, flexible premium variable whole life insurance. Dividends are not expected to be paid.

Large Case Variable Life Plus was issued by Massachusetts Mutual Life Insurance Company (MassMutual), Springfield, MA 01111-0001. 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 Distributors, LLC

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

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