

Panorama Premier Variable Annuity

Performance Update for the Period Ending September 30, 2008

Please note: this product is no longer available for new sales.

This report gives information only about the performance of the investment options available through the contract. It does not give, and should not be understood to give, information about the overall performance of any Panorama Premier variable annuity.

In most states, the Panorama Premier product first became available on January 23, 1996. However, many of the investment funds were established before this date. Therefore, the investment performance figures in this report are calculated using the actual historical performance of the investment options for the periods shown, including during periods before the product was available for sale.

- THE PERFORMANCE DATA QUOTED IS PAST PERFORMANCE
- PAST PERFORMANCE IS NO INDICATION OF FUTURE RESULTS
- THE INVESTMENT RETURN AND PRINCIPAL VALUE OF THE INVESTMENT ACCOUNTS WILL FLUCTUATE SO THE VALUE FOR THE ACCOUNTS MAY BE MORE OR LESS THAN THE PURCHASE PAYMENTS PAID
- THIS UPDATE CONTAINS THE MOST RECENT MONTH-END AND QUARTER-END PERFORMANCE AND EXPIRES WHEN THE NEXT MONTH-END PERFORMANCE IS POSTED
- SINCE PERFORMANCE CHANGES DAILY, THE CURRENT PERFORMANCE MAY BE LOWER OR HIGHER THAN THE PERFORMANCE REFLECTED IN THIS UPDATE
- INVESTMENT RETURNS AND PRINCIPAL VALUE WILL FLUCTUATE SO WHEN UNITS ARE REDEEMED, THEY MAY BE WORTH MORE OR LESS THAN THEIR ORIGINAL COST
- MONTHLY UPDATES ARE POSTED ON OUR WEBSITE AT WWW.MASSMUTUAL.COM OR BY CALLING OUR CUSTOMER SERVICE CENTER AT (800) 272-2216, PRESS 2; MONDAY THROUGH FRIDAY, 8:00 A.M. TO 8:00 P.M. (ET)
- PANORAMA PREMIER VARIABLE ANNUITY IS SOLD BY PROSPECTUS. BEFORE PURCHASING A VARIABLE ANNUITY CONTRACT, INVESTORS SHOULD CAREFULLY CONSIDER THE INVESTMENT OBJECTIVES, RISKS, CHARGES AND EXPENSES OF THE VARIABLE ANNUITY CONTRACT AND ITS UNDERLYING INVESTMENT CHOICES. FOR THIS AND OTHER INFORMATION, OBTAIN THE PROSPECTUSES FOR PANORAMA PREMIER VARIABLE ANNUITY AND ITS UNDERLYING INVESTMENT CHOICES FROM YOUR REGISTERED REPRESENTATIVE. PLEASE READ THE PROSPECTUSES CAREFULLY BEFORE INVESTING OR SENDING MONEY.

- NOT A BANK OR CREDIT UNION DEPOSIT OR OBLIGATION
- NOT FDIC OR NCUA-INSURED
- NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY
- NOT GUARANTEED BY ANY BANK OR CREDIT UNION
- MAY GO DOWN IN VALUE

Variable annuities offer Fixed Accounts, Death Benefit choices, a broad array of investment styles and asset classes and multiple methods to receive an income stream including a guaranteed income for life.¹ Be sure to discuss the variety of features variable annuities offer with your financial professional to help create a retirement plan strategy that is right for you.

¹ *Payment of the death benefit and lifetime income is contingent upon the claims paying ability of the issuing company or companies.*



Massachusetts Mutual Life Insurance Company
and affiliates, Springfield, MA 01111-0001

www.massmutual.com

Issuers: Massachusetts Mutual Life Insurance Company (in New York and New Jersey) and C.M. Life Insurance Company (in all other states).
Policy Form #MUVA94.

C.M. Life Insurance Company, 100 Bright Meadow Boulevard, Enfield CT 06082, is non-admitted in New York and is a subsidiary of Massachusetts Mutual Life Insurance Company.

Principal Underwriter: MML Distributors, LLC
1295 State Street, Springfield, MA 01111-0001
MML Distributors, LLC is a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company
1295 State Street, Springfield, MA 01111-0001

Fund Substitution and Investment Choice Updates, May 1, 2006

On May 1, 2006, MassMutual Retirement Income implemented fund substitutions resulting in a number of funds being replaced by MML Series Funds with MassMutual acting as the investment adviser. In some cases the sub-adviser to the current fund was the original investment adviser to the replaced fund and in other cases a new sub-adviser was named to the new fund.

The fund substitutions were designed to allow us to act more quickly and efficiently to help protect your interests related to these funds if the investment strategy, management team or performance of one or more of the sub-advisers does not meet expectations. Additionally the substitutions should simplify compliance, accounting and auditing and, generally, allow us to administer your contract more efficiently.

Below is a list of sub-accounts which invest in replacement MML Series Funds with the same strategy and manager as the replaced fund. The Average Annual Total Returns and Standardized Total Returns for the investment choices below reflect performance based on the date the fund was made available to the separate account, meaning performance includes history for the replaced fund until May 1, 2006 and the history of the replacement fund since then.

Current Sub-account Name	Replacement Fund	Replaced Fund
MML American Century Income & Growth	MML Income & Growth	American Century® VP Income & Growth
MML T. Rowe Price Blue Chip Growth	MML Blue Chip Growth	T. Rowe Price Blue Chip Growth
MML T. Rowe Price Mid Cap Growth	MML Mid Cap Growth	T. Rowe Price Mid Cap Growth
MML T. Rowe Price Equity Income	MML Equity Income	T. Rowe Price Equity Income
MML Templeton Foreign	MML Foreign	Templeton Foreign Securities Fund

Below is a list of sub-accounts which invest in replacement MML Series Funds with some change in strategy or manager as the replaced fund. Average Annual Total Returns and Standardized Total Returns for the investment choices below reflect performance based on the date the fund was made available to the separate account, meaning performance includes history for the replaced fund until May 1, 2006 and history of the replacement fund since then.

Current Sub-account Name	Replacement Fund	Replaced Fund
MML American Century Mid Cap Value	MML Mid Cap Value	American Century® VP Value
MML Capital Guardian Asset Allocation	MML Asset Allocation	American Funds® Asset Allocation and Calvert Social Balanced
MML Capital Guardian Growth & Income	MML Growth & Income	American Funds® Growth-Income and Fidelity® VIP Growth Opportunities ¹
MML AllianceBernstein Large Cap Growth	MML Large Cap Growth	Fidelity® VIP Growth
MML AllianceBernstein Small/Mid Cap Value	MML Small/Mid Cap Value	Franklin Small Cap Value Securities
MML Legg Mason Concentrated Growth	MML Concentrated Growth	Janus Aspen Forty
MML Neuberger Berman Global	MML Global	Janus Aspen Worldwide Growth
MML Small Cap Index	MML Small Cap Index	Scudder VIT Small Cap Index and MFS New Discovery

Below is a list of sub-accounts which invest in replacement MML Series Funds with some change in strategy or manager as the replaced fund. Average Annual Total Returns for the investment choices below reflect performance based on the replacement fund's inception date. Standardized Total Return is based on the date the replacement fund was made available to the separate account

Current Sub-account Name	Replacement Fund	Replaced Fund
MML Babson Blend	MML Blend	Janus Aspen Balanced
MML Babson Enhanced Index Core Equity	MML Enhanced Index Core Equity	MFS Investors Trust

Average Annual Total Returns – Reflect Fund and Separate Account Level Charges*

*These Average Annual Total Returns reflect total separate account expenses of 1.40% and all fund level expenses. These returns do not reflect contingent deferred sales charges, the annual maintenance charge, or premium taxes. Their inclusion would reduce the returns shown. For periods of one year or less, it is the percentage change in an Accumulation Unit. For periods greater than one year, it is the effective annual compounded rate of return. Many of the sub-accounts listed below were established before the contract was offered for sale (1/23/96).

<i>Asset Class</i>	<i>Investment Choice Name**</i>	<i>Year to Date (Cumulative) 9/30/08</i>	<i>1 Year⁹ 9/30/07 - 9/30/08</i>	<i>3 Year 9/30/05 - 9/30/08</i>	<i>5 Year 9/30/03 - 9/30/08</i>	<i>10 Year 9/30/98 - 9/30/08 or Since Inception of Fund or Date Fund Was Available to Separate Account¹⁰</i>
Asset Allocation	MML Conservative Allocation (8/31/07) ¹⁸	-10.63%	-10.70%	—	—	-7.66%
	MML Balanced Allocation (8/31/07) ¹⁸	-13.71%	-14.47%	—	—	-10.69%
	MML Moderate Allocation (8/31/07) ¹⁸	-15.53%	-16.94%	—	—	-12.68%
	MML Growth Allocation (8/31/07) ¹⁸	-19.02%	-21.19%	—	—	-16.14%
	MML Aggressive Allocation (8/31/07) ¹⁸	-21.94%	-24.83%	—	—	-19.15%
Sector	AIM V.I. Financial Services (9/21/99) ^{1, 13}	-34.95%	-46.25%	-14.55%	-6.51%	-2.02%
	AIM V.I. Global Health Care (5/22/97) ^{1, 13}	-12.97%	-11.22%	0.23%	4.58%	3.42%
	AIM V.I. Technology (5/21/97) ^{1, 13}	-26.08%	-31.01%	-4.01%	-0.10%	-1.15%
	ING Global Real Estate (5/1/04) ^{1, 13, 19}	-0.36%	-12.50%	4.26%	—	13.39%
	PIMCO CommodityRealReturn Strategy (7/1/04) ^{1, 13}	-11.18%	-3.36%	-0.74%	—	5.65%
International/ Global	MML Neuberger Berman Global (8/31/99) ^{2, 3, 12, 14}	-26.82%	-30.31%	-5.02%	0.14%	-3.26%
	MML Templeton Foreign (8/31/99) ^{2, 3, 11, 14}	-27.44%	-27.05%	0.27%	7.18%	1.67%
	Oppenheimer Global Securities (11/12/90) ^{2, 13}	-24.59%	-28.25%	-1.46%	7.19%	8.30%
	Oppenheimer International Growth (5/13/92) ^{2, 13}	-28.69%	-31.21%	1.75%	9.65%	4.78%
Small/Mid Cap Growth	MML Emerging Growth (4/30/00) ^{4, 13}	-24.14%	-29.37%	-2.20%	2.30%	-7.81%
	MML T. Rowe Price Mid Cap Growth (8/31/98) ^{3, 11, 14}	-20.48%	-21.78%	0.10%	7.36%	7.94%
	MML W&R/Wellington Small Cap Growth Equity (4/30/99) ^{3, 4, 13}	-20.41%	-23.00%	-0.99%	4.86%	4.10%
	Oppenheimer MidCap (8/15/86) ¹³	-25.40%	-30.20%	-6.24%	1.62%	2.03%
Small/Mid Cap Blend	MML Oppenheimer Small Cap Equity (6/1/98) ^{3, 4, 13}	-15.99%	-20.74%	-3.94%	2.31%	3.35%
	MML Oppenheimer Small Company Opportunities (4/30/01) ^{3, 4, 13}	-14.62%	-20.11%	-2.52%	5.54%	6.52%
	MML Small Cap Index (8/31/99) ^{4, 12, 14}	-9.16%	-15.36%	0.65%	6.61%	4.79%
Small/Mid Cap Value	MML AllianceBernstein Small/Mid Cap Value (4/30/03) ^{3, 4, 12, 14, 15}	-15.10%	-23.26%	-6.40%	4.40%	6.29%
	MML American Century Mid Cap Value (8/31/99) ^{3, 11, 14}	-7.72%	-15.43%	1.95%	6.24%	5.03%
Large Cap Growth	MML AllianceBernstein Large Cap Growth (8/31/99) ^{3, 12, 14}	-25.39%	-25.61%	-3.86%	0.31%	-3.73%
	MML Legg Mason Concentrated Growth (8/31/99) ^{3, 12, 14}	-41.25%	-44.57%	-11.06%	-0.32%	-2.59%
	MML NASDAQ-100® (4/30/00) ^{13, 17}	-24.43%	-24.92%	-1.60%	2.59%	-11.29%
	MML T. Rowe Price Blue Chip Growth (5/31/02) ^{3, 11, 14}	-24.47%	-26.05%	-2.05%	2.42%	0.98%
	MML T. Rowe Price Growth Equity (4/30/99) ^{3, 13}	-24.37%	-26.17%	-6.95%	-2.34%	-4.84%
	Oppenheimer Capital Appreciation (4/3/85) ¹³	-25.40%	-27.74%	-2.60%	1.67%	3.13%
	Fidelity® VIP Contrafund®–Initial Class (1/3/95) ¹³	-26.05%	-25.70%	-0.74%	6.62%	5.38%
Large Cap Blend	MML Babson Enhanced Index Core Equity (4/30/01) ^{3, 13}	-20.23%	-22.61%	-1.52%	3.56%	-0.69%
	MML Capital Guardian Growth & Income (4/30/03) ^{3, 12, 14}	-23.76%	-30.65%	-5.86%	0.66%	2.72%
	MML Equity Index–Class I Shares (4/30/97) ¹³	-20.39%	-23.41%	-1.57%	3.29%	1.18%
	Oppenheimer Main Street (7/5/95) ¹³	-21.76%	-26.11%	-2.35%	2.77%	1.60%
	MML American Century Income & Growth (8/31/98) ^{3, 11, 14}	-19.40%	-24.94%	-3.14%	3.36%	1.79%
Large Cap Value	MML Davis Large Cap Value (4/30/00) ^{3, 13}	-19.99%	-21.65%	-1.35%	4.59%	0.00%
	MML Oppenheimer/Bernstein Equity (8/31/71) ^{3, 5, 13}	-22.38%	-27.99%	-2.28%	3.85%	0.05%
	MML T. Rowe Price Equity Income (5/31/02) ^{3, 11, 14}	-18.40%	-21.25%	-0.52%	4.92%	2.53%
	Panorama Growth (1/21/82) ¹³	-22.09%	-26.20%	-2.34%	2.86%	-1.33%
	MML Babson Blend (2/3/84) ¹³	-12.50%	-13.44%	0.65%	3.59%	1.06%
	MML Capital Guardian Asset Allocation (5/30/03) ^{3, 12, 14}	-18.05%	-22.96%	-2.20%	2.71%	3.69%
Balanced	Oppenheimer Balanced (2/9/87) ¹³	-19.97%	-22.34%	-3.85%	1.52%	3.46%
	Panorama Total Return (9/30/82) ¹³	-19.28%	-20.60%	-1.86%	2.31%	0.00%
	MML Babson Inflation-Protected and Income (8/30/02) ^{3, 13, 16}	-2.99%	0.61%	0.60%	1.56%	2.54%
	Oppenheimer Core Bond (4/3/85) ¹³	-14.34%	-13.72%	-2.84%	-0.64%	1.61%
Fixed Income	Oppenheimer High Income/VA (4/30/86) ^{6, 13}	-26.53%	-29.37%	-7.73%	-2.35%	0.04%
	Oppenheimer Strategic Bond (5/3/93) ^{6, 13}	-5.84%	-3.75%	2.53%	4.02%	4.51%
	MML Money Market (4/30/87) ^{7, 13}	0.64%	1.35%	2.50%	1.47%	1.76%
Short-Term/Stable Value	Oppenheimer Money (4/3/85) ^{7, 8, 13}	1.10%	1.95%	2.81%	1.73%	1.97%

(Footnotes are on page 5)

Average Annual Total Returns – Reflect Fund, Separate Account and Contract Level Charges*

*These Average Annual Total Returns reflect total separate account expenses of 1.40%, annual maintenance charge (contract level charges) of \$30.00, contingent deferred sales charges (CDSC) (7%-year one since payment, 6%-year two since payment, 5%-year three since payment, 4%-year four since payment, 3%-year five since payment, 2%-year six since payment, 1%-year seven since payment, 0%-year eight since payment and thereafter), and all fund level expenses. These returns do not reflect premium taxes, if any. Their inclusion would reduce the returns shown. For periods of one year or less, it is the percentage change in an Accumulation Unit. For periods greater than one year, it is the effective annual compounded rate of return. Please note that the amount of the CDSC depends on the amount of your purchase payments, then length of time since you made them and the amount of the withdrawal.

<i>Asset Class</i>	<i>Investment Choice Name**</i>	<i>Year to Date (Cumulative) 9/30/08</i>	<i>1 Year⁹ 9/30/07 - 9/30/08</i>	<i>3 Year 9/30/05 - 9/30/08</i>	<i>5 Year 9/30/03 - 9/30/08</i>	<i>10 Year 9/30/98 - 9/30/08 or Since Inception of Fund or Date Fund Was Available to Separate Account¹⁰</i>
Asset Allocation	MML Conservative Allocation (8/31/07) ¹⁸	-16.19%	-16.25%	—	—	-12.21%
	MML Balanced Allocation (8/31/07) ¹⁸	-19.05%	-19.76%	—	—	-15.07%
	MML Moderate Allocation (8/31/07) ¹⁸	-20.75%	-22.06%	—	—	-16.95%
	MML Growth Allocation (8/31/07) ¹⁸	-23.99%	-26.01%	—	—	-20.21%
	MML Aggressive Allocation (8/31/07) ¹⁸	-26.70%	-29.40%	—	—	-23.05%
Sector	AIM V.I. Financial Services (9/21/99) ^{1, 13}	-38.82%	-49.33%	-15.87%	-7.03%	-2.04%
	AIM V.I. Global Health Care (5/22/97) ^{1, 13}	-18.40%	-16.77%	-1.33%	3.98%	3.39%
	AIM V.I. Technology (5/21/97) ^{1, 13}	-30.58%	-35.16%	-5.50%	-0.67%	-1.18%
	ING Global Real Estate (5/1/04) ^{1, 13, 19}	-6.64%	-17.93%	2.67%	—	12.94%
	PIMCO CommodityRealReturn Strategy (7/1/04) ^{1, 13}	-16.70%	-9.43%	-2.25%	—	5.05%
International/ Global	MML Neuberger Berman Global (8/31/99) ^{2, 3, 12, 14}	-31.35%	-34.60%	-6.56%	-0.51%	-3.40%
	MML Templeton Foreign (8/31/99) ^{2, 3, 11, 14}	-31.87%	-31.50%	-1.30%	6.56%	1.62%
	Oppenheimer Global Securities (11/12/90) ^{2, 13}	-29.37%	-32.78%	-3.16%	6.45%	8.17%
	Oppenheimer International Growth (5/13/92) ^{2, 13}	-33.05%	-35.39%	0.14%	9.00%	4.73%
Small/Mid Cap Growth	MML Emerging Growth (4/30/00) ^{4, 13}	-28.77%	-33.63%	-3.70%	1.73%	-7.83%
	MML T. Rowe Price Mid Cap Growth (8/31/98) ^{3, 11, 14}	-25.53%	-26.75%	-1.61%	6.62%	7.81%
	MML W&R/Wellington Small Cap Growth Equity (4/30/99) ^{3, 4, 13}	-25.32%	-27.73%	-2.54%	4.25%	4.06%
	Oppenheimer MidCap (8/15/86) ¹³	-30.04%	-34.51%	-7.78%	0.96%	1.94%
Small/Mid Cap Blend	MML Oppenheimer Small Cap Equity (6/1/98) ^{3, 4, 13}	-21.22%	-25.64%	-5.46%	1.70%	3.30%
	MML Oppenheimer Small Company Opportunities (4/30/01) ^{3, 4, 13}	-19.93%	-25.03%	-4.03%	4.95%	6.49%
	MML Small Cap Index (8/31/99) ^{4, 12, 14}	-14.85%	-20.62%	-0.91%	6.00%	4.76%
Small/Mid Cap Value	MML AllianceBernstein Small/Mid Cap Value (4/30/03) ^{3, 4, 12, 14, 15}	-20.37%	-27.96%	-7.85%	3.80%	5.98%
	MML American Century Mid Cap Value (8/31/99) ^{3, 11, 14}	-13.61%	-20.78%	0.27%	5.56%	4.90%
Large Cap Growth	MML AllianceBernstein Large Cap Growth (8/31/99) ^{3, 12, 14}	-29.98%	-30.19%	-5.39%	-0.30%	-3.82%
	MML Legg Mason Concentrated Growth (8/31/99) ^{3, 12, 14}	-44.76%	-47.84%	-12.51%	-0.94%	-2.71%
	MML NASDAQ-100 [®] (4/30/00) ^{13, 17}	-29.03%	-29.48%	-3.11%	2.02%	-11.32%
	MML T. Rowe Price Blue Chip Growth (5/31/02) ^{3, 11, 14}	-29.07%	-30.54%	-3.56%	1.85%	0.82%
	MML T. Rowe Price Growth Equity (4/30/99) ^{3, 13}	-28.99%	-30.66%	-8.39%	-2.89%	-4.86%
	Oppenheimer Capital Appreciation (4/3/85) ¹³	-30.08%	-32.25%	-4.23%	0.98%	3.01%
	Fidelity [®] VIP Contrafund [®] –Initial Class (1/3/95) ¹³	-30.72%	-30.39%	-2.44%	5.89%	5.23%
Large Cap Blend	MML Babson Enhanced Index Core Equity (4/30/01) ^{3, 13}	-25.14%	-27.35%	-3.04%	2.97%	-0.72%
	MML Capital Guardian Growth & Income (4/30/03) ^{3, 12, 14}	-28.49%	-34.89%	-7.37%	0.04%	2.31%
	MML Equity Index–Class I Shares (4/30/97) ¹³	-25.30%	-28.11%	-3.10%	2.69%	1.14%
	Oppenheimer Main Street (7/5/95) ¹³	-26.66%	-30.71%	-3.96%	2.10%	1.49%
Large Cap Value	MML American Century Income & Growth (8/31/98) ^{3, 11, 14}	-24.47%	-29.61%	-4.74%	2.69%	1.67%
	MML Davis Large Cap Value (4/30/00) ^{3, 13}	-24.93%	-26.47%	-2.89%	3.99%	-0.04%
	MML Oppenheimer/Bernstein Equity (8/31/71) ^{3, 5, 13}	-27.18%	-32.39%	-3.83%	3.24%	-0.02%
	MML T. Rowe Price Equity Income (5/31/02) ^{3, 11, 14}	-23.45%	-26.10%	-2.07%	4.31%	2.36%
	Panorama Growth (1/21/82) ¹³	-26.87%	-30.70%	-3.86%	2.27%	-1.37%
Balanced	MML Babson Blend (2/3/84) ¹³	-18.01%	-18.88%	-0.97%	2.95%	0.97%
	MML Capital Guardian Asset Allocation (5/30/03) ^{3, 12, 14}	-23.15%	-27.72%	-3.75%	2.09%	3.31%
	Oppenheimer Balanced (2/9/87) ¹³	-24.92%	-27.13%	-5.37%	0.92%	3.41%
	Panorama Total Return (9/30/82) ¹³	-24.25%	-25.49%	-3.38%	1.72%	-0.03%
Fixed Income	MML Babson Inflation-Protected and Income (8/30/02) ^{3, 13, 16}	-9.10%	-5.75%	-0.95%	0.99%	2.37%
	Oppenheimer Core Bond (4/3/85) ¹³	-19.74%	-19.16%	-4.43%	-1.29%	1.51%
	Oppenheimer High Income/VA (4/30/86) ^{6, 13}	-31.04%	-33.68%	-9.20%	-2.94%	-0.02%
	Oppenheimer Strategic Bond (5/3/93) ^{6, 13}	-11.81%	-9.88%	0.88%	3.37%	4.44%
Short-Term/Stable Value	MML Money Market (4/30/87) ^{7, 13}	-5.71%	-5.04%	0.94%	0.91%	1.76%
	Oppenheimer Money (4/3/85) ^{7, 8, 13}	-5.32%	-4.53%	1.20%	1.13%	1.93%

(Footnotes are on the next page)

Footnotes For Average Annual Total Returns (on pages 3 and 4)

- *** The returns for all separate accounts or funds assume they had been part of the contract for the periods shown and reflect applicable charges. The contract inception date was 1/23/96.
1. Sector funds may experience greater short-term price volatility than more diversified funds, and are most suitable for the aggressive portion of an investment portfolio.
 2. There are special risks associated with international investing, such as political changes and currency fluctuation. These risks are heightened in emerging markets.
 3. As of May 1, 2006, the names of several sub-accounts have changed and several funds have been replaced with MML Series. Please see the attached "Fund Substitution and Investment Choice Updates, May 1, 2006" on page 2 of this document for more information.
 4. Investments in companies with small market capitalizations ("small caps") may be subject to special risks given their characteristic narrow markets, limited financial resources, and less liquid stocks, all which may cause price volatility.
 5. Although the MML Equity Fund commenced operations 9/15/71, the information necessary to calculate returns is available only for 1987 and later years.
 6. Investments in high yielding debt securities are generally subject to greater market fluctuations and risk of loss of income and principal than are investments in lower yielding debt securities.
 7. *An investment in the Money Market Fund is neither insured nor guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Money Market Fund seeks to preserve the value of your investment at \$1.00 per share, it is possible to lose money by investing in this Fund.*
 8. Although the Oppenheimer Money Fund/VA commenced operations 4/3/85, the information necessary to calculate returns is available only for 1987 and later years. Oppenheimer Money is not available as an investment choice for contracts issued after 1/18/2008.
 9. Due to ongoing market volatility, rates of return may be subject to substantial short-term fluctuations. Current rates of return may be lower than the rates of return shown above.
 10. The returns will be based on the earliest of either 10 years or the funds inception or the date the fund was available to the separate account.
 11. Performance prior to May 1, 2006 reflects performance of an investment choice that is no longer available with the Panorama Premier variable annuity contract due to a fund substitution. However, the investment adviser to the investment choice replaced is the investment sub-adviser to the current investment choice.
 12. Performance prior to May 1, 2006 reflects performance of an investment choice that is no longer available with the Panorama Premier variable annuity contract due to a fund substitution. The investment adviser to the investment choice replaced is not the investment sub-adviser to the current investment choice.
 13. Performance numbers for periods that pre-date the contract's availability are hypothetical and are calculated based on the fund's inception date shown.
 14. Performance numbers for periods that pre-date the contract's availability are hypothetical and are calculated based on the date shown, which is the date the fund was originally made available to the separate account.
 15. MML AllianceBernstein Small/Mid Cap Value was formerly known as MML Goldman Sachs/AllianceBernstein Small Cap Value.
 16. MML Babson Inflation-Protected and Income was formerly known as MML Babson Inflation-Protected Bond.
 17. NASDAQ®, NASDAQ-100® and NASDAQ-100 Index® are trademarks of The NASDAQ Stock Market, Inc. (together with its affiliates, "NASDAQ") and are licensed for use by the Fund. The Fund has not been passed on by NASDAQ as to its legality or suitability. The Fund is not issued, endorsed, sold or promoted by NASDAQ. **NASDAQ MAKES NO WARRANTIES AND BEARS NO LIABILITY WITH RESPECT TO THE FUND.**
 18. Funds offered in a fund-of-funds structure, such as the MML Allocation Funds, may have higher expenses than a direct investment in the 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.
 19. September 6, 2008, ING VP Real Estate was merged into and is now known as ING Global Real Estate.

Standardized Total Returns through 9/30/08

These are SEC required returns since inception of the funds within the contract/certificate. The numbers assume a single \$1,000 payment made at the beginning of the period and full redemption at the end. They assume that the contract/certificate is redeemed and reflect total separate account expenses of 1.40%, annual maintenance charge (contract level charges) of \$30.00, contingent deferred sales charges (CDSC) (7%-year one since payment, 6%-year two since payment, 5%-year three since payment, 4%-year four since payment, 3%-year five since payment, 2%-year six since payment, 1%-year seven since payment, 0%-year eight since payment and thereafter), and all fund level expenses. These returns do not reflect premium taxes, if any. Their inclusion would reduce the returns shown. Please note that the amount of the CDSC depends on the amount of your purchase payments, then length of time since you made them and the amount of the withdrawal.

		C.M. Life Insurance Company			Massachusetts Mutual Life Insurance Company		
Asset Class	Sub-Account (Date fund was made available to the separate account)	1 Year	5 Year	10 Year or Since Available in Separate Account	1 Year	5 Year	10 Year or Since Available in Separate Account
Asset Allocation	MML Conservative Allocation (1/22/08)	—	—	-13.54%	—	—	-13.54%
	MML Balanced Allocation (1/22/08)	—	—	-15.12%	—	—	-15.12%
	MML Moderate Allocation (1/22/08)	—	—	-15.75%	—	—	-15.75%
	MML Growth Allocation (1/22/08)	—	—	-17.20%	—	—	-17.20%
	MML Aggressive Allocation (1/22/08)	—	—	-18.20%	—	—	-18.20%
Sector	AIM V.I. Financial Services (4/30/00) ¹	-49.33%	-7.03%	-2.96%	-49.33%	-7.03%	-2.96%
	AIM V.I. Global Health Care (4/30/00) ¹	-16.77%	3.98%	2.11%	-16.77%	3.98%	2.11%
	AIM V.I. Technology (4/30/00) ¹	-35.16%	-0.67%	-15.61%	-35.16%	-0.67%	-15.61%
	ING Global Real Estate (4/30/06) ^{1,6}	-17.93%	—	-2.17%	-17.93%	—	-2.17%
	PIMCO CommodityRealReturn Strategy (4/30/06) ¹	-9.43%	—	-0.85%	-9.43%	—	-0.85%
International/ Global	MML Neuberger Berman Global (8/31/99) ²	-34.60%	-0.51%	-3.40%	-34.60%	-0.51%	-3.40%
	MML Templeton Foreign (8/31/99) ¹	-31.50%	6.56%	1.62%	-31.50%	6.56%	1.62%
	Oppenheimer Global Securities (8/31/99)	-32.78%	6.45%	5.17%	-32.78%	6.45%	5.17%
	Oppenheimer International Growth (1/31/96-CM, 8/31/98-MM)	-35.39%	9.00%	4.73%	-35.39%	9.00%	4.73%
Small/Mid Cap Growth	MML Emerging Growth (4/30/00)	-33.63%	1.73%	-7.83%	-33.63%	1.73%	-7.83%
	MML T. Rowe Price Mid Cap Growth (8/31/98) ¹	-26.75%	6.62%	7.81%	-26.75%	6.62%	7.81%
	MML W&R/Wellington Small Cap Growth Equity (4/30/99)	-27.73%	4.25%	4.06%	-27.73%	4.25%	4.06%
	Oppenheimer MidCap (8/31/99)	-34.51%	0.96%	-2.68%	-34.51%	0.96%	-2.68%
Small/Mid Cap Blend	MML Oppenheimer Small Cap Equity (8/31/98)	-25.64%	1.70%	3.30%	-25.64%	1.70%	3.30%
	MML Oppenheimer Small Company Opportunities (4/30/01)	-25.03%	4.95%	6.50%	-25.03%	4.95%	6.50%
	MML Small Cap Index (8/31/99)	-20.62%	6.00%	4.76%	-20.62%	6.00%	4.76%
Small/Mid Cap Value	MML AllianceBernstein Small/Mid Cap Value (4/30/03) ^{2,3}	-27.96%	3.80%	5.91%	-27.96%	3.80%	5.91%
	MML American Century Mid Cap Value (8/31/99) ¹	-20.78%	5.56%	4.92%	-20.78%	5.56%	4.92%
Large Cap Growth	MML AllianceBernstein Large Cap Growth (8/31/99) ²	-30.19%	-0.30%	-3.83%	-30.19%	-0.30%	-3.83%
	MML Legg Mason Concentrated Growth (8/31/99) ²	-47.84%	-0.94%	-2.71%	-47.84%	-0.94%	-2.71%
	MML NASDAQ-100® (4/30/00) ⁵	-29.48%	2.02%	-11.32%	-29.48%	2.02%	-11.32%
	MML T. Rowe Price Blue Chip Growth (5/31/02) ¹	-30.54%	1.85%	0.89%	-30.54%	1.85%	0.89%
	MML T. Rowe Price Growth Equity (4/30/99) ⁴	-30.66%	-2.89%	-4.86%	-30.66%	-2.89%	-4.86%
	Oppenheimer Capital Appreciation (8/31/99)	-32.25%	0.98%	-0.42%	-32.25%	0.98%	-0.42%
Large Cap Blend	Fidelity® VIP Contrafund®-Initial Class (8/31/98)	-30.39%	5.89%	5.23%	-30.39%	5.89%	5.23%
	MML Babson Enhanced Index Core Equity (4/30/01)	-27.35%	2.97%	-0.72%	-27.35%	2.97%	-0.72%
	MML Capital Guardian Growth & Income (4/30/03) ²	-34.89%	0.04%	2.30%	-34.89%	0.04%	2.30%
	MML Equity Index-Class I Shares (4/30/99)	-28.11%	2.69%	-1.64%	-28.11%	2.69%	-1.64%
	Oppenheimer Main Street (8/31/99)	-30.71%	2.10%	-1.42%	-30.71%	2.10%	-1.42%
Large Cap Value	MML American Century Income & Growth (8/31/98) ¹	-29.61%	2.69%	1.67%	-29.61%	2.69%	1.67%
	MML Davis Large Cap Value (4/30/00)	-26.47%	3.99%	-0.04%	-26.47%	3.99%	-0.04%
	MML Oppenheimer/Bernstein Equity (4/30/99)	-32.39%	3.24%	-2.03%	-32.39%	3.24%	-2.03%
	MML T. Rowe Price Equity Income (5/31/02) ¹	-26.10%	4.31%	2.36%	-26.10%	4.31%	2.36%
	Panorama Growth (1/31/96-CM, 8/31/98-MM)	-30.70%	2.27%	-1.37%	-30.70%	2.27%	-1.37%
Balanced	MML Babson Blend (4/30/99)	-18.88%	2.95%	-0.25%	-18.88%	2.95%	-0.25%
	MML Capital Guardian Asset Allocation (4/30/03) ²	-27.72%	2.09%	3.28%	-27.72%	2.09%	3.28%
	Oppenheimer Balanced (4/30/00)	-27.13%	0.92%	1.07%	-27.13%	0.92%	1.07%
	Panorama Total Return (1/31/96-CM, 8/31/98-MM)	-25.49%	1.72%	-0.03%	-25.49%	1.72%	-0.03%
Fixed Income	MML Babson Inflation-Protected and Income (4/30/03) ⁴	-5.75%	0.99%	1.71%	-5.75%	0.99%	1.71%
	Oppenheimer Core Bond (1/31/96-CM, 8/31/98-MM)	-19.16%	-1.29%	1.51%	-19.16%	-1.29%	1.51%
	Oppenheimer High Income/VA (8/31/99)	-33.68%	-2.94%	-0.55%	-33.68%	-2.94%	-0.55%
	Oppenheimer Strategic Bond (8/31/99)	-9.88%	3.37%	4.90%	-9.88%	3.37%	4.90%
Short-Term/ Stable Value	MML Money Market (4/30/06)	-5.04%	—	0.60%	-5.04%	—	0.60%
	Oppenheimer Money (1/31/96-CM, 8/31/98-MM) ⁵	-4.53%	1.13%	1.93%	-4.53%	1.13%	1.93%

Since Inception Return is not annualized if less than one year since Inception Date shown.

1. Performance prior to May 1, 2006 reflects performance of an investment choice that is no longer available with the Panorama Premier variable annuity contract due to a fund substitution. However, the investment adviser to the investment choice replaced is the investment sub-adviser to the current investment choice.
2. Performance prior to May 1, 2006 reflects performance of an investment choice that is no longer available with the Panorama Premier variable annuity contract due to a fund substitution. The investment adviser to the investment choice replaced is not the investment sub-adviser to the current investment choice.
3. MML AllianceBernstein Small/Mid Cap Value was formerly known as MML Goldman Sachs/AllianceBernstein Small Cap Value.
4. MML Babson Inflation-Protected and Income was formerly known as MML Babson Inflation-Protected Bond.
5. Oppenheimer Money is not available as an investment choice for contracts issued after 1/18/2008.
6. September 6, 2008, ING VP Real Estate was merged into and is now known as ING Global Real Estate.

Interest Rates

The Fixed Account (Not available in all states). *Interest rates are annualized. They do not reflect contract charges, the inclusion of which would reduce the return shown.*

New Money Interest Rate as of:

<u>5/1/08</u>	<u>6/1/08</u>	<u>7/1/08</u>	<u>8/1/08</u>	<u>9/1/08</u>	<u>10/1/08</u>
3.50%	3.50%	3.50%	3.50%	3.50%	3.50%

Portfolio Interest Rate as of:

<u>5/1/08</u>	<u>6/1/08</u>	<u>7/1/08</u>	<u>8/1/08</u>	<u>9/1/08</u>	<u>10/1/08</u>
3.10%	3.10%	3.10%	3.10%	3.10%	3.10%

DCA Fixed Account (Not available in all states): Current rates on both DCA Fixed Accounts are subject to change monthly. The 6-Month DCA Fixed Account rate is guaranteed for 6 months. The 12-Month DCA Fixed Account rate is guaranteed for 12 months. Current rates on new investments in the DCA Fixed Accounts are guaranteed based on the claims-paying ability of the issuing company. These rates are credited to the 6-month and 12-month DCA Fixed Accounts and do not reflect the performance of any investment choices. Certain restrictions apply. The stated interest rate is not earned on the entire premium payment amount due to regular transfers to the variable investment choices that will affect the daily accrual, lowering the effective yield. Effective yield is based on your initial deposit after the completion of your DCA Fixed Account transfers. All monies must be transferred from the fixed account in the specified period of time, as applicable. The advertised interest rates are annualized and applied to a declining balance of the DCA Fixed Account and, therefore, the true rate an investor earns would be less than the rate shown.

6 Month Interest Rate as of 10/1/08: 3.00% Effective Yield: 0.68%

In New York: 3.00% Effective Yield: 0.68%

12 Month Interest Rate as of 10/1/08: 3.00% Effective Yield: 1.43%

In New York: 3.00% Effective Yield: 1.43%
