

Memorandum

- Massachusetts Mutual Life Insurance Company
- C.M. Life Insurance Company
- MML Bay State Life Insurance Company

To: All Representatives
From: Corporate Actuarial
Re: 2009 Dividend Schedule

No: 2008-053
Date: November 3, 2008
Discard After: Hold Indefinitely

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Summary This memorandum announces the 2009 Dividend Schedule (DS). Here are some key points:

- Driven by a commitment to policyholders--as well as a strong financial position, solid underwriting results and prudent expense management--the Massachusetts Mutual Life Insurance Company's board of directors has approved an estimated dividend payout of \$1.35 billion under the company's 2009 Dividend Schedule. This estimate reflects a very competitive dividend interest rate of 7.60 percent on new eligible participating life insurance policies written since the MassMutual-Connecticut Mutual merger in 1996. The company believes this dividend interest rate strikes the right balance between two key MassMutual commitments: maintaining exceptional financial strength and providing long-term value for policyholders.
- A reduction in dividend interest rates is the primary cause for the reduction in the 2009 DS. The dividend interest rate decreased from 7.90 percent to 7.60 percent for new business (the MM-TBCC block), decreased from 7.75 percent to 7.40 percent for the CML block, and decreased from 7.90 percent to 7.45 percent for the MM block (see block definition in next page).

While MassMutual's diversified investment strategy is not totally immune to short-term volatility, the company's disciplined approach is designed to optimize returns over the long run. This approach drove the estimated dividend payout of \$1.38 billion in 2008 and the \$1.35 billion estimated payout for 2009.

MassMutual's investment and business discipline, and comprehensive portfolio of products and services, position the company to continue to help provide the financial stability and security policyholders expect. And, strong year-to-date increases in whole life sales and net field force will set the stage for sustained future growth.

- About 46 percent of all eligible participating life insurance policyholders will receive a 2009 dividend larger than or equal to the dividend they *received* in 2008. Almost all eligible participating life insurance policyholders will receive a 2009 dividend less than or equal to the dividend *illustrated* under the 2008 DS for 2009.

- The 2009 DS incorporates an increase in the amount of distributed other business earnings compared to the 2008 DS, reflecting MassMutual's strategy to provide enhanced value to eligible participating policyholders through the dividend schedule. Other business earnings are primarily the earnings of businesses other than individual participating businesses, such as noninsurance subsidiaries.
- Expense charges were maintained for all eligible participating life insurance policies and participating annuity contracts for the 2009 DS.
- Mortality experience factors were updated to reflect the most recent mortality tables for each block. Mortality experience factors vary positively and negatively depending on block, policy series, gender, underwriting class and other factors. On balance, mortality experience resulted in a positive effect on dividends.

Competitive Positioning and Financial Strength

MassMutual's 2009 DS is expected to maintain the company's competitiveness while safeguarding its financial strength to help ensure long-term security for policyholders.

CML, MM and MM-TBCC Blocks

In this memorandum, business written by the former Connecticut Mutual Life Insurance Company prior to the 1996 merger is referred to as the CML block; MassMutual business written prior to the merger, as the MM block; and business written since the merger through Massachusetts Mutual Life Insurance Company, as the MM-TBCC block. MassMutual is used to denote all three blocks combined.

Change Varies by Block

Dividend changes on the three blocks (CML, MM and MM-TBCC) and on individual policies can vary significantly from the average. The change for a given policy is a function of factors such as policy series, issue age, policy duration, gender, policy loan rate and smoker status, as well as changes in experience.

Guiding Principles, including the Merger Agreement

The Contribution Principle (that is, divisible surplus is returned to policies in the same proportion as the policies are deemed to have contributed to divisible surplus), actuarial standards of practice, state laws and the 1996 Merger Agreement between MassMutual and the former Connecticut Mutual guide MassMutual in the distribution of divisible surplus among the three blocks of business.

Dividends for eligible participating life insurance depend primarily on three main factors: investments, mortality and expenses. Each policyholder receives an equitable share of the divisible surplus that results when the combined actual experience of these factors is better than the experience that was originally assumed in setting the premium and guaranteed cash surrender value for that policy. Dividends are not guaranteed.

Total Payout The total approved dividend payout for 2009 is estimated at \$1,350.2 million, a decrease of \$34.6 million, or 2.5 percent, compared to the estimated total approved dividend payout for 2008. This decrease is the difference between the actual estimated total payout in 2008 (under the 2008 DS) and the actual estimated total payout for 2009 (under the 2009 DS).

The total payout for 2009 also represents a decrease of approximately \$96.6 million compared with maintaining the 2008 DS in 2009. This decrease is the difference between the actual estimated total payout in 2008 (under the 2008 DS) and the payout that would have occurred in 2009 if the 2008 DS had been maintained (continued) for 2009.

Life Insurance Dividend Payout The life insurance dividends estimated for 2009 are \$1,328.7 million, a decrease of \$34.6 million from the \$1,363.3 million estimated for 2008.

Settlement dividend formulas for all blocks are unchanged from the 2008 DS.

Policyholder Impact About 46 percent of all eligible participating life insurance policyholders will receive a 2009 dividend larger than or equal to the dividend they *received* in 2008. About 44 percent (CML), 33 percent (MM) and 92 percent (MM-TBCC) of eligible participating life insurance policyholders of the respective blocks will receive a 2009 dividend larger than the dividend they *received* in 2008.

Almost all eligible participating life insurance policyholders will receive a 2009 dividend less than or equal to the dividend *illustrated* under the 2008 DS for 2009.

Agents are strongly encouraged to run inforce illustrations based on the 2009 DS and on a lower dividend schedule to determine the impact of the 2009 DS on individual policies.

Life Insurance Experience Updated Life insurance experience factors related to investment earnings, policy loans, mortality, persistency, expenses, taxes and other business earnings have been analyzed and, where appropriate, updated consistently for each block.

Dividend Interest Rates

The dividend interest rates for eligible participating life insurance are:

<i>Policy Block</i>	<i>2008 DS</i>	<i>2009 DS</i>	<i>Percentage-point Difference</i>
CML	7.75%	7.40%	-0.35
MM	7.90%	7.45%	-0.45
MM-TBCC	7.90%	7.60%	-0.30

The dividend interest rates for the CML and MM blocks reflect the investment earnings from their respective asset portfolios, the effects of distributed other business earnings (which are shared in accordance with the Merger Agreement) and scale management. The dividend interest rate for the MM-TBCC block reflects earnings on assets backing all blocks, adjusted for distributed other business earnings.

The dividend interest rate decreases for the CML, MM, and MM-TBCC blocks primarily reflect the decrease in the investment results for the portfolios backing the different blocks offset in part by the increase in, and sharing of, distributed other business earnings.

The investment component of the dividend for most policies also reflects updated policy loan experience, any loan expenses and the earnings on those loans where appropriate.

The dividend interest rate is not the rate of return on the policy. Dividends are composed of an investment component, a mortality component and an expense component. Therefore, dividend interest rates should not be the sole basis for comparing insurers or policy performance.

Expense Changes

The dividend schedule covers only those expenses allocated to the eligible participating life insurance line of business.

For all blocks, no expense changes were necessary to maintain the balance between expenses charged in the dividend schedule and the average expenses to be recovered.

Mortality Changes

Mortality experience factors were reviewed and updated to reflect the most recent mortality tables for each block. The mortality experience factors vary positively and negatively depending on block, policy series, gender, underwriting class and other factors.

The mortality component of the dividend remained the same or increased (improved) compared to the 2008 DS for most classes of the CML block, except for all Nonsmoker and Non-Tobacco policies issued in 1990 and later with face amounts of \$100,000 or more (high band).

The mortality component of the dividend remained the same or increased (improved) compared to the 2008 DS for all classes of the MM block.

The mortality component of the dividend remained the same or increased (improved) compared to the 2008 DS for most classes of the MM-TBCC block, except for Select Preferred Non-Tobacco and Preferred Tobacco policies.

Term Policies For term policies, the following modifications were made:

- For the MM term block, all term dividends are unchanged from the 2008 DS.
- Dividends on 86 Series and later CML YRT policies were adjusted to reflect the most recent mortality experience, which improved compared to the 2008 DS.
- Dividends on CML Update Term policies were adjusted to reflect the most recent mortality experience, which improved compared to the 2008 DS. Dividends will be paid at some issue ages and some durations (mostly at attained ages 73 and above).
- Dividends on all other CML term policies are unchanged from the 2008 DS.

**Disability
Income
Insurance**

The estimated payout for disability income insurance policies is \$15.4 million (\$0.3 million for the CML block, \$1.4 million for the MM block and \$13.7 million for the MM-TBCC block). This total is an increase of \$2.1 million, or 15.8 percent, compared to the payout for 2008.

The 2008 DS was maintained for all disability income insurance products. For the MM-TBCC block, all disability income insurance policyholders will receive a 2009 dividend larger than or equal to the dividend *illustrated* under their policies' original scale.

In addition, these disability income insurance products will pay dividends for the first time in 2009, as follows:

- Non-New York Radius 2004 RateBook policyholders will receive a 2009 dividend larger than the dividend *illustrated* under their policies' original scale.
- Non-New York Voluntary MaxElect policyholders will receive a 2009 dividend equal to the dividend *illustrated* under their policies' original scale.
- Non-New York Employer-Pay MaxElect policyholders will receive a 2009 dividend larger than the dividend *illustrated* under their policies' original scale.

Annuities

The estimated dividend payout for annuities is \$5.7 million (\$0.9 million for the CML block and \$4.8 million for the MM block). This total reflects an estimated decrease of \$2.1 million, due to decreases in the dividend interest rates.

The dividend interest rates for annuities are:

<i>Policy Block</i>	<i>2008 DS</i>	<i>2009 DS</i>	<i>Percentage-point Difference</i>
CML	7.75%	7.40%	-0.35
MM	7.90%	7.45%	-0.45

The investment component of the MM block dividend reflects updated policy-loan experience and any earnings on those loans. The expense charges on premium-paying annuity contracts and paid-up additions were unchanged for the CML block and MM block as compared to the 2008 DS.

TDO and OYT Rates

Term Dividend Option (TDO) rates for the MM and MM-TBCC blocks (except for Whole Life Legacy 100), one-year term (OYT) rates for the CML block Fifth and Sixth Dividend Options, and Enhanced Whole Life (EWL) term rates were updated to reflect the most recent mortality tables for each block and to ensure consistency between the blocks.

TDO rates for the MM and MM-TBCC blocks vary positively and negatively depending on policy series, gender and underwriting class.

One-year term rates for the CML block Fifth and Sixth Dividend Options are mostly the same or lower (better) than in 2008, except for the Tobacco class.

Payment Option Rates

Payment option rates were maintained for all three blocks for the 2009 DS:

<i>Payment Option</i>	<i>2008</i>	<i>2009</i>
• Option A and Option 4 (fixed amount)	3.25%	3.25%
• Option B and Option 1 (fixed period)	3.25%	3.25%
• Option D and Option 3 (interest only)	3.25%	3.25%

Dividend Accumulation Rates

The CML, MM and MM-TBCC blocks' dividend accumulation rates for 2009 are lower than the 2008 rates, consistent with the changes in dividend interest rates:

	<i>2008 DS</i>	<i>2009 DS</i>
<i>CML block:</i>		
<ul style="list-style-type: none"> All life insurance policies and annuity contracts. 	4.75%	4.20%
<i>MM block and MM-TBCC block:</i>		
<ul style="list-style-type: none"> Permanent life insurance policies with an adjustable policy-loan interest-rate provision, term insurance policies and annuity contracts with no policy loan provision. For the MM block only, this includes permanent life insurance policies without an adjustable loan rate that have policy numbers below 4,000,000 and annuity contracts with policy numbers below 4,000,000. 	4.85%	4.30%
<ul style="list-style-type: none"> All other life insurance policies and annuity 	4.75%	4.25%

Life Insurance Illustrations Regulation

The 2009 DS--like the 1997-2008 dividend schedules--complies with the requirements of the National Association of Insurance Commissioners (NAIC) Life Insurance Illustrations Model Regulation, as adopted by the states.

Policy Illustrations

Mainframe illustrations based on the 2009 DS are available Nov. 3, 2008. The Sales and Communications Software CD (compact disc), which contains all necessary values for the 2009 DS, will be received in the field by Nov. 3. Agents can run the update on Nov. 3. Using a system that is not updated will result in incorrect illustrations. *Because of a time-triggered default built into the software, MassMutual Designs and MassMutual PrismSM will not operate on non-updated systems after Nov. 10, 2008.*

Additional Information

For additional information about the 2009 DS and dividend-related articles being posted on FieldNet, see The Word Nov. 3, 2008.