

BUILT TO C●NNECT

...MassMutual



2023 QUALITY & PERF●RMANCE REPORT

MassMutual: A Commitment to Financial Strength and Value

Since 1851, MassMutual's business decisions have been guided by a commitment to provide financial security and enduring value to our participating policyowners.

We continue to be a mutual life insurance company that operates for the benefit of these policyowners and one of the largest financial services firms in the U.S. This has allowed us to take a long-term business approach that has delivered results while maintaining financial strength ratings that are among the highest in any industry. While MassMutual® has grown to become a diversified financial services company, our purpose remains the same: To help people secure their future and protect the ones they love.

**For more information,
visit us at www.MassMutual.com**


A Leading Mutual Life Insurance Company

As a mutual company, MassMutual does not have shareholders. The company is managed with the long-term interests of its policyowners and members in mind, and our business decisions reflect this commitment.

Policyowners and members benefit directly from the company's mutual form of ownership. For example, if you are the insured under a MassMutual participating whole life insurance policy, you are a member of the company and entitled to vote for its board of directors. And, if you are the owner of that participating policy, you are eligible to receive policy dividends.

Through the most prosperous and turbulent of financial times, our mutual foundation has enabled us to deliver long-term value to our policyowners.

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



MassMutual continues
its tradition of

strength, stability, and performance.

2022 Highlights

- Increased total adjusted capital to \$33.8 billion, a record high, while the statutory surplus increased to \$27.9 billion. Both are key indicators of the company's financial strength.¹
- Paid more than \$7.1 billion in insurance and annuity benefits in 2022, delivering on our commitments to customers and their families when they need it most.
- Ended 2022 with \$466 billion in assets under management.²
- The company increased the insurance protection it provides by over 6% to \$950 billion at the end of 2022, delivering on our commitment to provide financial security to our policyowners and their families.
- Issued more than \$708 million of life insurance coverage since 2002 through MassMutual's LifeBridgeSM Free Life Insurance Program.³

- We achieved total reported sales of more than \$39 billion,⁴ led by steady demand for whole life insurance, record annuity sales, and the seventh year of strong growth in our Institutional Solutions business. Our 2021 acquisition of MassMutual Ascend (rebranded from Great American Life Insurance) continued to help position MassMutual to become one of the leading annuity providers in the U.S.
- MassMutual and the MassMutual Foundation provided millions of dollars in support of social causes in the U.S. focused on financial well-being in underserved communities — with a focus on our hometown of Springfield, Massachusetts, as well as Boston — addressing issues of education, health equity, economic development, among others.

- FutureSmart,SM our proprietary financial education program for middle and high school students, continued to expand its footprint in our nation's schools, reaching millions of students nationwide and in Puerto Rico. Additionally, FutureSmart includes digital financial literacy education for educators and families, is free, and is available in English and Spanish. We hope to encourage all participants to manage their finances, make sound decisions, and chart their own course to personal financial well-being.

¹ The consolidated statutory results of Massachusetts Mutual Life Insurance Company include its wholly-owned U.S. domiciled life insurance subsidiary C.M. Life Insurance Company (C.M. Life) and C.M. Life's wholly-owned U.S. domiciled life insurance subsidiary, MML Bay State Life Insurance Company. MassMutual Ascend (f/k/a Great American Life Insurance Company) is also included within MassMutual's total adjusted capital calculation.

² Assets Under Management (AUM) include assets and certain external investment funds managed by MassMutual subsidiaries, including Barings and MassMutual Ascend. AUM from MassMutual International, OppenheimerFunds, Inc., and the retirement plan business excluded from 2018 (\$363 billion), 2019 (\$172 billion), and 2020 (\$191 billion) as those businesses have been sold.

³ MassMutual pays the premiums on \$50,000 of term life insurance for eligible parents or guardians, with the benefit paid into a trust earmarked for their child's education. Trust services provided by The MassMutual Trust Company, FSB, a wholly owned subsidiary of MassMutual.

⁴ This is a consolidated sales number for MassMutual and MassMutual Ascend. (It includes sales from distribution channels: MMFA, MMSD, Worksite, Institutional, MM Ascend, Direct to Consumer/Haven Life and MM Funds.)



A Responsible Company

Employees with Holistic Support – for Work and Life

We know that creating a sense of belonging and bringing together broader perspectives and backgrounds fuels a more vibrant, collaborative, and innovative workplace that enables us to authentically and genuinely reach more people on their terms.

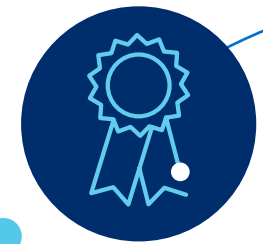
MassMutual's Commitment to Sustainability

Our philosophy is simple: operate in a manner that supports long-term value for our policyowners, employees, communities, environment, and all of our stakeholders.

As a leading mutual life insurance company, we take seriously our role in helping to build a future where challenges are met, ideas are supported, and each individual and community is linked to the support and resources they need to thrive.

MassMutual is also ranked No. 104 on the 2023 FORTUNE 500® list.*

- America's Best Employers for Diversity
Forbes
- FORTUNE World's Most Admired Company*
- 2022 Best Places to Work for LGBTQ Equality.
Corporate Equality Index rating of 100%
Human Rights Campaign
- Top Places to Work in Massachusetts
The Boston Globe
- 2022 Best Places to Work for Disability Inclusion
Disability Equality Index rating of 100%
- Military Friendly Employer
Victory Media
- 2022 The Civic 50 Most Community-Minded Companies
Points of Light



*From FORTUNE. ©2023 FORTUNE Media IP Limited. All rights reserved. FORTUNE 500 (June 2023) and FORTUNE World's Most Admired Company (February 2023) are registered trademarks of FORTUNE Media IP Limited and are used under license. FORTUNE and FORTUNE Media IP Limited are not affiliated with, and do not endorse products or services of, MassMutual.

Investing for the Future

A Long-Term Investment Philosophy

Our long-term investment philosophy is tailored to our goals as a mutual life insurance company.

MassMutual’s investment goal is to generate long-term, stable investment performance to support MassMutual’s financial strength and ability to meet its financial commitments to policyowners.

Quality, Diversification, and Risk Management

Our investment strategy built on diversification, prudent security selection, and value has been able to achieve consistent long-term investment returns, even during unpredictable markets and varying economic cycles.

MassMutual’s General Investment Account (GIA) consists primarily of bonds and real estate debt investments. Our goal is to generate competitive long-term results, while maintaining the ability to weather downturns in financial markets.

A History of Dividends to Eligible Participating Policyowners

Dividends are generally declared and paid annually, and although policy dividends are not guaranteed, MassMutual has paid them every year since 1869.

Dividends can help policyowners increase their life insurance coverage and build more value.⁵

Diversification

We diversify the composition of the General Investment Account (GIA) by investing in a variety of asset classes. This approach increases the opportunity to capture positive returns across issuers and sectors while minimizing the impact of underperformance. MassMutual further diversifies by investing in strategic partnerships in international insurance and asset management businesses.

Relative Value

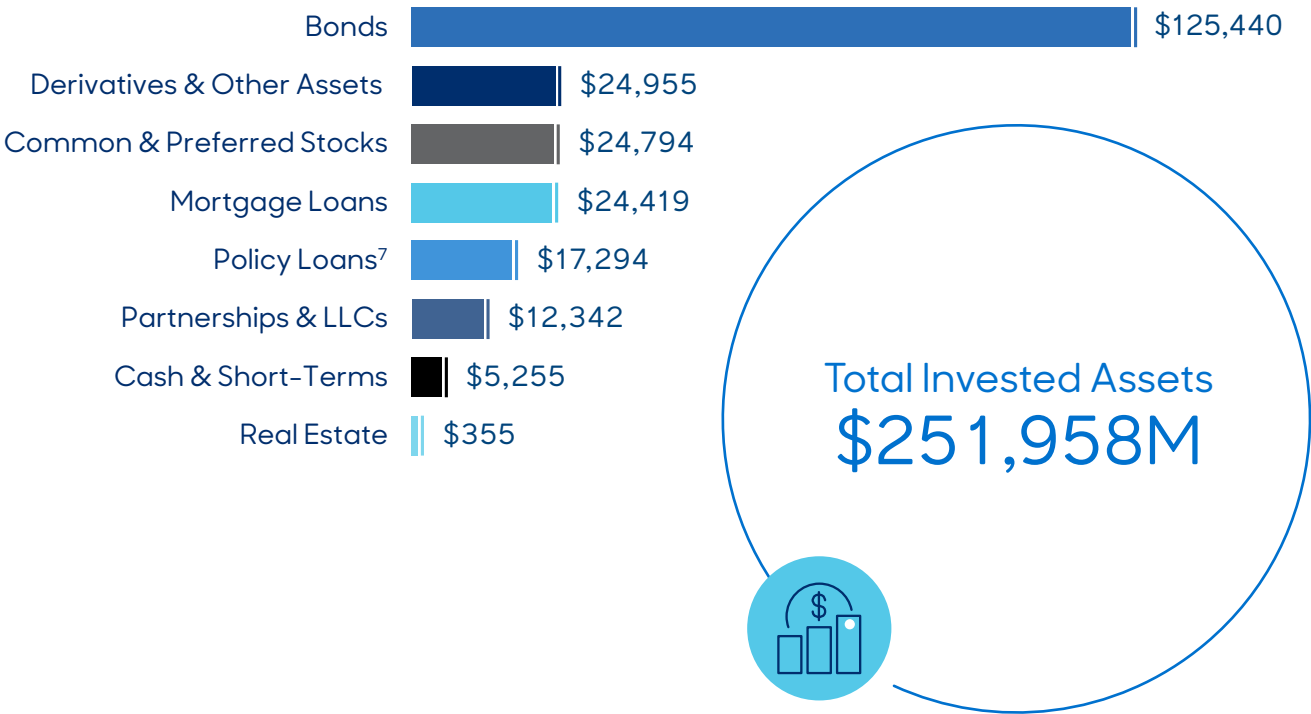
A relative value assessment of risk versus return informs our decision-making process as we consider various opportunities and their prospective impacts on GIA performance.

Prudent Security Selection

Our investment professionals conduct regular, thorough reviews of both current and potential holdings to ensure that they meet our criteria for inclusion in the GIA.

Invested Assets⁶

As of December 31, 2022
(in millions)



⁵ Dividends are determined annually, are subject to change, and are not guaranteed.

⁶ Invested assets exclude \$17,106 million of funds withheld from the Total Invested Assets, given that 100% of the associated investment risk is reinsured. The funds withheld investment portfolio has counterparty protections in place, including investment guidelines that were established to meet MassMutual’s risk management objectives.

⁷ Policy loans are loans taken by policyowners against the cash surrender value of their policies and, as such, are secured by the cash surrender value of those policies.



MassMutual Has
Paid Dividends
Every Year
Since 1869

Policyowner Dividends

Annual dividends to eligible participating whole life policyowners include three primary components that reflect the company's favorable operating experience with respect to mortality, investment results, and expenses savings. The dividend paid on a specific policy is determined based on the portion that the policy contributed to surplus.

The investment component of the dividend reflects the difference between the dividend interest rate (DIR) set by the board of directors each year and the policy's guaranteed interest rate. As a result, prudent investment decisions have allowed us to maintain an industry-leading dividend interest rate for the last 17 years while maintaining outstanding financial strength.⁸

How Dividends are Determined

Company surplus is primarily the result of favorable operating experience with respect to claims (death benefits paid), investment results, and expenses. A portion is set aside to be paid or applied as policy dividends in the following year. When determining the dividend for an individual policy, the amount paid reflects the portion that each specific policy is considered to have contributed to surplus.

Our eligible whole life insurance policyowners use the dividends they receive in a variety of ways, from increasing their cash value and death benefit to helping to pay their premiums.

Generally, dividends are declared and paid annually. However, since we do not know what our experience will be in future years, we cannot guarantee the payment of dividends.

⁸ The dividend and dividend interest rate (DIR) are determined annually, subject to change, and are not guaranteed. Dividends for eligible participating life insurance policies consist of investment, mortality, and expense components. The DIR is used to determine the investment component of the dividend. It is not the rate of return on the policy and should not be the sole basis for comparing insurers or policy performance.



Dividends & Policyowners

MassMutual will deliver a leading dividend interest rate⁵ among our peers for the 17th consecutive year, paying

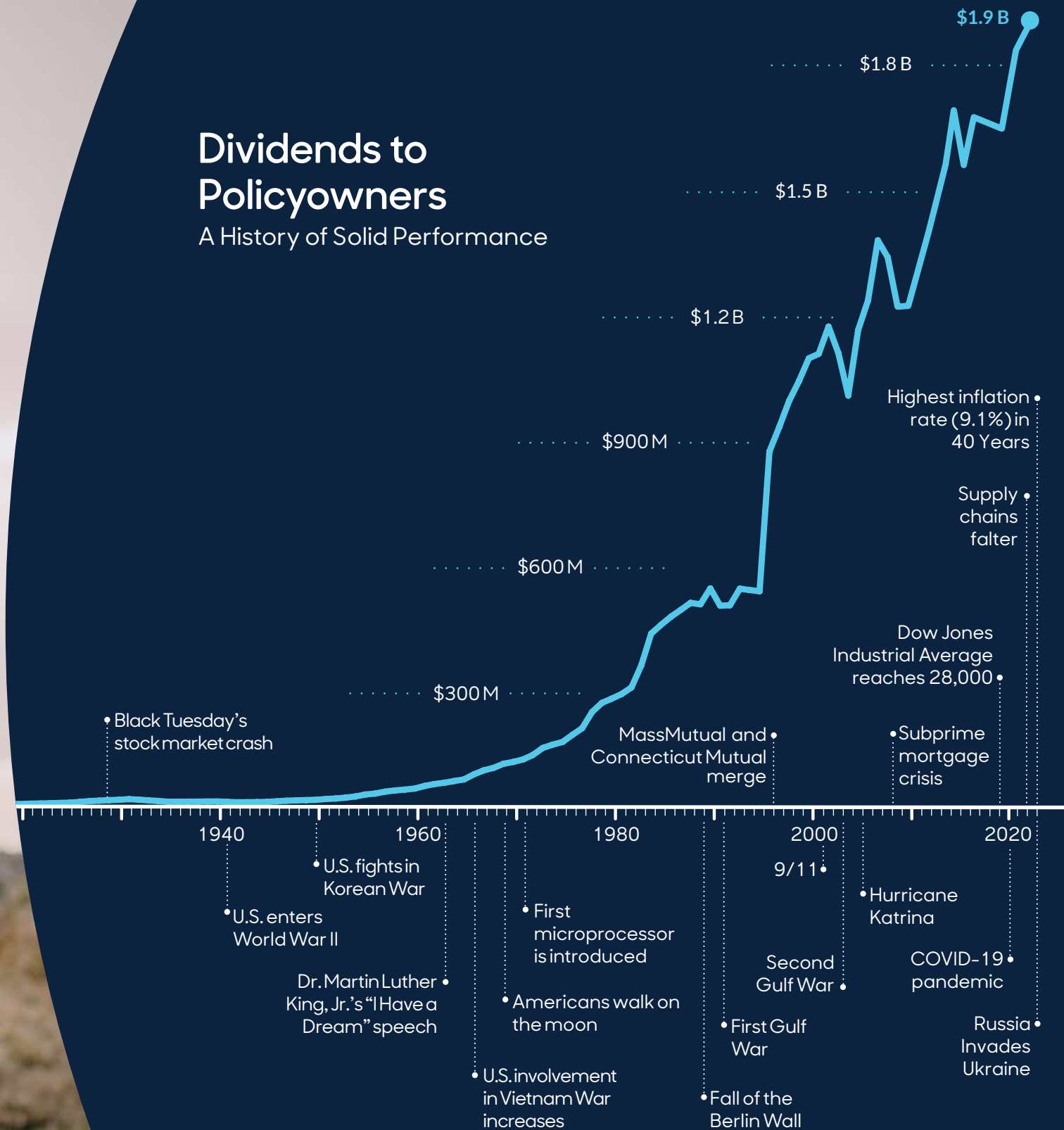
\$1.9B

in estimated dividend payout in 2023.



Dividends to Policyowners

A History of Solid Performance



Source: Massachusetts Mutual Life Insurance Company Statutory Annual Statement, Year-End — Summary of Operations — Dividends to Policyowners: These numbers reflect incurred dividends to policyowners. Incurred dividends equal amounts paid to eligible participating policyowners plus any increase in liabilities.

Historical Dividend Results for Participating Whole Life Insurance

The following is an overview of the historical dividend results for a whole life insurance policy issued by MassMutual to a hypothetical insured in 1980.⁹ The policy was a Life Paid-Up at 65 with a \$250,000 face amount, issued on a woman who was age 35 and a nonsmoker. The guaranteed annual premium for the policy was \$4,077.50, payable to her age 65 policy anniversary. The policy was then paid-up.

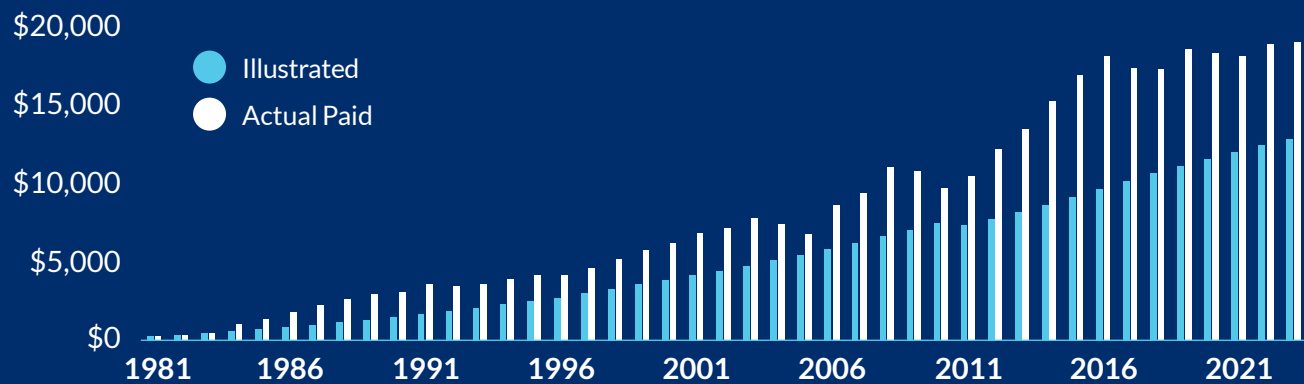
The policy provides a guaranteed amount of life insurance (\$250,000) and a schedule of guaranteed cash values that increase each year and grow to equal the face amount at the insured's age 100. In addition, the policy is participating, which means that it is eligible to receive policy dividends. However, dividends are not guaranteed. In the original sales illustration created in 1980, dividends (based on the dividend schedule in effect at that time) were applied to purchase paid-up additional life insurance or paid-up additions. This is the most common dividend option selected by MassMutual whole life policyowners. Paid-up additions provide additional life insurance protection, accumulate additional cash value, and are also eligible to receive dividends. As a result, they have the potential to increase the policy death benefit significantly over a period of many years.

The charts that follow compare the policy values that were illustrated in 1980 to the actual results with dividends paid through 2023. This includes:

- The total annual dividends, which include the base policy dividends and dividends paid on accumulated paid-up additions, assuming no paid-up additions were surrendered.
- The total policy cash value, which includes the base policy cash value and the cash value of accumulated paid-up additions.
- The total policy death benefit, which includes the base policy death benefit and the death benefit of accumulated paid-up additions.

The results shown reflect the actual experience of the company over this time period, primarily with respect to investment results, mortality, and expenses. Dividends paid in future years will be lower or higher than illustrated, depending on MassMutual's operating experience over time.

Illustrated vs. Actual Total Annual Dividends
(1981 - 2023)



Illustrated vs. Actual Cumulative
Total Dividends Paid (1981 - 2023)

Illustrated	\$222,247
Actual Paid	\$358,510

The cumulative total annual dividends illustrated from 1981-2023, based on the dividend schedule in effect in 1980, was \$222,247. The actual paid was \$358,510, which is 61.31% higher.

Illustrated vs. Actual
Total Cash Value (2023)¹⁰

Illustrated	\$487,221
Actual	\$669,713

The illustrated total cash value for 2023 was \$487,221. The actual total cash value is \$669,713, which is 37.46% higher. This represents an internal rate of return¹⁰ of 5.73% on the premiums paid through age 65, which totaled \$122,325 (\$4,077.50 X 30 years).

Illustrated vs. Actual
Total Death Benefit (2023)¹⁰

Illustrated	\$619,200
Actual	\$850,613

The illustrated total death benefit for 2023 was \$619,200. The actual death benefit is \$850,613, which is 37.37% higher and well over three times the initial death benefit of \$250,000. If the policy death benefit is paid in 2023, this will represent an internal rate of return¹¹ of 6.50% on the premiums paid. The death benefit is generally paid income tax-free.

⁹ This policy was issued by MassMutual prior to the merger with the former Connecticut Mutual Life Insurance Company in 1996. Policies in this block of business are no longer available for purchase. The policy was originally issued with a fixed loan rate, which was updated to an adjustable loan rate in 1983.

¹⁰ These values include a termination dividend in 2023 for total dividends. Termination dividends payable in Total Cash Value and Total Death Benefit begin in year 15. Termination dividends are only available upon full policy surrender or a death.

¹¹ The internal rate of return (IRR) is the rate at which premiums paid up to that year would need to be compounded each year to generate the Total Cash Value or Total Death Benefit.

Creating Value for Policyowners – Strategic Business Investments

Over a period of many years, MassMutual has acquired and built a diverse mix of high-performing businesses and investments.

These include our Institutional and Worksite businesses, non-participating insurance and annuity operations, and ownership interests in global asset management companies. These investments and businesses have added diversity to our portfolio and enhanced our product offerings, while delivering very attractive long-term investment results.

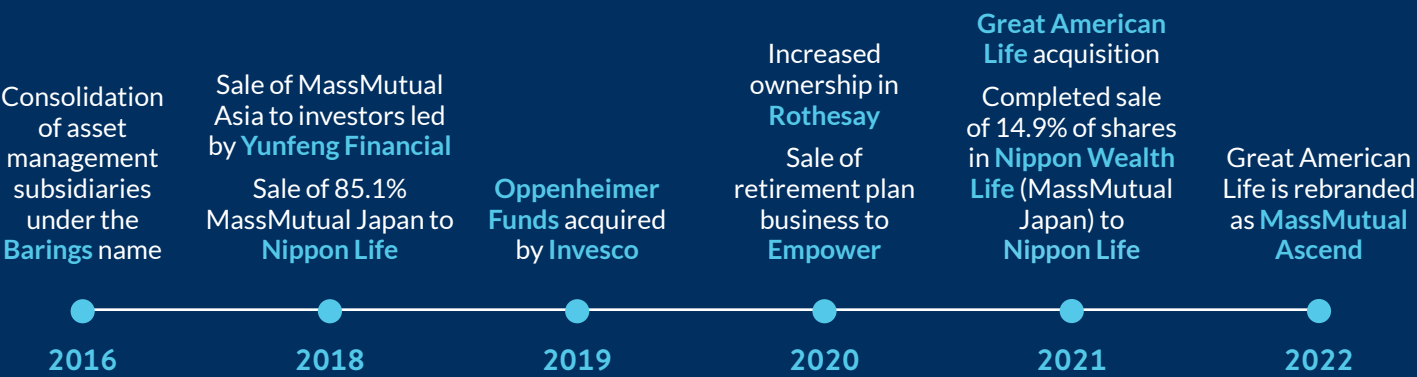
This investment insurance strategy has benefited our participating whole life policyowners in a couple of ways:

- This has allowed us to maintain an industry-leading dividend interest rate⁸ for the 17th year in a row.
- It has helped MassMutual maintain great financial strength and stability.

The success of these businesses and investments has been an important and distinct competitive advantage for MassMutual relative to our peer mutual companies. This approach has enabled us to deliver results over varying market cycles. MassMutual continues to look for new business opportunities that have the potential to deliver better long-term investment results for the company and our whole life policyowners.



Our portfolio of strategic businesses and investments has evolved over time. The following timeline summarizes some of the more recent transactions involving these businesses.



A Strong, Stable Company with Consistent Growth

The rating agencies have recognized our financial strength as reflected in factors like our strong capital, diversified operating earnings, and focus on proven products.

Massachusetts Mutual Life Insurance Company and subsidiary companies have financial strength ratings¹² that are among the highest of any company in any industry.

Measures of Strength
MassMutual's financial strength is shown by a number of different measures that reflect the company's fundamental stability.

Company Ratings
Independent rating agencies assess a company's financial strength and its capacity to meet its insurance obligations, such as the guarantees in life insurance policies or annuity contracts.



¹² Ratings are for Massachusetts Mutual Life Insurance Company, Springfield, MA 01111-0001, and its subsidiaries: C.M. Life Insurance Company and MML Bay State Life Insurance Company, Enfield, CT 06082, as of 7/12/2023, and are subject to change.

Strong Capital and Surplus

Surplus is another key metric for evaluating the financial strength and stability of an insurance company. It represents the financial resources a company has on hand, above and beyond setting aside reserves to meet projected future obligations.

A Strong Surplus Position
Despite a very challenging economic and market environment, our surplus and capital grew to record levels in 2022, increasing around 4% and 3% respectively year-over-year. Since 2002, we have grown our surplus at an average annual rate of around 8%.

One of the Highest Ranked Life Insurance Companies for Capital and Surplus
MassMutual is ranked third in the life industry based on capital and surplus as of year-end 2022.¹³ Our 2022 capital ratio, a measure of capital and surplus in relation to an insurer's overall size, was 9.2%, which is above the life industry average.¹⁴

¹³ S&P Capital IQ Pro: SNL Life Group data (as of 12/31/2022) includes parent and life subsidiaries adjusted with eliminating entries by S&P Global where relevant. The industry consists of nearly 350 groups/unaffiliated companies in the S&P Capital IQ Pro database with year-end 2022 capital and surplus greater than zero.
¹⁴ Capital ratio is capital and surplus as a percentage of total admitted assets excluding separate account assets, as of 12/31/2022. Source: S&P Capital IQ Pro.
¹⁵ "Ordinary life," in statutory annual statement terminology, includes individual life insurance policies but excludes industrial, credit life, and group life policies. Ordinary life lapse ratio above is the five-year average of lapses and surrenders as a percentage of average face value in force. Lapses and surrenders occur for a variety of reasons including failure to pay premiums, cancellation of a policy, etc. Ordinary life lapse ratio compares the amount of ordinary life insurance face value lapsed or surrendered during a time period to the average amount of face value in force during that time period. Source: NAIC Statutory Insurance data, sourced from S&P Capital IQ Pro (as of 12/31/2022) on group basis includes parent and life subsidiaries adjusted with eliminating entries by SNL where relevant.

Outperforming the Industry for Ordinary Life Lapse Ratio
Lapse ratio is a measure of customer retention. Policyowners who are satisfied with the value and service they receive might tend to be less likely to lapse their life insurance policies.

Ordinary Life Lapse Ratio (%) – Five-Year Average (2018–2022)¹⁵
A low lapse ratio is more favorable than a high lapse ratio.



A Powerful Measure of Long-Term Value
As of December 31, 2022, our retention rate remains favorable. More than 125,215 life insurance policies have been with MassMutual for 50 years or longer — a powerful measure of long-term value and policyowner retention.

A Broad Network of Financial Professionals

MassMutual's core distribution channel, a network of affiliated financial professionals, continues to grow in communities throughout the country with a national network of approximately 7,500 financial professionals at year-end 2022.

In 2022, MassMutual also focused on the expansion of its dedicated third-party distribution channel, MassMutual Strategic Distributors (MMSD), by offering its distribution partners a diverse product portfolio and the support of an experienced team, backed by the company's financial strength. MMSD complements MassMutual's existing retail distribution by building on strong institutional relationships across the financial industry, advancing access to the company's protection and accumulation products, including life insurance, disability income insurance, annuities, and hybrid life/long term care insurance.

Institutional Solutions

Our institutional customers trust us to meet their unique financial needs, goals, and visions through long-term, customized solutions. Using an innovative approach to solution design and a clear focus on client outcomes, MassMutual has earned a reputation as a premier provider of comprehensive protection and investment solutions for institutional customers. Our deep experience in institutional markets spans Bank-Owned Life Insurance (BOLI), Corporate-Owned Life Insurance (COLI), Funding Agreements, Pension Risk Transfer (PRT) solutions, Stable Value investments, and related financial solutions.

Last year, we continued delivering solutions to our customers during a time of market instability, and with AUM exceeding \$105 billion¹⁶ we were able to serve a broad portfolio of institutional clients with their varied needs.



Supporting the Financial Well-Being of Working Americans

At MassMutual, we are driven to help transform workplace benefits to make financial well-being a reality for all working Americans and those who count on them. Through our Worksite business we offer life, critical illness, accident, and disability insurance products to help companies provide their employees with new ways to meet their financial goals and feel more confident about their ability to manage the unexpected.

Appropriate Solution

Our financial professionals work with clients to develop customized financial solutions. In addition, our SpecialCareSM program provides access to information, specialists, and financial products and services that can help improve the quality of life for people with special needs and their families and caregivers.

Each of us has different financial needs. Yet we share one goal: to make good financial decisions. To help you get there, we follow a needs-based approach.

¹⁶ These assets under management are included in MassMutual's overall Assets Under Management (AUM) which include assets and certain external investment funds managed by MassMutual subsidiaries, including Barings and MassMutual Ascend. Please refer to MassMutual's Annual and Corporate Responsibility Report, www.MassMutual.com/global/media/shared/doc/financial-documents/annual-reports/2022_annual_report.pdf.

MassMutual at a Glance

	What We Offer	Who We Help	How We Help
MassMutual	Domestic Insurance and Retirement Solutions	<ul style="list-style-type: none">• Individuals and families• Business owners	Through a nationwide network of trusted financial professionals, we offer a comprehensive portfolio of products and services that help people secure their future and protect the ones they love. Our offerings include life insurance, disability income insurance, annuities, and protection products available to individuals through the worksite. ¹⁷
Affiliates & Subsidiaries	Wealth and Asset Management	<ul style="list-style-type: none">• Institutional investors, including public and private pensions, insurance companies, endowments, and sovereign wealth funds• Retail and wealth channel investors, including RIAs• Plan sponsors	<p>Our asset management subsidiary, Barings, is dedicated to meeting the evolving investment and capital needs of its clients and customers around the globe. Through active asset management and direct origination, Barings provides innovative solutions and access to differentiated opportunities across public and private capital markets. Barings also provides additional diversification, leverages many of our core strengths, and is a contributor to MassMutual's financial strength and dividend-paying ability. MassMutual Funds and MassMutual Trust Company add to our wealth and asset management capabilities by offering investment solutions, products, and services to the institutional market and investing public.</p> <p>MML Investors Services LLC, our broker-dealer and registered investment adviser, offers an array of investment products, advisory programs, small business retirement plans, and fiduciary services, lending, and private wealth portfolio management to retail clients through a network of financial advisors.</p>
Institutional Solutions	Financial and Risk Management Solutions for Institutions	<ul style="list-style-type: none">• Banks and corporations• Institutional investors• Retirement professionals and plan sponsors• Businesses• Banks (BOLI)• Corporate (COLI)	<p>Solving complex institutional needs requires a dedicated, experienced partner that enables businesses to focus on what they do best while making them stronger for the long term. As a highly rated insurance and investment provider, MassMutual delivers the expertise and financial strength required to help our clients meet evolving needs. Using an innovative approach to solution design, and a clear focus on client outcomes, we have earned a reputation as a premier provider of comprehensive protection and investment solutions.</p> <p>Our solutions include: Bank-Owned Life Insurance (BOLI), Corporate-Owned Life Insurance (COLI), Funding Agreements, Stable Value offerings, and Pension Risk Transfer solutions.</p>

**MassMutual**
Funds

**MassMutual**
Trust Company, FSB

**MassMutual**
Investments

**MassMutual**
Institutional Solutions

**MML Investors Services**

**MassMutual Ascend**

**BARINGS**

¹⁷ Trust services provided by The MassMutual Trust Company, FSB, a wholly owned subsidiary of MassMutual. Securities, products, and services offered through registered representatives of MML Investors Services, LLC, (MMLIS), Member SIPC® (www.SIPC.org), Springfield, MA 01111-0001 or a broker-dealer that has a selling agreement with MML Distributors, LLC (MMLD), (Member SIPC), or MML Strategic Distributors, LLC (MSD), Springfield, MA 01111-0001. MMLIS, MSD, and MMLD, all Members FINRA (www.FINRA.org), are subsidiaries of MassMutual, Springfield, MA 01111-0001.

Insurance products issued by Massachusetts Mutual Life Insurance Company (MassMutual), and its subsidiaries, C.M. Life Insurance Company (C. M. Life) and MML Bay State Life Insurance Company (MML Bay State), Springfield, MA 01111-0001. C.M. Life and MML Bay State are non-admitted in New York.



To find out more, visit
MassMutual.com/annualreportpdf



© 2023 Massachusetts Mutual Life Insurance Company,
Springfield, MA 01111-0001. All rights reserved.

LI7602 823

MM202408-306500