COMMONWEALTH OF MASSACHUSETTS

OFFICE OF CONSUMER AFFAIRS AND BUSINESS REGULATION

DIVISION OF INSURANCE

REPORT OF EXAMINATION OF THE

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY

Springfield, Massachusetts

As of December 31, 2024

NAIC GROUP CODE 0435

NAIC COMPANY CODE 65935

EMPLOYER ID NUMBER 04-1590850

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY

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COMMISSIONER

June 18, 2026

The Honorable Michael T. Caljouw
Commissioner of Insurance
Commonwealth of Massachusetts
Division of Insurance
One Federal Street, Suite 700
Boston, MA 02110

Honorable Commissioner:

Pursuant to your instructions and in accordance with Massachusetts General Laws, Chapter 175, Section 4, an examination has been made of the financial condition and affairs of the

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY

The Company's home office is located at 1295 State Street, Springfield, Massachusetts 01111. The following report thereon is respectfully submitted.

SCOPE OF EXAMINATION

Massachusetts Mutual Life Insurance Company ("MassMutual" or the "Company") was last examined as of December 31, 2019 by the Massachusetts Division of Insurance ("Division"). The current examination was also conducted by the Division and covers the five-year period from January 1, 2020 through December 31, 2024, including any material transactions and/or events occurring subsequent to the examination date and noted during the course of this examination.

The examination was conducted in accordance with standards and procedures established by the National Association of Insurance Commissioners ("NAIC") Financial Condition (E) Committee and prescribed by the current NAIC Financial Condition Examiners Handbook ("Handbook"), the examination standards of the Division and with Massachusetts General Laws. The Handbook requires that we plan and perform the examination to evaluate the financial condition and identify current and prospective risks of the Company by obtaining information about the Company, including corporate governance, identifying and assessing inherent risks within the Company, and evaluating system controls and procedures used to mitigate those risks.

All accounts and activities of the Company were considered in accordance with the risk-focused examination process. This may include assessing significant estimates made by management and evaluating management's compliance with Statutory Accounting Principles. The examination does not attest to the fair presentation of the financial statements included herein. If, during the course of the examination an adjustment is identified, the impact of such adjustment will be documented separately following the Company's financial statements.

This examination report includes significant findings of fact, as mentioned in the Massachusetts General Laws, Chapter 175, Section 4, and general information about the insurer and its financial condition. There may be other items identified during the examination that, due to their nature (e.g., subjective conclusions, proprietary information, etc.), are not included within the examination report but separately communicated to other regulators and/or the Company.

The Company is audited annually by KPMG LLP ("KPMG"), an independent certified public accounting firm. The firm expressed unqualified opinions on the Company's financial statements for the calendar years 2020 through 2024. A review and use of the Certified Public Accountants' work papers were made to the extent deemed appropriate and effective.

This examination was conducted as part of a coordinated group financial examination in compliance with the *Coordination of Holding Company Group Exams* framework of the Handbook. The Division acted as the Lead State, and coordinated with the participating state, Connecticut Insurance Department.

Representatives from the firm Baker Tilly US, LLP ("Baker Tilly") were retained by the Division to assist in the examination by performing certain examination procedures at the direction of and under the overall management of the Division's examination staff. The assistance included a review of accounting records, information systems, investment and actuarially determined loss and loss adjustment expense reserves, as well as other significant actuarial estimates.

SUMMARY OF SIGNIFICANT FINDINGS OF FACT

There were no significant findings during the previous examination and there are no significant findings related to the current examination.

COMPANY HISTORY

General

Massachusetts Mutual Life Insurance Company is headquartered in Springfield, Massachusetts. The Company provides a portfolio of products and services, including life insurance, disability income insurance, long-term care insurance, annuities, investments, retirement plans, and other employee benefits. MassMutual is the lead company of a large global, diversified financial services organization. The Company and its subsidiaries employ approximately 11,000 employees, and its principal business is primarily sold through a network of financial professionals with over 50 agencies and approximately 6,500 advisors and thousands of brokers contracted with the agencies.

The Company offers a broad set of comprehensive financial products using a variety of channels to meet the protection, accumulation, investment, and income needs of individuals, small businesses, and institutions. Offerings include a wide variety of life insurance, disability income insurance, long-term care insurance, annuities, retirement plans and other institutional funding and protection vehicles, as well as broker-dealer and trust services. The Company issues participating and non-participating protection products to policyowners. Participating policyowners may receive a share of the Company's surplus through the distribution of a dividend.

The Investment Management business offers separately managed accounts, mutual funds, 529 college savings plans, fixed income and absolute return strategies, investment management for institutions and sub-advisory services, and medium-term notes to individual and institutional investors.

In 2021, the Company sponsored the launch of a new reinsurer, Martello Re Limited ("Martello Re"), a Bermuda exempted company that is licensed as a Long-Term Class E reinsurer. MassMutual now holds a minority stake alongside outside investors.

MassMutual acquired Great American Life Insurance Company in May 2021 as part of a strategy to expand its retirement and annuity offerings. Following the acquisition, the subsidiary continued to operate as a stand-alone, wholly owned subsidiary, maintaining its Cincinnati headquarters, employee base, and existing annuity products. It was rebranded as MassMutual Ascend Life Insurance Company ("MM Ascend") in October 2022, reflecting closer alignment with the MassMutual brand while preserving operational independence. MassMutual positioned MM Ascend as a dedicated annuities platform. The rebrand did not affect existing policies or benefits and reinforced MassMutual's broader strategy of meeting evolving retirement income needs through specialized subsidiaries.

Dividends

Although the Company is the lead insurer of one of the largest domestic life insurance groups in the United States, and offers a diversified portfolio of products and services, one of its primary stakeholder groups are policyholders of its participating whole life insurance products. The following table illustrates dividends paid to participating policyholders during the period covered by this examination.

2024	$2,501,359,228
2023	2,131,090,746
2022	1,905,770,356
2021	1,808,135,960
2020	1,697,380,641

MANAGEMENT AND CONTROL

Board of Directors Minutes

The minutes of meetings of the Board of Directors and its Committees as provided by the Company for the period under examination were read and they indicated that all meetings were held in accordance with the Company's By-laws and the Laws of the Commonwealth of Massachusetts. The minutes provided were in "redacted" form, whereby management cited various non-disclosure agreements and attorney client privilege, therefore the complete contents could not be reviewed. Activities of the Committees are reported to the full Board at each meeting.

Charter and By-laws

The Charter and By-laws of the Company were reviewed. There were no amendments to the By-laws or Charter during the examination period. The current By-laws, as amended, were adopted at the Annual Meeting of members effective April 8, 2015. The By-laws provide that the majority of Directors constituting a quorum at the Board of Directors meetings be independent Directors.

Board of Directors

According to the By-laws, the Company's business shall be managed by a Board of Directors which may exercise all of the powers of the Company, except as reserved to the members of the Company by law or by the By-laws. The Board of Directors shall consist of not fewer than seven nor more than twenty-one Directors. As of December 31, 2024, the Company's Board of Directors consisted of the following people.

Name of Directors	Title
Roger W. Crandall	Chairman, President, and Chief Executive Officer, Massachusetts Mutual Life Insurance Company
Kathleen A. Corbet	Founder and Principal, Cross Ridge Capital, LLC
James H. DeGraffenreidt, Jr.	Chairman and Chief Executive Officer, Retired, WGL Holdings, Inc.
Isabella D. Goren	Former Chief Financial Officer, AMR Corporation and American Airlines, Inc.
Bernard A. Harris, Jr.	CEO and Managing Partner, Vesalius Ventures, Inc.
Michelle K. Lee	Founder and CEO, Obsidian Strategies, Inc.
Jeffrey M. Leiden	Executive Chairman and Former President and Chief Executive Officer, Vertex Pharmaceuticals, Inc.
Laura J. Sen	Former Non-Executive Chairman, President and Chief Executive Officer, BJ’s Wholesale Club, Inc.
William T. Spitz	Principal and Co-Founder, Diversified Trust Company
Amy M. Stepnowksi	Chief Investment Officer, The Hartford
H. Todd Spitzer	Former Chief Executive Officer, Cadbury PLC

Officers

Officers of the Company as of December 31, 2024, were as follows:

Name of Officer	Title
Roger W. Crandall	Chairman, President and Chief Executive Officer
Julieta G. Sinisgalli	Treasurer
Akintokunbo Akinbajo	Corporate Secretary
Vy Q. Ho	Appointed Actuary
Eric W. Partlan	Chief Investment Officer
Geoffrey J. Craddock	Chief Risk Officer
Susan M. Cicco	Chief of Staff to the Chairman and CEO, Human Resources & Employee Experience
Michael J. O’Connor	General Counsel
Sears A. Merritt	Head of Technology & Experience
Dominic L. Blue	Head of Third-Party Distribution & New Markets
Paul A. LaPiana	Head of Brand, Product, & Affiliated Distribution
Peter J. Rugel	Head of Operations
Elizabeth Ward Chicares*	Chief Financial Officer

*Retired effective January 1, 2025, and replaced by Mary Jane Fortin effective January 1, 2025.

Affiliated Companies

As stated in the Insurance Holding Company System Form B as filed with the Division, the Company is a member of a holding company system and is subject to the registration requirements of Massachusetts General Laws, Chapter 175, Section 206C and 211 Code of Massachusetts Regulations ("CMR") 7.00.

Organizational Chart

As noted, MassMutual is the lead company of a large global, diversified financial services organization. The Company directly owns a number of insurance and non-insurance subsidiaries. Due to the size of the overall MassMutual organization, we have chosen to list those affiliated insurance companies maintaining an NAIC Company Code Number. The Company is the Ultimate Controlling Party. For a complete listing of all affiliates and subsidiaries please refer to the Company's 2024 Annual Statement.

Entity Name	NAIC CoCode	State of Domicile
Massachusetts Mutual Life Insurance Company	65935	MA
CM Life Insurance Company	93432	CT
MML Baystate Life Insurance Company	70416	CT
MM Ascend Life Insurance Company	63312	OH
Annuity Investors Life Insurance Company	93661	OH
Manhattan Life Insurance Company	67083	OH

Transactions and Agreements with Subsidiaries and Affiliates

Administrative Services Agreements

MassMutual has administrative services agreements with various subsidiaries and affiliates where MassMutual will furnish a subsidiary or affiliate, as required, financial accounting, tax planning, legal support, supplies management, technology, compliance, human resources, compliance, treasury services, and other miscellaneous services. MassMutual charges a fee for the services which corresponds to all the costs related to providing the services.

Tax Sharing Agreement

The Company and its eligible United States subsidiaries are included in a consolidated United States federal income tax return. The Company, its eligible subsidiaries, and certain affiliates, ("Parties") have executed and are subject to a written tax allocation agreement. The agreement sets forth the manner in which the total combined federal income tax is allocated among the Parties. The agreement provides the Company with the enforceable right to recoup federal income taxes paid in prior years in the event of future net losses, which it may incur. Additionally, the agreement provides the Company with the enforceable right to utilize its net losses carried forward as an offset to future net income subject to federal income taxes.

Investment Management Agreements

MassMutual has an agreement with its subsidiary, Barings LLC (“Barings”). Barings provides investment advisory services to MassMutual. While management of a substantial majority of the general investment account is currently delegated to, and is expected to remain with Barings, management of portions of the general investment account and separate investment account have been delegated to other asset managers outside of the MassMutual complex. An Investment Management Agreement and investment policies and guidelines are in place with each asset manager, both internal and external.

TERRITORY AND PLAN OF OPERATION

The Company is licensed in all 50 states, the District of Columbia and Puerto Rico, with the largest numbers of insurance risks written in New York, California and Florida. The Company distributes its life insurance, annuity, disability income, and long-term care products primarily through a combination of career agents and independent agents and brokers. These distribution channels are supported by digital platforms and tools that facilitate marketing, application processing, and underwriting; however, sales are predominantly advisor supported.

Treatment of Policyholders – Market Conduct

The Division’s Market Conduct Department performed a comprehensive market conduct examination for the period of January 1, 2022 through December 31, 2022, with a focus on Massachusetts individual life, annuity, individual disability income ("IDI"), hybrid life/long-term care ("LLTC"), and long-term care (“LTC”) business. The market conduct examination was called pursuant to authority in Massachusetts General Laws, Chapter 175, Section 4. The market conduct examination was conducted at the direction of, and under the overall management and control of, the market conduct examination staff of the Division. Representatives from the firm of Rudmose & Noller Advisors, LLC (“RNA”) were engaged to complete certain agreed upon procedures which were developed using the guidance and standards of the NAIC Market Regulation Handbook, the market conduct examination standards of the Division, and the Commonwealth of Massachusetts insurance laws, regulations and bulletins. The operational areas reviewed under this examination include company operations/management, complaint handling, marketing and sales, producer licensing, policyholder service, underwriting and rating, and claims. Each business area reviewed includes the identification and evaluation of the insurer’s internal controls. The examination resulted in findings and required actions in marketing and sales, underwriting and rating, and claims, with the Company noting implementation of required actions.

REINSURANCE

Assumed Reinsurance

MassMutual has two coinsurance agreements with CM Life, whereby MassMutual assumes additional universal life policies sold by CM Life. MassMutual assumes specific plans of insurance on a yearly renewable term basis from MML Bay State. There is an automatic quota-share modified coinsurance treaty whereby MassMutual assumes the risk for certain BOLI policies sold by MML Bay State on or before 12/31/2000. In 2020, MassMutual also entered into a stop-loss agreement with CM Life for interest rate risk associated with certain fixed deferred annuity contracts.

MassMutual has an indemnity reinsurance agreement with Talcott Resolution Life Insurance Company (“Talcott”) to assume 100% of its Retirement Plans Group ("RPG") business. The reinsurance agreement contained coinsurance and modified coinsurance features. In addition, MassMutual reinsured contracts written on Talcott’s policy forms by MassMutual's Retirement Services Division during the post close period. Under the modified coinsurance feature, the separate account assets and related reserves are not transferred to or held by MassMutual. The treaty remains intact, but in 2021 this block of business was retroceded to Empower Retirement.

In 2016, MassMutual assumed Longevity risk from U.K. based insurer Rothesay Life. The reinsurance coverage was provided on a block of in-force pensioners. The Company subsequently entered into similar agreements with Rothesay Life in 2019 and 2020.

Ceded Reinsurance

MassMutual enters into reinsurance agreements with affiliated and unaffiliated insurers to limit its insurance risk. The Company reinsures a portion of its mortality risk in its life insurance business under either a first-dollar quota share arrangement, or in an excess of the retention limit arrangement with reinsurers. Approximately 70% of MassMutual’s life insurance business is reinsured. The Company also reinsures a portion of its disability and long-term care business. The amounts are reinsured on a yearly renewable term, coinsurance funds withheld, coinsurance or modified coinsurance basis. The Company’s highest retention limit for new issues of life policies ranges from $15 million to $35 million.

Automatic Reinsurance Programs (open block life products)

The Company has various automatic reinsurance programs which are reinsured as first dollar quota share on a yearly renewable term basis for its permanent life business and on a coinsurance basis for its term life business. Under these programs, the Company currently cedes to reinsurers, with a maximum of 7 reinsurers for each program. The Company retains at least 10% of each policy for automatic programs.

Reinsurers: Swiss Re
Munich American Reassurance (formerly Continental)
SCOR Global USA (formerly Generali USA)
RGA Reinsurance Co.
SCOR Global Life Americas (formerly TransAmerica)

	Canada Life Insurance
	Optimum Re
	General Re (formerly General & Cologne)
	Hannover
	Partner Re
	Korean Reinsurance Company (closed for new business 8/31/2023)
Ceded:	Automatic reinsurance for most plans. Quota share pools are eligible for policies up to $60 million with MassMutual retaining additional amount above Auto Limit.
Termination:	New business termination requires 90-day notice for YRT and 150-day notice for coinsurance by either the Company or reinsurer.

Facultative Substandard Shopping Program

Also known as "Salvage" reinsurance, this program seeks the best offer on MassMutual's substandard cases not qualifying for the automatic reinsurance program.

Reinsurers:	General Re (formerly General & Cologne)
	Munich American Reassurance (formerly Continental)
	RGA Reinsurance Company
	Swiss Re
	Canada Life
	Hannover
	Munich
	Optimum
	SCOR Global USA (formerly Generali)
	SCOR Global Americas (formerly Transamerica)
	Partner Re
Ceded:	Facultative reinsurance for all plans.
Coverage:	Varies
Retention:	Varies
Termination:	Requires 90 day notice by either the Company or reinsurer.

Automatic Excess of Retention Reinsurance

Under this program, the excess of retention on any one life is reinsured. Current maximum retention limits on a single life and on Survivorship Whole Life vary by reinsurer. This program includes certain automatic and facultative reinsurance agreements for current business on a yearly renewable term basis. Facultative submissions are made when cases do not qualify for automatic reinsurance.

Reinsurer:	Munich American Reassurance (formerly Continental)
	Swiss Re
	General Re
	RGA Reinsurance Co.

Ceded: Automatic reinsurance for all plans.
Coverage: The amount in excess of the Company's retention limit.
Termination: Requires 90 day notice by either the Company or reinsurer.

Facultative Excess of Retention

Under this program, the excess of retention on any one life is reinsured. Current maximum retention limits on a single life and on Survivorship Whole Life vary by reinsurer. This program includes facultative reinsurance agreements for current business on a yearly renewable term basis. All reinsurers request notification any time the jumbo limit exceeds $50 million.

Reinsurer:	Canada Life Insurance General Re SCOR Global USA (formerly Generali) Munich American Reassurance (formerly Continental)RGA Reinsurance Company SCOR Swiss Re SCOR Global Americas (formerly Transamerica) Hannover Optimum Partners Re
Ceded:	Facultative reinsurance for all plans.
Coverage:	The amount in excess of the Company's retention limit.

Long-Term Care Coinsurance

Effective July 5, 2023, the Company recaptured the long-term care ("LTC") policies ceded to LifeCare Assurance Company ("LifeCare") and subsequently entered into a quota share agreement to reinsure 50% of most SignatureCare 500 series LTC policies to RGA Reinsurance Company ("RGA"), with up to 50% of the ceded risks being retroceded to LifeCare. The quota share agreement was amended to cede 75% to RGA effective July 1, 2024.

The Company's reinsurer exposure limit was exceeded in 2021 and 2022 due to MassMutual's exposure to Employers Reassurance Corporation ("ERAC"), a subsidiary of General Electric Company ("GE"). This exposure is comprised of a reserve credit of $5,922 million for LTC insurance ceded under a treaty that was entered in 2000, before the current risk policy was established. This reserve credit represents about eleven percent of the entire reserve credit for reinsurance taken by MassMutual. The Company is not ceding any new business to ERAC and plans to let its exposure decline naturally. MassMutual and ERAC have agreed that MassMutual would pursue premium increases and ERAC would post assets in trust for the benefit of MassMutual. The net impact of these actions has mitigated the Company's exposure to ERAC and the exposure was returned to within the exposure limit by Q1 2023. The Company closely monitors GE's financials and capital contributions to ERAC.

In-force Life

In 2016, MassMutual ceded 100% of certain in-force Universal Life and Term Life policies on a coinsurance basis and certain in-force Variable Life policies on a modified coinsurance basis to Swiss Re.

In 2017, the Company ceded 90% of certain in-force Universal Life policies and 40% of other certain in-force Universal Life policies on a yearly renewable term basis to RGA.

In 2020, MassMutual entered into reinsurance agreements with Great-West Life and Annuity Insurance Company and Great-West Life & Annuity Insurance Company of New York to cede business on a 100% coinsurance and coinsurance funds withheld basis for General Account Liabilities and 100% modified coinsurance basis for Separate Account Liabilities. These Great-West companies were since rebranded to Empower Annuity Insurance Company of America and Empower Life and Annuity Insurance Company of New York. A portion of these agreements were retrocessions of the business MassMutual had originally assumed from the retrocession agreements with Hartford Life Insurance Company, now the Talcott Resolution Life Insurance Company.

Annuity Reinsurance

In 2018, the Company entered into an automatic new business agreement to coinsure a fixed annuity to Athene Annuity and Life Assurance Company of Delaware (“AADE”). The agreement allowed the quota share for new business to vary overtime. During the course of the agreement, the quota share ranged from 0% to 75%. Effective 7/1/2020, the Company recaptured the business from AADE and re-ceded to Athene Life Re Ltd (“AL Re”) on a coinsurance funds withheld basis and the agreement remained open to new business until March 2022.

In 2019, the Company entered into a facultative reinsurance agreement with Commonwealth Annuity and Life Insurance Company (“CWA”). The Company coinsures certain new group annuity contracts under the agreement. CWA posts assets to a book value comfort trust for the benefit of MassMutual.

On March 1, 2022, $13.6 billion of in force statutory reserves for a portion of MM Ascend’s fixed annuity and fixed indexed annuity products were reinsured on a coinsurance funds withheld basis with Martello Re. MM Ascend retained a portfolio worth $26 billion. During 2022, MassMutual also agreed to reinsure on an automatic new business basis certain multi-year guaranteed annuity contracts at a quota share of between 25% and 75% on coinsurance funds withheld basis. In Q2 2023, MassMutual and Martello Re entered into a facultative reinsurance agreement covering certain group annuity contracts also on a coinsurance funds withheld basis. In Q2 2024, MassMutual and Martello Re entered into a new reinsurance agreement covering newly issued income annuities on a coinsurance basis with assets posted to a book value trust for the benefit of MassMutual.

FINANCIAL STATEMENTS

The following financial exhibits are based on the statutory financial statements prepared by management and filed by the Company with the Division and present the financial condition of the Company for the period ending December 31, 2024. The financial statements are the responsibility of Company management.

Statement of Assets, Liabilities, Surplus and Other Funds as of December 31, 2024

Summary of Operations for the Year Ended December 31, 2024

Reconciliation of Capital and Surplus for Each Year in the Five-Year Period Ended December 31, 2024

Massachusetts Mutual Life Insurance Company

Statement of Assets, Liabilities, Surplus and Other Funds
As of December 31, 2024

ASSETS	Per Annual Statement
Bonds	$163,629,228,594
Preferred stocks	1,019,281,245
Common stocks	27,038,056,282
Mortgage loans on real estate	23,692,319,580
Properties occupied by the Company	337,611,512
Properties held for the production of income	(16,894,432)
Properties held for sale	1,954,867
Cash, cash equivalents and short-term investments	6,003,993,461
Contract loans	17,658,158,526
Derivatives	24,220,070,890
Other invested assets	14,746,749,213
Receivable for securities	3,514,730,764
Subtotals, cash and invested assets	281,845,260,503
Investment income due and accrued	5,346,896,637
Uncollected premiums and agents' balances	201,300,509
Deferred premiums	1,112,287,015
Amounts recoverable from reinsurers	96,270,371
Other amounts receivable under reinsurance contracts	55,035,084
Current federal and foreign income tax recoverable	552,200,781
Net deferred tax asset	1,856,956,283
Guaranty funds receivable or on deposit	175,848,619
Electronic data processing equipment and software	5,643,261
Receivables from parent, subsidiaries and affiliates	114,454,044
Aggregate write-ins for other than invested assets	4,572,060,300
Total assets excluding Separate Accounts	295,934,213,407
From Separate Accounts	49,251,330,972
Total Assets	$345,185,544,379

Statement of Assets, Liabilities, Surplus and Other Funds (Continued)
As of December 31, 2024

LIABILITIES	Per Annual Statement
Aggregate reserve for life contracts	$175,057,703,256
Aggregate reserve for accident and health contracts	3,200,176,297
Liability for deposit-type contracts	21,227,671,398
Contract claims: Life	519,233,675
Contract claims: Accident and health	29,204,926
Policyholders' dividends and coupons due and unpaid	9,408,829
Policyholders' dividends/refunds to members apportioned	2,524,034,900
Premiums and annuity considerations received in advance	37,185,634
Provision for experience rating refunds	9,739,210
Other amounts payable on reinsurance assumed and ceded	11,191,285
Commissions and expense allowances payable on reinsurance assumed	3,071,328
General expenses due or accrued	917,143,435
Transfers to Separate Accounts due or accrued	(64,410,234)
Taxes, licenses and fees due or accrued	193,318,268
Unearned investment income	138,451,801
Amounts withheld or retained by company as agent or trustee	23,353,304
Amounts held for agents' account	468,244,204
Remittances and items not allocated	2,316,529,322
Liability for benefits for employees and agents if not included above	270,498,671
Borrowed money and interest thereon	249,623,194
Asset valuation reserve	5,951,795,152
Reinsurance in unauthorized companies	104,742
Funds held under reinsurance treaties with unauthorized reinsurers	1,404,411,439
Payable to parent, subsidiaries and affiliates	108,039,945
Funds held under coinsurance	28,220,871,861
Derivatives	16,773,770,652
Payable for securities	581,770,712
Aggregate write-ins for liabilities	8,013,181,355
Total liabilities excluding Separate Accounts business	268,195,318,560
From Separate Accounts Statement	49,107,794,252
Total liabilities	$317,303,112,811

Statement of Assets, Liabilities, Surplus and Other Funds (Continued)
As of December 31, 2024

SURPLUS	Per Annual Statement
Surplus notes	4,827,049,659
Aggregate write-ins for special surplus funds	1,427,335,401
Unassigned funds (surplus)	21,628,046,508
Surplus	27,882,431,568
Total Liabilities, Surplus and Other Funds	$345,185,544,379

Massachusetts Mutual Life Insurance Company

Summary of Operations
For the Year Ended December 31, 2024

	Per Annual Statement
Premiums and annuity considerations	$21,170,932,520
Considerations for supplementary contracts with life contingencies	26,973,472
Net investment income	11,783,999,207
Amortization of Interest Maintenance Reserve	(126,676,711)
Separate Accounts net gain from operations	3,377,079
Commissions and expense allowances on reinsurance ceded	643,971,029
Reserve adjustments on reinsurance ceded	(2,927,346)
Income from fees from Separate Accounts	240,979,398
Aggregate write-ins for miscellaneous income	376,869,972
Total	34,117,498,620
Death benefits	2,330,068,148
Matured endowments	11,443,033
Annuity benefits	3,076,763,735
Disability benefits and benefits under A&H contracts	360,722,571
Surrender benefits and withdrawals for life contracts	10,369,749,775
Interest and adjustments on contract or deposit-type funds	744,906,651
Payments on supplementary contracts	25,754,798
Increase in aggregate reserves	10,988,839,832
Total	27,908,248,542
Commissions on premiums	1,388,197,150
Commissions and expenses allowances on reinsurance assumed	46,326,665
General insurance expenses	2,337,112,827
Insurance taxes, licenses and fees, excluding federal taxes	324,597,490
Increase in loading on deferred and uncollected premiums	26,009,469
Net transfers to or (from) Separate Accounts	(1,941,721,488)
Aggregate write-ins for deductions	1,069,869,010
Total	31,158,639,666
Net gain from operations before dividends to policyholders and federal income taxes	2,958,858,954
Dividends to policyholders	2,501,359,228
Net gain from operations after dividends to policyholders and before federal income taxes	457,499,726
Federal and foreign income taxes incurred	(293,021,973)
Net gain from operations after dividends to policyholders and federal income taxes and before capital gains (losses)	750,521,698
Net realized capital gains or (losses)	(801,098,935)
Net income	$(50,577,237)

Massachusetts Mutual Life Insurance Company

Reconciliation of Capital and Surplus
For Each Year in the Five-Year Period Ended December 31, 2024
(in thousands)

	2024	2023	2022	2021	2020
Surplus as regards policyholders,					
December 31, previous year	$ 28,876,660,992	$ 27,941,058,515	$ 26,979,255,991	$ 24,327,413,335	$ 18,892,910,171
Net income/(loss)	(50,577,237)	(25,242,461)	732,240,859	(216,406,821)	215,910,615
Change in net unrealized capital gains or (losses) less capital gains tax	(194,386,225)	8,465,308	870,357,676	3,365,774,080	1,421,779,174
Change in net unrealized foreign exchange capital gain (loss)	(260,825,362)	375,952,061	(1,739,307,186)	(673,352,955)	1,009,504,915
Change in net deferred income tax	244,424,122	462,403,744	661,575,651	543,739,109	(22,692,987)
Change in nonadmitted assets	(190,837,898)	364,943,115	(562,886,836)	19,624,116	50,501,209
Change in liability for reinsurance in unauthorized companies	(76,908)	82,068	12,520	13,256	26,694
Change in reserve on account of changes in valuation basis	(186,900)	-	(12,275,243)	-	(48,425,000)
Change in asset valuation reserve	37,394,996	(314,845,291)	739,839,478	(1,209,136,105)	(534,863,914)
Surplus (contributed to) withdrawn from Separate Accounts	-	-	(3)	(150,000,000)	-
Other changes in surplus in Separate Accounts Statement	2,246,260	4,600,052	(16,892,260)	148,282,431	-
Change in surplus notes	(49,752,962)	(149,159,227)	412,500,000	840,731,855	1,537,330,284
Aggregate write-ins for gains and losses in surplus	(531,651,311)	208,403,108	(123,362,131)	(17,426,309)	1,805,432,173
Change in surplus as regards policyholders for the year	(994,229,424)	935,602,477	961,802,524	2,651,842,656	5,434,503,164
Surplus as regards policyholders,					
December 31, current year	$ 27,882,431,568	$ 28,876,660,992	$ 27,941,058,515	$ 26,979,255,991	$ 24,327,413,335

ANALYSIS OF CHANGE IN FINANCIAL STATEMENTS RESULTING FROM THE EXAMINATION

There were no changes in the financial statements resulting from the examination.

COMMENTS ON FINANCIAL STATEMENT ITEMS

Services provided by Baker Tilly to the Division for this examination included the services of Baker Tilly Actuaries ("Examination Actuary") to perform a detailed review of the Company's actuarial items, reserves and claims liability.

The Examination Actuary reviewed the KPMG (MassMutual's independent external auditors) assessment of the reasonableness of the reported U.S. statutory reserve calculations for MassMutual. The KPMG actuarial team independently calculated the statutory reserve for a sample of policies as of the valuation date of December 31, 2024. KPMG concluded the reserves held by the Company for these policies appeared to be reasonable. The Examination Actuary is comfortable with the results of the KPMG independent recalculation of reserves against the Company's booked reserves. No adjustments to reserves or surplus were indicated as a result of the actuarial portion of the examination. The assumptions used were generally found to be reasonable and met the requirements of the insurance laws and regulations of the state of Massachusetts.

Additionally, the Examination Actuary reviewed the Company's asset adequacy and cash flow testing ("CFT") results to determine if the Company's profitability is eroded in the low-interest rate environment. Present value of surplus was positive across all interest-rate scenarios. The Examination Actuary concluded that the CFT results are favorable in increasing and decreasing rate environments and is satisfied with the overall results of CFT. The Examination Actuary also concluded that the mortality CFT assumptions are reasonable based on actual Company experience.

SUBSEQUENT EVENTS

On May 14, 2026, MassMutual announced that MS&AD Insurance Group Holdings, Inc. has completed the acquisition of an 18% equity stake in Barings through its subsidiary, Mitsui Sumitomo Insurance Co., Ltd, for approximately $1.4 billion.

On May 28, 2026, MassMutual announced it has entered into an agreement with Nationwide Mutual Insurance Company for the reinsurance of a block of fixed Universal Life with Secondary Guarantees (ULSG) policies representing nearly $6 billion of statutory reserves. The transaction is expected to close in the second quarter of 2026, subject to customary closing conditions and regulatory approval requirements.

SUMMARY OF RECOMMENDATIONS

No significant recommendations were identified during the examination that should be noted in this report.

SIGNATURE PAGE

Acknowledgement is made of the cooperation and courtesies extended by the officers and employees of the Company during the examination.

The assistance rendered by Baker Tilly in this examination is acknowledged.

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