



**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, 2019**

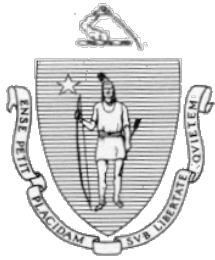
**NAIC GROUP CODE 0435**

**NAIC COMPANY CODE 65935**

**EMPLOYER ID NUMBER 04-1590850**

# MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY

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**COMMONWEALTH OF MASSACHUSETTS**  
**Office of Consumer Affairs and Business Regulation**  
**DIVISION OF INSURANCE**

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**GARY D. ANDERSON**  
COMMISSIONER OF INSURANCE

June 7, 2021

The Honorable Gary D. Anderson  
Commissioner of Insurance  
Commonwealth of Massachusetts  
Division of Insurance  
1000 Washington Street, Suite 810  
Boston, MA 02118-6200

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. Due to the COVID-19 pandemic, the examination was conducted remotely. 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, 2014 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, 2015 through December 31, 2019, 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 2015 through 2019. 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 as a result of the 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 9,650 employees, and its principal business is primarily sold through a network of financial professionals with over 70 agencies and approximately 7,300 advisors and thousands of brokers contracted with the agencies.

During the examination period the Company's operations were organized under four segments: US Insurance Group, Investment Management, International, and Retirement Services. The Company's US Insurance Group is engaged in providing products and services such as various life insurance, long-term care insurance, annuities, benefit funding vehicles, disability income insurance, executive benefits, and trust services to individual and business clients. Participating whole life products continue to be the primary focus of the US Insurance Group.

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.

Subsequent to the examination period the Company sold its retirement business to Empower Retirement, as discussed in more detail in the Subsequent Events section below. However, during the period under examination through its Retirement Services Division, the Company was engaged in providing a wide range of retirement products and services such as defined benefit plans and consulting, defined contribution and 401(k) plans, non-qualified deferred compensation plans, tax-exempt plans including 403(b) and 457, Taft-Hartley plans, retirement management accounts, deferred and immediate annuities and IRA's to unions, corporate, nonprofit and governmental employers.

MassMutual International LLC, is MassMutual's holding company for its international operations. In May of 2018 MassMutual International LLC sold its majority interest in MassMutual Life Insurance Company in Japan, and in November of 2018 sold MassMutual Asia, a wholly-owned Hong Kong-based life insurer. Through these transactions MassMutual effectively exited the Asian market as the owner of international insurance operating companies during the period under examination. MassMutual International LLC now participates in strategic partnerships and joint

## Massachusetts Mutual Life Insurance Company

venture opportunities with companies throughout Asia. It also manages a joint venture investment in a life insurance company operating in the China.

### 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.

2019	\$ 1,671,109,490
2018	1,695,253,440
2017	1,569,130,529
2016	1,565,630,560
2015	1,727,593,543

## **MANAGEMENT AND CONTROL**

### Board of Directors Minutes

The minutes of meetings of the Board of Directors and its Committees for the period under examination were read and they indicated that all meetings were held in accordance with the Company's bylaws and the Laws of the Commonwealth of Massachusetts. Activities of the Committees are reported to the full Board at each Board meeting.

### Charter and Bylaws

The charter and bylaws of the Company were reviewed. The current bylaws, as amended, were adopted at the Annual Meeting of members effective April 8, 2015. Included within the bylaws changes is the requirement that a majority of the Directors constituting a quorum at Board of Directors meetings be independent directors. There were no amendments to the charter.

### Board of Directors

According to the bylaws, 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 bylaws. The Board of Directors shall consist of not fewer than seven nor more than twenty-one Directors. The Company's Board of Directors consisted of the following individuals:

## Massachusetts Mutual Life Insurance Company

<u>Name of Directors</u>	<u>Title</u>
Roger W. Crandall	Chairman, President and Chief Executive Officer, Massachusetts Mutual Life Insurance Company
Karen H. Bechtel	Managing Director, retired, The Carlyle Group
Mark T. Bertolini	Former Chairman and Chief Executive Officer, Aetna Inc.
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, American Airlines, Inc. and AMR Corporation
Shelley B. Leibowitz	President and Founder, SL Advisory, LLC
Jeffrey M. Leiden	Chairman and Chief Executive Officer, Vertex Pharmaceuticals Incorporated
Laura J. Sen	Former Non-Executive Chairman and Former Chief Executive Officer, BJ's Wholesale Club, Inc.
William T. Spitz	Principal, Diversified Trust Company
H. Todd Stitzer	Former Chief Executive Officer, Cadbury PLC

### Officers

Officers of the Company as of December 31, 2019 were as follows:

<u>Name of Officers</u>	<u>Title</u>
Roger W. Crandall	Chairman, President and Chief Executive Officer
Todd G. Picken	Treasurer
Akintokunbo Akinbajo	Corporate Secretary
Douglas W. Taylor	Appointed Actuary
Elizabeth Ward Chicares	Chief Financial Officer
Michael R. Fanning	Head of MassMutual U.S.
M. Timothy Corbett	Chief Investment Officer
Adnan Omar Ahmed	Head of MassMutual International
Geoffrey J. Craddock	Chief Risk Officer
Pia D. Flanagan	Chief of Staff to the CEO
Susan M. Cicco	Head of Human Resources & Employee Experience
Michael J. O'Connor	General Counsel
Gareth F. Ross	Head of Enterprise Technology Experience

### 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

## Massachusetts Mutual Life Insurance Company

of Massachusetts General Laws, Chapter 175, Section 206C and 211 Code of Massachusetts Regulations (“CMR”) 7.00.

### Organizational Chart

Subsidiaries of Massachusetts Mutual Life Insurance Company as of December 31, 2019:

- C.M. Life Insurance Company
  - MML Bay State Life Insurance
  - CML Mezzanine Investor III, LLC
  - CML Special Situations Investor LLC
- CML Global Capabilities LLC
- MM Global Capabilities LLC
  - MassMutual Global Business Services India LLP
- MM Global Capabilities I I LLC
- MM Global Capabilities I II LLC
- Berkshire Way LLC
- MML Special Situations Investor LLC
- Timberland Forest Holding LLC
  - Lyme Adirondack Forest Company, LLC
    - Lyme Adirondack Timber Sales, Inc.
    - Lyme Adirondack Timberlands I, LLC
    - Lyme Adirondack Timberlands II, LLC
- MSP-SC, LLC
- Insurance Road LLC
  - MassMutual Trad Private Equity LLC
  - MassMutual Intellectual Property LLC
  - Trad Investments I LLC
- EM Opportunities LLC
- MassMutual MCAM Insurance Company, Inc.
- Jefferies Finance LLC (owned 50% by MassMutual)
  - Apex Credit Partners LLC
  - JFIN Asset Management LLC
    - JFAM GP LLC
    - JFAM GP LP
    - Jefferies Direct Lending Fund C LP
  - JFIN Co-Issuer Corporation
  - JFIN Fund III LLC
  - JFIN High Yield Investments LLC
  - JFIN LC Fund LLC
  - JFIN Europe GP, S.a.r.l.
    - Jefferies Finance Europe, SCSp
  - Jefferies Finance Business Credit LLC
  - JFIN Revolver Holdings LLC
  - JFIN Revolver Holdings II LLC
  - JFIN GP Adviser LLC
  - Jefferies Finance Business Credit LLC
    - JFIN Business Credit Fund I LLC
  - JFIN High Yield Investments LLC
  - JFIN LC Fund LLC
  - JFIN Revolvers CLO Holdings LLC
  - JFIN CLO 2012 Ltd.
  - JFIN CLO 2013 Ltd.
  - JFIN CLO 2014 Ltd.
  - JFIN CLO 2014-II Ltd.
  - JFIN MM CLO 2014 Ltd.



## Massachusetts Mutual Life Insurance Company

JFIN CLO 2015 Ltd.  
Apex Credit CLO 2015-II Ltd. (owned 44% by Jeffries Finance LLC and 56% by Apex Credit Partners LLC)  
JFIN Revolver CLO 2015 Ltd. (owned 33% by Jeffries Finance LLC and 53% by Apex Credit Partners LLC)  
JFIN Revolver CLO 2017 Ltd.  
JFIN Revolver CLO 2017-II Ltd.  
JFIN Revolver CLO 2017-III Ltd.  
JFIN Revolver CLO 2018 Ltd.  
JFIN Revolver CLO 2019 Ltd.  
JFIN Revolver CLO 2019-II Ltd.  
JFIN Revolver Fund, L.P. (owned 58% by Jeffries Finance LLC)  
Apex Credit CLO 2016 Ltd.  
Apex Credit CLO 2017 Ltd.  
Apex Credit CLO 2017-II Ltd.  
Apex Credit CLO 2019-II Ltd. (owned 74% by Apex Credit Partners LLC)  
MassMutual Mortgage Lending LLC  
MassMutual Retirement Services, LLC  
MM Copper Hill Road LLC  
MML Distributors LLC (owned 99% by MassMutual and 1% by MassMutual Holding LLC)  
MML Investment Advisers, LLC  
MML Strategic Distributors, LLC  
The MassMutual Trust Company, FSB  
MassMutual Asset Finance LLC (owned 99.6% by MassMutual and 0.04% by C.M. Life Insurance Company)  
    MMAF Equipment Finance LLC 2013-A  
    MMAF Equipment Finance LLC 2014-A  
    MMAF Equipment Finance LLC 2015-A  
    MMAF Equipment Finance LLC 2016-A  
    MMAF Equipment Finance LLC 2017-A  
    MMAF Equipment Finance LLC 2017-B  
    MMAF Equipment Finance LLC 2018-A  
    MMAF Equipment Finance LLC 2019-A  
    MMAF Equipment Finance LLC 2019-B  
    Rozier LLC  
MML Private Placement Investment Company I, LLC  
MML Private Equity Fund Investor LLC  
MM Private Equity Intercontinental LLC  
Pioneers Gate LLC  
MassMutual Holding LLC  
    Fern Street LLC  
    Sleeper Street LLC  
    Haven Life Insurance Agency, LLC  
    MassMutual Assignment Company  
    MassMutual Capital Partners LLC  
    MM Rothesay Holdco US LLC  
    MassMutual Ventures Holding LLC  
        MassMutual Ventures US I LLC  
        MassMutual Ventures US II LLC  
        MassMutual Ventures UK LLC  
        MassMutual Ventures Southeast Asia I LLC  
        MassMutual Ventures Southeast Asia II LLC  
        Crane Venture Partners LLP (owned 33% by MassMutual Holding LLC)  
        MassMutual Ventures Management LLC  
            MassMutual Ventures SEA Management Private Limited  
MML Investors Services, LLC  
    MML Insurance Agency, LLC

## Massachusetts Mutual Life Insurance Company

MMLISI Financial Alliances, LLC  
Sleeper Street LLC  
MassMutual Assignment Company  
MM Asset Management Holding LLC  
Barings LLC  
    Baring Asset Management (Asia) Holdings Limited  
        Baring International Fund Managers (Bermuda) Limited  
        Baring Asset Management Korea Limited  
        Barings Investment Management (Shanghai) Limited  
            Barings Overseas Investment Fund Management (Shanghai)  
            Limited  
        Baring SICE (Taiwan) Limited  
        Barings Japan Limited  
        Barings Australia Holding Company Pty Ltd  
            Barings Australia Pty Ltd  
Barings Finance LLC  
    BCF Europe Funding Limited  
    BCF Senior Funding I LLC  
    BCF Senior Funding I Designated Activity Company  
Barings Securities LLC  
Barings Guernsey Limited  
    Barings Europe Limited  
        Barings Asset Management Spain SL  
        Barings Italy S.r.l  
        Barings Sweden AB  
        Barings Finland Oy  
        Barings Netherlands B.V.  
        Barings Real Estate UK Holdings Limited  
            BREAE AIFM LLP  
            Barings Real Estate Advisers (Continental Europe)  
            Limited  
            Barings Real Estate Advisers Europe LLP  
            Barings Real Estate Advisers Europe Finance LLP  
            Barings Real Estate GmbH  
Barings Asset Management Limited  
    Barings Global Advisors Limited  
        BCGSS 2 GP LLP  
        Barings European Direct Lending 1 GP LLP  
    Baring International Investment Limited  
    Baring International Investment Management Holdings  
        Baring Asset Management UK Holdings  
        Limited  
            Baring Asset Management GmbH  
            Baring International Fund  
            Managers (Ireland) Limited  
            Baring Asset Management  
            Switzerland Sarl  
            Baring France SAS  
    Baring Investment Fund (LUX) GP S.a.r.l  
    Barings GPC CP S.a.r.l  
    Barings European Core Property Fund GP S.a.r.l  
    Almack Mezzanine CP II Limited  
    Almack Holding Partnership GP Limited  
    Almack Mezzanine Fund Limited  
    Almack Mezzanine Fund II Limited  
Barings (U.K.) Limited

## Massachusetts Mutual Life Insurance Company

Barings Multifamily Capital Holdings LLC  
Barings Multifamily Capital LLC  
Barings Multifamily Capital Corporation  
Barings Real Estate Advisers Inc.  
Chassis Acquisition Holding LLC (owned 30% by MassMutual)  
CRA Aircraft Holding LLC (owned 40% by MassMutual)  
Aland Royalty Holdings LP (owned 26% by MassMutual)  
Intermodal Holding II LLC (owned 18% by MassMutual)  
Milestone Acquisition Holding, LLC (owned 18.3% by MassMutual)  
Novation Companies, Inc. (owned 20.7% by MassMutual)  
Red Lake Ventures, LLC (owned 31.5% by MassMutual)  
Remington L & W Holdings LLC (owned 66.7% by MassMutual)  
EIP Holdings I, LLC (owned 29.4% by MassMutual)  
Tamiami Citrus, LLC (owned 15.7% by MassMutual)  
Teaktree Acquisitions, LLC (owned 14.7% by MassMutual)  
U.S. Pharmaceuticals Holdings I, LLC  
U.S. Pharmaceuticals Holdings II, LLC (owned 42.4% by MassMutual)  
Validus Pharmaceuticals Holdings II, LLC (owned 80.1% by MassMutual)  
VGS Acquisition Holding, LLC (owned 33.3% by MassMutual Holding LLC)  
Aland Royalty GP, LLC  
Alaska Future Fund CP, LLC  
BAI Funds SLP, LLC  
BAI GP, LLC  
Barings Alternative Investment SLP, LLC  
Baring Asset-Based Income Fund (US) CP, LLC  
Barings Global Investment Funds (US) Management LLC  
Babson Global Loan Feeder Management, LLC  
Barings ABIF SLP, LLC  
Barings CLO Investment Partners CP, LLC  
Barings Core Property Fund GP LLC  
Barings Direct Lending GP Ltd.  
Barings Global Energy Infrastructure Advisors, LLC  
Barings Global Real Assets Fund GP, LLC  
Barings Multi Asset Income Fund  
Barings North American Private Loan Fund Management, LLC  
Barings/LAZ Parking Fund GP LLC  
Benton Street Advisors, Inc.  
BRECS VII GP LLC  
CCM Fund I REIT Manager LLC  
CEMF I GP LLC  
CHY Venture GP LLC  
Cornerstone Hotel Fund GP, LLC  
CREF X GP LLC  
CREF VIII GP, LLC  
Great Lakes III GP, LLC  
Lake Jackson LLC  
Loan Strategies Management LLC  
Mezzco LLC  
Mezzco II LLC (owned 98.4% by Barings LLC)  
Mezzco III LLC (owned 99.3% by Barings LLC)  
Mezzco IV LLC (owned 99.3% by Barings LLC)  
Mezzco Australia II LLC  
RECSA-NY GP LLC  
SBNP SIA II LLC  
Somerset Special Opportunities Management LLC  
Invesco Ltd. (owned 15.7% by MassMutual)

## Massachusetts Mutual Life Insurance Company

MassMutual International LLC  
MassMutual Solutions LLC  
HarborTech (Asia) Limited  
Yunfeng Financial Group Limited (owned 24.9% by MassMutual)  
MML Management Corporation  
MassMutual International Holding MSC, Inc.  
MassMutual Holding MSC, Inc.  
MML Mezzanine Investor II, LLC  
MML Mezzanine Investor III, LLC  
MassMutual External Benefits Group LLC

### 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, operating facilities, human resources, computer software development, managerial, data science, underwriting, and other miscellaneous services. MassMutual charges a fee for the services which corresponds to all of 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 Agreement*

MassMutual has an agreement with its subsidiary, Barings LLC ("Barings"), which was created during the examination period through a consolidation of a number investment management subsidiaries. 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 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 New Jersey. The Company uses

## Massachusetts Mutual Life Insurance Company

a career agency system, independent agents and brokers, and digital direct to consumer platforms to sell life insurance, annuities, disability insurance and long-term care insurance in these states.

### Treatment of Policyholders – Market Conduct

During the financial examination of the Company, the Division's Market Conduct Department performed no comprehensive market conduct examination. The last market conduct examination of the Company was performed as of December 31, 2014. 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 and Noller Advisors, LLC 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 business areas that were reviewed under this comprehensive market conduct examination are Company Operations/Management; Complaint Handling; Marketing and Sales; Producer Licensing; Policyholder Services; Underwriting and Rating and Claims. Each business area reviewed includes the identification and evaluation of the insurer's internal controls.

## **REINSURANCE**

### Assumed Reinsurance

MassMutual has a stop-loss reinsurance agreement on all C.M. Life Insurance Company ("CM Life") policies. MassMutual has two coinsurance agreements with CM Life, whereby MassMutual assumes additional universal life policies sold by CM Life. MassMutual has a stop-loss agreement with MML Bay State Life Insurance Company ("MML Bay State") on all business. 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.

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. This transaction enabled MassMutual to build its retirement business, add complementary markets and distribution capabilities, and nearly double the number of retirement plan participants it serves to approximately three million. The treaty remains intact, but subsequent to the period under examination this block of business was retroceded to Empower Retirement through the transaction discussed in the Subsequent Events section below.

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

### 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 60% 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 \$25 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 5 reinsurers for each program. The Company retains at least 10% of each policy for automatic programs.

- Reinsurers: Swiss Re  
Munich American. Reassurance  
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
- 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 AM. Reassurance (formerly Continental)

## Massachusetts Mutual Life Insurance Company

RGA Reinsurance Company

Swiss Re

Canada Life

Hannover (closed for new business 12/31/19)

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 Am 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 AM. Reassurance

RGA Reinsurance Company

SCOR

Swiss Re

SCOR Global Americas (formerly Transamerica)

Hannover (closed for new business 12/31/19)

## Massachusetts Mutual Life Insurance Company

Optimum  
Partners Re

Ceded: Facultative reinsurance for all plans.  
Coverage: The amount in excess of the Company's retention limit.

### *Long-Term Care Coinsurance/Modified Coinsurance*

The Company reinsures 100% of its long-term care ("LTC") risk on policies issued prior to April 1, 2008 via coinsurance with Employers Reassurance Corporation ("ERAC"), an authorized reinsurer domiciled in Kansas. Policies issued after April 1, 2008 are reinsured 25% with LifeCare Assurance Company ("LifeCare"), an authorized reinsurer domiciled in Arizona.

The Company's reinsurer exposure limit is currently exceeded due to MassMutual's exposure to ERAC, a subsidiary of General Electric Company ("GE"). This exposure is comprised of a reserve credit of \$3,578 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 one-quarter 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. In 2017, MassMutual and ERAC reached an agreement, whereby 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. The Company closely monitors GE's financials and capital contributions to ERAC.

In 2018, MassMutual restructured its agreement with LifeCare from modified coinsurance to yearly renewable term agreement. The yearly renewable premium rates are paid monthly and guaranteed for the life of the agreement. LifeCare posts assets to a trust account for the benefit of MassMutual to support the reserve credit equal to 1/24th of the annualized premium on active lives and the disabled life reserve.

### *Inforce Life*

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

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

### *Annuity Reinsurance*

In 2018, the Company entered into an automatic new business agreement to coinsure 50% of a fixed annuity to Athene Annuity and Life Assurance Company of Delaware ("AADE"). The quota share was increased to 75% for a new contract effective 3/1/2019. 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 entered into an automatic new business agreement with AL Re at the same 75% quota share.



## Massachusetts Mutual Life Insurance Company

In 2019, the Company entered into a facultative reinsurance agreement with Commonwealth Annuity and Life Insurance Company. The Company coinsures certain new group annuity contracts under the agreement. Commonwealth posts assets to a book value comfort 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, 2019. The financial statements are the responsibility of Company management.

Statement of Assets, Liabilities, Surplus and Other Funds as of December 31, 2019

Statement of Income for the Year Ended December 31, 2019

Reconciliation of Capital and Surplus for Each Year in the Five-Year Period Ended December 31, 2019

# Massachusetts Mutual Life Insurance Company

## Statement of Assets, Liabilities, Surplus and Other Funds As of December 31, 2019

	Per Annual Statement
<b>ASSETS</b>	
Bonds	\$ 101,906,630,889
Preferred stocks	748,884,136
Commons stocks	18,155,623,985
Mortgage loans on real estate	27,472,894,866
Properties occupied by the company	209,287,678
Properties held for the production of income	148,924,938
Cash, cash equivalents and short-term investments	3,793,098,998
Contract loans	14,724,907,074
Derivatives	12,063,706,294
Other invested assets	9,011,826,432
Receivables for securities	2,037,001,924
Subtotals, cash and invested assets	<u>190,272,787,214</u>
Investment income due and accrued	2,686,542,135
Uncollected premiums and agents' balances	166,485,191
Deferred premiums	848,612,345
Amounts recoverable from reinsurers	37,140,266
Other amount receivable under reinsurance contracts	40,267,993
Net deferred tax asset	1,108,192,574
Guaranty funds receivable or on deposit	16,042,391
Electronic data processing equipment and software	16,516,928
Receivables from parent; subsidiaries and affiliates	80,437,664
Aggregate write-ins	2,745,562,008
Total assets excluding separate accounts	<u>198,018,586,709</u>
From separate accounts	<u>70,230,699,186</u>
Total Assets	<u>\$ 268,249,285,895</u>

# Massachusetts Mutual Life Insurance Company

## Statement of Assets, Liabilities, Surplus and Other Funds (Continued) As of December 31, 2019

	Per Annual Statement
<b>LIABILITIES</b>	
Aggregate reserve for life contracts	\$ 127,404,910,418
Aggregate reserve for accident and health contracts	3,074,252,813
Liability for deposit-type contracts	15,296,773,875
Contract claims: Life	395,457,118
Contract claims: Accident and health	28,571,378
Policyholders' dividends/refunds to members	5,418,002
Policyholders' dividends/refunds to members apportioned	1,678,330,958
Premiums and annuity considerations received in advance	38,780,694
Provision for experience rating refunds	10,737,816
Other amounts payable on reinsurance	32,432,419
Interest maintenance reserve	438,181,103
Commissions to agents due or accrued	31,267,218
Commissions payable on reinsurance assumed	3,509,387
General expenses due or accrued	1,213,851,888
Transfers to Separate Accounts due or accrued	(134,499,953)
Taxes, licenses and fees due or accrued	74,722,727
Current federal and foreign income taxes	22,586,267
Unearned investment income	194,435,521
Amounts withheld as agent or trustee	38,020,441
Amounts held for agents' account	392,163,578
Remittances and items not allocated	777,472,078
Liability for benefits for employees and agents	198,284,548
Borrowed money	249,869,729
Asset valuation reserve	4,670,184,316
Reinsurance in unauthorized and certified companies	162,371
Payable to parent, subsidiaries and affiliates	32,575
Funds held under coinsurance	4,252,254,372
Derivatives	9,608,418,011
Aggregate write-ins	9,129,094,870
Total liabilities excluding Separate Accounts	179,125,676,538
From Separate Accounts statement	70,230,699,186
Total Liabilities	249,356,375,724

Massachusetts Mutual Life Insurance Company

Statement of Assets, Liabilities, Surplus and Other Funds (Continued)  
As of December 31, 2019

	Per Annual Statement
<b>SURPLUS</b>	
Surplus notes	<u>2,235,399,709</u>
Aggregate write-ins for special surplus funds	3,256,298
Unassigned funds (surplus)	<u>16,654,254,164</u>
Surplus	<u>18,892,910,171</u>
Total Liabilities, Surplus and Other Funds	<u><u>\$ 268,249,285,895</u></u>

# Massachusetts Mutual Life Insurance Company

## Summary of Operations For the Year Ended December 31, 2019

	Per Annual Statement
Premiums and annuity considerations	\$22,752,212,483
Considerations for supplementary contracts with life contingencies	\$ 28,590,209
Net investment income	7,682,463,670
Amortization of Interest Maintenance Reserve	10,699,953
Commissions and expense allowances on reinsurance ceded	287,604,065
Reserve adjustments on reinsurance ceded	(33,004,043)
Income from fees from Separate Accounts	402,141,262
Aggregate write-ins for miscellaneous income	724,320,590
Total	<u>31,855,028,189</u>
Death benefits	2,032,965,426
Matured endowments	17,173,120
Annuity benefits	2,198,346,477
Disability benefits and benefits under A&H contracts	373,206,297
Surrender benefits and withdrawals for life contracts	19,529,326,111
Interest and adjustments on contract	416,137,455
Payments on supplementary contracts	17,210,071
Increase in aggregate reserves	8,429,331,327
Total	<u>33,013,696,284</u>
Commissions on premiums	995,608,854
Commissions and expense allowances on reinsurance assumed	71,517,738
General insurance expenses	2,387,273,112
Insurance taxes, licenses and fees, excluding federal taxes	271,331,349
Increase in loading on deferred and uncollected premiums	(11,544,534)
Net transfers to or (from) Separate Accounts	(6,020,187,105)
Aggregate write-ins for deductions	(969,782,095)
Total	<u>29,737,913,603</u>
Net gain from operations before dividends to policyholders and federal income taxes	2,117,114,586
Dividends to policyholders	<u>1,671,109,490</u>
Net gain from operations after dividends to policyholders and before federal income taxes	446,005,096
Federal and foreign income taxes incurred	<u>(14,965,399)</u>
Net gain from operations after dividends to policyholders and federal income taxes and before capital gains (losses)	460,970,495
Net realized capital gains (losses)	<u>(36,723,981)</u>
Net income	<u>\$ 424,246,514</u>

# Massachusetts Mutual Life Insurance Company

## Reconciliation of Capital and Surplus For Each Year in the Five-Year Period Ended December 31, 2019 (in thousands)

	2019	2018	2017	2016	2015
Surplus as regards policyholders, December 31, prior year	\$ 15,609,787	\$ 15,705,217	\$ 15,423,490	\$ 14,982,532	\$ 14,231,326
Net income/(loss)	424,247	(821,347)	52,076	(13,883)	412,181
Change in net unrealized capital gains or (losses) less capital gains tax	3,433,085	1,778,862	367,766	1,104,826	194,731
Change in net unrealized foreign exchange gain (loss)	282,237	(594,081)	720,964	(440,579)	(225,760)
Change in net deferred income tax	(55,178)	289,824	(1,084,217)	247,382	231,109
Change in non-admitted assets	747,092	(716,309)	124,348	(326,288)	(15,893)
Change in liability for reinsurance in unauthorized and certified companies	27	15	(204)	-	-
Change in reserve on account of change in valuation basis	-	-	-	(700)	-
Change in asset valuation reserve	(1,363,364)	(99,750)	(29,061)	(360,870)	(196,860)
Surplus (contributed to) withdrawn from Separate Accounts during period	-	3	10,140	137	(31)
Other changes in surplus in Separate Accounts Statement	-	(3)	(10,140)	23	(833)
Change in surplus notes	(32,697)	469	35,697	293	491,416
Cumulative effect of changes in accounting principles	-	-	-	-	2,617
Aggregate write-ins for gains and losses in surplus	(152,325)	66,888	94,357	230,616	(141,471)
Change in surplus as regards policyholders for the year	3,283,124	(95,430)	281,727	440,958	751,206
Surplus as regards policyholders, December 31, current year	\$ 18,892,910	\$ 15,609,787	\$ 15,705,217	\$ 15,423,490	\$ 14,982,532

## **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, 2019. KPMG concluded that the statutory reserves were between their threshold of  $\pm 2.0\%$ . Hence, 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. The Examination Actuary reviewed the absolute difference in policy reserves between MassMutual and KPMG, which resulted in a maximum of a 0.3% difference on an individual policy basis. The Examination Actuary applied this maximum difference to the tested reserves held by MassMutual at December 31, 2019 to develop the low and high range of reasonable 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.

The Examination Actuary reviewed a seriatim listing supporting a sample of 2019 Annual Statement Exhibit 5 reserves for consistency and to determine whether the totals match the entries in Exhibit 5. The totals provided matched Exhibit 5, and no material inconsistencies were noted.

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. Business not modeled through CFT was reviewed, and the Examination Actuary is comfortable the CFT results would not be significantly impacted if they were included in the CFT model. 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 January 27, 2021, MassMutual announced it has entered into a definitive agreement with American Financial Group, Inc. to purchase its wholly owned subsidiary, Great American Life Insurance Company (“Great American Life”), and other subsidiaries and affiliated entities, which

## Massachusetts Mutual Life Insurance Company

primarily offer traditional fixed and fixed indexed annuity products. The purchase price is \$3.5 billion, subject to adjustment at closing. The transaction was completed on May 29, 2021. Upon the close of the transaction, Great American Life will operate as an independent subsidiary of MassMutual.

On January 4, 2021, MassMutual announced that the Company and Empower Retirement (“Empower”) had completed an agreement for Empower to acquire MassMutual’s retirement plan business. MassMutual’s retirement plan business comprising of 26,000 workplace savings plans with approximately \$167 billion in assets was acquired by Empower through a reinsurance transaction with a \$2.35 billion ceding commission. As part of the agreement, MassMutual and Empower entered into a strategic partnership through which digital insurance products offered by MassMutual’s affiliate, Haven Life Insurance Agency, LLC, and MassMutual’s voluntary insurance and lifetime income products will be made available to Empower customers.

On September 30, 2020, MassMutual announced an agreement where it and GIC, a Singapore investment firm, acquired investment firm Blackstone Tactical Opportunities’ 36% shareholding in Rothesay Life, a United Kingdom pension insurer. The transaction was completed on December 1, 2020. The transaction values Rothesay Life at £5.75 billion. GIC and MassMutual were both shareholders in Rothesay Life since 2013 and will now each become 49% shareholders. Rothesay Life’s assets under management are £56 billion, and it insures the pensions of over 800,000 people.

On April 16, 2020, MassMutual issued \$700 million in 3.375% surplus notes due in 2050. On June 24, 2020, MassMutual issued an additional \$600 million in 5.077% surplus notes due in 2069, bringing total outstanding surplus notes to \$3.77 billion. These facilities were meant to reduce the Company’s cost of borrowing.

In March 2020, the World Health Organization declared Coronavirus disease (COVID-19) a pandemic. As of the date of this report, there was significant uncertainty on the effect that the pandemic would have on the insurance industry, economy, and society at large. Any impact to the Company will take time to assess and will be specific to the class and mix of business it underwrites. The Division will continue to monitor how the pandemic might impact the Company.

### **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 and the following examiner participating in this examination is acknowledged.

Michael Lewandowski, Financial Examiner II

*John M Curran*

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John M. Curran, CFE  
Supervising Examiner and EIC  
Commonwealth of Massachusetts  
Division of Insurance