

2022 Sustainability Report





Table of Contents

A Message From Our CEO	2
About MassMutual®	3
MassMutual's Sustainability Journey	5
Sustainability and Mutuality	6
Sustainable Finance	10
Sustainable Operations	15
Diversity, Equity, and Inclusion	17
Our People	23
Our Policyowners and Customers	28
Our Communities	32
Governance and Ethics	37
About This Report and Indices (SASB and TCFD)	41

A Message From Our CEO

Dear Fellow Stakeholders,

For more than 172 years, MassMutual has fulfilled a simple yet profound purpose: we help people secure their future and protect the ones they love. Throughout our long history, we've learned that delivering enduring value hinges on our ability to anticipate the future and work to shape it for the better. That's why we're focused on building a sustainable world for all of us, including our policyowners, customers, employees, and communities.

As a mutual company, we are uniquely suited for this challenge, as we operate for the benefit of our participating policyowners. That means we serve stakeholders – not shareholders – allowing us to pursue ideas and prioritize investments aimed at generating positive impact for decades to come. This mindset applies to how we've integrated material environmental, social, and governance considerations across our business, which has helped us with our goal to deliver strong, consistent, long-term financial performance.

Our approach to sustainability includes efforts to advance environmental stewardship and social responsibility in alignment with our business strategy. We are working toward our net zero goals by setting interim targets to reduce greenhouse gas emissions

within our own operations and our investment portfolio. Further, we are helping accelerate the transition to a low-carbon economy and a more equitable world by investing in climate technology companies as well as diverse fund managers and entrepreneurs.

At the same time, we know we need a dedicated and talented employee base with fresh and wide-ranging perspectives to realize our ambitions. To do so, we continue to foster an inclusive workplace that increasingly reflects the diversity of the communities we serve, while fueling innovation and building the spirit and character that makes MassMutual a great place to work. What's more, we seek to ensure our colleagues have the time and resources they need to lead productive, happy, healthy, and fulfilled lives.

This support for our people extends beyond our own walls as well, given we were founded on the belief that when we care for our neighbors, we all thrive. MassMutual translates this conviction into action by investing in our communities and focusing on eliminating barriers to social and economic advancement. From helping expand access to affordable homeownership and financial resiliency, to furthering initiatives committed to youth, education, and inclusion, our efforts are aimed at ensuring all families have the opportunity to succeed.

Of course, this work – and the entirety of our sustainability strategy – is consistent with our unwavering commitment to the highest standards of stewardship, integrity, and good governance. Since 1851, people have entrusted us to help build their legacies and care for those who rely on them. We take this responsibility seriously, because fundamentally, we want what's best for them and their loved ones both now and in the years to come.

This same sense of obligation to serve the long-term interests of our policyowners and customers helps shape how we take action to protect our people and our planet. To truly serve all our stakeholders, we cannot restrict our work to the lifecycle of an insurance policy or contract. We must build a sustainable future, across society, from generation to generation. And that's just what MassMutual will continue to do, helping those who rely on us live with confidence, stability, and peace of mind.

Sincerely,



Roger W. Crandall

Chairman, President & Chief Executive Officer



“To truly serve all our stakeholders, we cannot restrict our work to the lifecycle of an insurance policy or contract. We must build a sustainable future, across society, from generation to generation.”

*– Roger Crandall
Chairman, President & CEO*



About MassMutual®

MassMutual is a leading mutual life insurance company that is run for the benefit of its members and participating policyowners. Founded in 1851, the company has been continually guided by one purpose: we help people secure their future and protect the ones they love. With a focus on delivering long-term value, MassMutual offers a wide range of protection, accumulation, wealth management, and retirement products and services.

For more information, visit [MassMutual.com](https://www.massmutual.com).

Purpose

We help people secure their future
and protect the ones they love

Vision

To provide financial well-being
for all Americans



2022 at a Glance

~10,000

full-time employees¹

~7,500

financial professionals in our network

~157,000

lives newly insured

\$7.1B

in insurance and annuity benefits paid to policyowners and customers

\$950B

life insurance in force

155th

consecutive dividend payout to eligible participating policyowners approved²

2022 Awards and Recognition

World's Most Admired Companies

- FORTUNE³

Top Places to Work in Massachusetts

- The Boston Globe

America's Best Employer for Diversity

- Forbes

The Civic 50 Most Community-Minded Businesses

- Points of Light

2022 Corporate Citizenship Award, A Recognition of the Region's Top Corporate Charitable Contributors

- Boston Business Journal

2022 Best Places to Work: Best Benefits in Boston and Best Large Companies to Work for in Boston

- Built In Boston

Best Place to Work for Disability Inclusion

- Disability Equality Index® rating of 100%

Military Friendly Employer

- Victory Media

Best Places to Work for LGBTQ+ Equality

- Corporate Equality Index rating of 100%, Human Rights Campaign

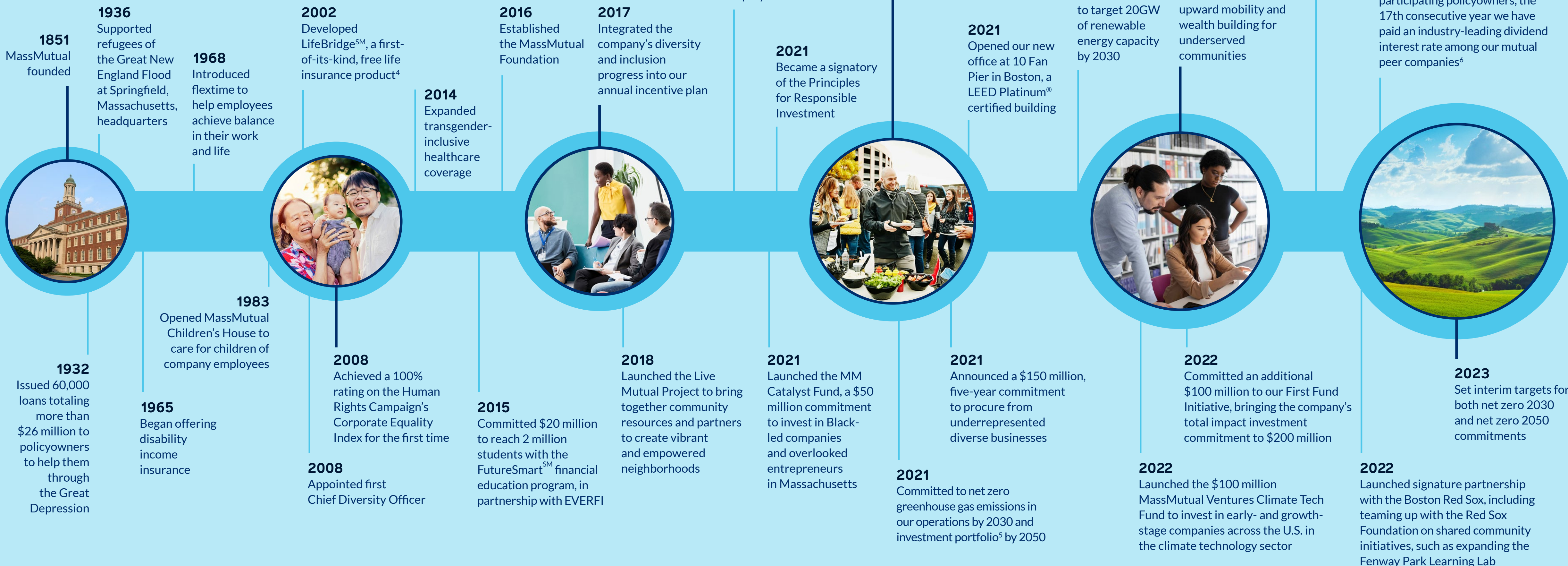
¹ Includes Massachusetts Mutual Life Insurance Company, MassMutual Ascend, MassMutual Romania, MassMutual India, and Barings.

² The dividend and dividend interest rate are determined annually, subject to change, and are not guaranteed.

³ MassMutual also ranked No. 100 on the 2022 FORTUNE® 500 list. From FORTUNE. ©2022 FORTUNE Media IP Limited. All rights reserved. FORTUNE 500 (May 2022) and FORTUNE World's Most Admired Companies (February 2022) 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.

MassMutual's Sustainability Journey

As a mutual life insurer, we have focused from the beginning on the long-term interests of our policyowners and customers, achieving many sustainability milestones over the past century. As our business continues to grow and evolve, sustainability remains essential to how we deliver value for our policyowners, customers, employees, and communities.



⁴MassMutual pays the premiums.
⁵Investment portfolio refers to MassMutual's General Investment Account, which had \$252 billion of invested assets as of December 31, 2022.
⁶The dividend and dividend interest rate are determined annually, subject to change, and are not guaranteed.



Sustainability and Mutuality

In the more than 170 years since MassMutual was founded – through profound social and economic change – one thing that has not wavered is our purpose: we help people secure their future and protect the ones they love. Being continually guided by this purpose has enabled our company to stand the test of time and helps ensure we will be here to deliver on our commitments for generations to come.

As a mutual company, we operate for the benefit of our members and participating policyowners, which allows us to manage the company with a focus on their long-term interests. This means that our commitment to sustainability is fundamentally aligned with, and ingrained in, how we operate and deliver value to the people who depend on us and the planet we share. Being mutual guides our actions today, as it has throughout our history.

Our Approach

At MassMutual, sustainability is about embedding environmental stewardship, social responsibility, and good governance into how we do business. We view sustainability as integral to how we deliver long-term value and stability for our policyowners, customers, employees, and communities.

We focus on the environmental, social, and governance factors that are material to our long-term success. Integration of these factors within our business drives long-term growth, aligns with our steadfast commitment to risk management, sparks innovation, and helps us build the culture and attract the talent we need to succeed in a changing world. We are committed to continuously advancing our sustainability approach and performance in support of our business goals.



Core Elements of Our Sustainability Strategy



Supporting the transition to an equitable, low-carbon economy, capturing opportunities, and managing risk to succeed in a rapidly changing world



Creating a diverse, equitable, and inclusive workplace that empowers our employees to reach their personal and professional goals



Investing in our communities to create more equitable access to social and economic opportunities and financial well-being



Operating our facilities sustainably

Progress to Date

- Established 2030 interim targets to reduce greenhouse gas emissions for select asset classes and industry sectors in our investment portfolio, advancing our progress toward net zero portfolio emissions by 2050
- Launched the \$100 million MassMutual Ventures Climate Tech Fund to invest in early-stage and growth-stage companies across the U.S. that are working to address the sources of and to provide solutions to climate change
- Increased our impact investing commitment from \$100 million to \$200 million through our First Fund Initiative and MM Catalyst Fund, which focus on investing capital in funds and companies that are overlooked due to systemic barriers

- For the sixth year, linked progress on workforce diversity to our annual incentive plan, which applies to all MassMutual employees, including senior leadership
- Increased the racial and ethnic diversity of our overall workforce by 32 percent since 2017
- Announced the expansion of our benefits offerings in 2023 – quadrupling paid caregiver leave, expanding access to mental health solutions, and directly providing funds to employees to manage their overall well-being as they see fit

- As part of MassMutual's signature partnership with the Boston Red Sox, the MassMutual Foundation and the Red Sox Foundation will expand upon our long history of giving back to the community through programs that support youth and education, foster inclusion, and make Fenway Park welcoming to all
- The MassMutual Foundation provided a \$2 million grant to Way Finders' City of Homes program, which supports equitable and affordable homeownership opportunities in the Springfield area
- MassMutual committed \$2.5 million over five years to the American College Center for Economic Empowerment and Equality®, to promote upward mobility and wealth building for underserved communities

- Established a 2027 interim target to reduce operational greenhouse gas emissions by 72 percent from 2019, advancing our progress toward net zero operations by 2030



Sustainability Governance

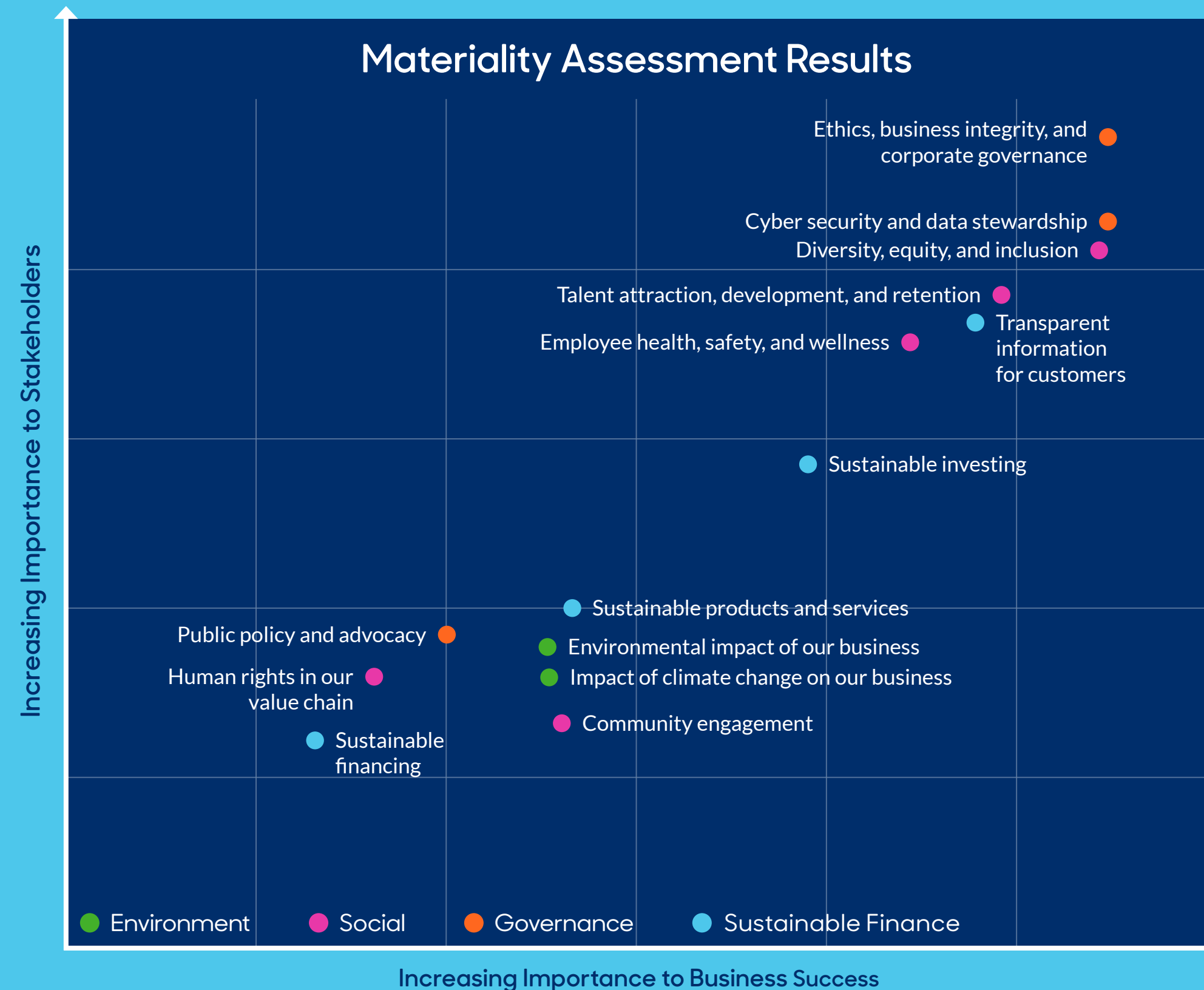
We have established a sustainability governance structure designed to ensure integrity, accountability, transparency, and sound decision-making. Strong oversight enables us to deliver long-term value and stability to our policyowners, customers, employees, and communities. Our sustainability governance structure is as follows:



For more about our corporate governance practices, see [page 37](#).

Our Material Sustainability Topics

We focus on the sustainability topics that are material to the long-term growth and stability of our business and that are of the highest priority to our stakeholders. In 2021, we conducted a formal materiality assessment, in which we identified and prioritized our material sustainability topics. This assessment was informed by relevant standards, megatrends, and peer disclosures, as well as internal and external stakeholder input. In 2022, we reviewed this analysis and determined that these issues continue to be material and should accordingly inform our sustainability strategy, objectives, and goals.



Stakeholder Engagement

We regularly engage with key stakeholders through a variety of mechanisms to help inform our sustainability strategy and approach.





Sustainable Finance

Since MassMutual was founded in 1851, our policyowners and customers have trusted us with their financial security and peace of mind – and our company has been guided by one purpose: we help people secure their future and protect the ones they love. Our commitment to sustainability directly stems from our obligation to manage the company with a focus on the long-term interests of our members and participating policyowners. Integrating material environmental, social, and governance factors across our finance activities enables us to pursue consistent, long-term returns by mitigating risk and identifying new opportunities.

At MassMutual, sustainable finance encompasses the management of our General Investment Account (GIA), our insurance products, asset management offerings, and our capital structure. Our Sustainable Finance Framework provides company-wide guidance to drive alignment on the continued integration of sustainability considerations in these areas. We have developed sustainable finance playbooks to provide actionable insights on operationalizing the framework.

We view sustainability as a critical lens through which to identify and manage risks and opportunities across our insurance, investment, and credit decisions, with the specifics of our approach differing by line of business. Through our sustainability governance structure and Sustainable Finance Framework, we maintain oversight of the integration of environmental, social, and governance (ESG) factors across the company. Doing so enables us to offer solutions that align with our customers' needs while supporting our company's long-term growth.

Sustainable Finance Framework



Sustainable Offerings

MassMutual is committed to helping our clients meet their financial goals and reaching people on their terms. To do this, we offer a diverse range of products and services that enable our customers to choose solutions based on their individual priorities and objectives. For clients who want to take advantage of sustainable investing strategies, we offer a variety of options across our variable annuities and variable life product lineups, as well as through MML Investors Services' (MMLIS) brokerage and investment advisory platforms.

For example, in 2022, we added the MML Sustainable Equity Fund as an option within our variable annuities and variable life insurance products, to provide clients seeking to invest in an ESG fund the opportunity to do so. The MML Sustainable Equity Fund is subadvised by American Century Investment Management and seeks to deliver competitive long-term financial results by investing in companies with improving business fundamentals and sustainable corporate behaviors.

Through our Wealth Management Services (WMS) advisory platform, MMLIS clients have access to hundreds of ESG investment options offered by third-party asset managers. At the end of 2022, WMS's assets under management for ESG investments, including mutual funds, exchange-traded funds, separately managed accounts, and fund strategist providers, totaled approximately \$1 billion.

⁷ Consistent with SBTi's real estate trajectory for well below 2°C.

Sustainable Investing

MassMutual's GIA – which held \$252 billion of total invested assets as of year-end 2022 – backs our obligations to our policyowners and customers. As a mutual life insurance company, we are long-term investors concerned with meeting commitments that stretch far into the future. That means we focus on generating long-term, stable performance to support MassMutual's financial strength and ability to meet our financial obligations to our policyowners. Evaluation of material sustainability factors contributes to our overall approach to managing risk-adjusted returns.

Through our sustainable investing strategy, we leverage our capital to capture opportunities and manage risks in order to succeed in a rapidly changing world. We do this by focusing on three key areas: advancing our commitment to achieve net zero portfolio emissions by 2050; fostering social and economic opportunity; and investing responsibly, by continuing to embed sustainability considerations into the management of our GIA.

Advancing Our Net Zero 2050 Commitment

In 2021, MassMutual announced our commitment to reach net zero emissions in our investment portfolio by 2050. Our GIA is our largest impact on the climate. Further, it is our largest exposure to climate-related risks and the vehicle to capture the significant

2030 Portfolio Emissions Reduction Targets

Portfolio Targets	Public Corporate Bonds			Mortgage Loans
Sector	Power Power generation	Energy Upstream production, refiners, integrated companies		Commercial real estate
Climate Scenario	IEA Net Zero Emissions 2050	IEA Net Zero Emissions 2050		IEA Energy Technology Perspectives Beyond 2°C Scenario ⁷
GHG Scopes Included	Scope 1 and 2	Scope 1 and 2	Scope 3	Scope 1 and 2
2030 Interim Target	70% reduction from 2019	42% reduction from 2019	29% reduction from 2019	56% reduction from 2019
Metric	kg CO ₂ e/MWh	g CO ₂ e/MJ	g CO ₂ e/MJ	kg CO ₂ e/m ²

investment opportunities associated with the transition to a low-carbon economy.

We have developed and are implementing a multiyear roadmap supported by a detailed action plan with the near-term steps needed to put our company on the path to net zero. As one of the steps on this path, we have established 2030 interim targets for our commercial real estate loans and our power and energy public corporate bond portfolios. To develop these interim targets, we considered guidance from available frameworks, including the Science Based Targets initiative (SBTi) and the Partnership for

Carbon Accounting Financials (PCAF). We selected these carbon-intensive sectors to start because they have transition pathways and represent meaningful emissions from our GIA. A summary of our 2030 interim targets is shown in the table above.

To help meet our net zero goal, we have measured and plan to disclose our financed emissions, starting with the selected carbon-intensive portfolios. We are implementing a software platform to measure, track, and report on emissions within our portfolio and in our operations. For more about our efforts to decarbonize our operations, see [page 15](#).

We recognize that carbon accounting, particularly for financed emissions, is still in its early stages of development. Given this evolving landscape, we anticipate that our methodology will likewise have to evolve over time as the quality of emissions data improves, new sources of data and new methodologies develop, and climate scenarios evolve. As such, we will continue to monitor new developments, transparently report on our progress, and adapt as needed.

We embrace the opportunity to adopt a new mindset as we continue to safeguard the long-term financial performance of our GIA, while serving as stewards of our portfolio's climate impacts. As we incorporate our interim targets into our investment management process, we will do so in a way that supports our belief in an engagement-centered approach to encourage decarbonization.

As a critical component of our net zero pathway, we actively pursue opportunities to invest in climate solutions that support the transition to a low-carbon economy and our responsibility to generate long-term value for our policyowners. In 2022, for example, MassMutual Ventures (MMV) launched a \$100 million fund to invest in early- and growth-stage climate technology companies across the U.S., with the objective of delivering both market investment returns and measurable climate benefits. The MMV Climate Tech Fund will invest in technology companies that address the sources of climate change and/or provide solutions for managing climate impacts on individuals, businesses, and communities.

In 2022, our wholly owned asset management subsidiary, Barings, collaborated with Counterpointe Sustainable Advisors, a firm focused on real estate financing products for energy efficiency, renewable energy, and resiliency measures in commercial properties, to originate a construction loan and a commercial property-assessed clean energy (C-PACE) loan. This innovative financing solution helps property owners by providing up to 100 percent financing for energy efficiency, renewable energy, water conservation, and resiliency improvements – catalyzing investments to decarbonize and strengthen resilience of the commercial real estate sector.

More broadly, MassMutual continues to deploy our capital to further the development of low- and zero-carbon energy, investing \$125 million in renewable energy in 2022. This resulted in a total direct exposure of \$1.8 billion in this sector. We also have an ongoing strategic partnership with Low Carbon Limited, a leading renewable energy company based in the U.K. In 2021, we began working with Low Carbon to accelerate the renewable energy transition, with the goal of creating 20 gigawatts of new renewable energy capacity by 2030. The partnership is focused on investing in, developing, and operating large-scale renewable projects including solar, wind, energy storage, and energy from waste, across the U.K., Europe, and North America.

Fostering Social and Economic Opportunity

Leveraging our capital to address societal needs and expand access to economic opportunity strengthens the communities in which we operate. In addition, it enables MassMutual to capture the market opportunity that exists by investing in and serving the needs of all Americans.

We do this in a variety of ways. For example, in 2022, we invested \$76 million in affordable housing debt and equity, giving us a total direct exposure of \$2.5 billion in affordable housing. In addition, through MMV, we invest in a range of businesses, some of which create social benefit. In 2022, MMV led the Series A extension for HelloBetter, a provider of digital therapy courses that include prevention and treatment of mental health issues like depression, anxiety, and insomnia. MMV also invested in Daye, a female-founded health platform that improves accessibility to and the convenience of gynecological products, services, and treatments.

Through MassMutual's impact investments – which are part of our GIA – we focus on investing capital in companies and funds that are overlooked because of systemic barriers. In doing so, we aim to generate positive, measurable social and environmental impact, while addressing inequality in capital markets.



Our strategy leverages innovative approaches in deal sourcing, selection, diligence, and investments that reduce structural inequities and advance racial equity. MassMutual had committed a total of \$200 million of impact investment capital, and we deployed more than \$23 million of it in 2022. We are doing this through two initiatives we launched in 2021:

• **MassMutual Catalyst Fund (MMCF)**, a \$50 million fund investing in Black-led startups as well as rural-based businesses across Massachusetts. From sourcing to screening to due diligence, MMCF's approach is key to finding and funding companies in a more expansive way. Our online application lowers barriers to overlooked startups and has generated a robust pipeline. We take a "look twice" approach to screening, meeting entrepreneurs where they are, building relationships, and providing transparency and access to MMCF's process. Rather than relying solely on previous exits or track records, our due diligence evaluates founders' tenacity and ability to overcome adversity. MMCF is focused on generating positive, measurable social impact while addressing inequality in capital markets. See the example to the right of one of MMCF's change-making investees.

• **First Fund Initiative**, an effort through which we are committing to invest catalytic capital in Black, Hispanic/Latino/Latinx, and Indigenous emerging managers to advance racial equity. First Fund's allocation strategy centers on funds that are systemically overlooked by financial institutions and have a differentiated investment thesis, with the ability to generate positive social impact as well as financial returns. In 2022, we announced we would dedicate an additional \$100 million to the initiative, building on the \$50 million we committed in 2021.

The First Fund Initiative aims to move beyond examining the problem of lack of diversity in capital access and to concentrate on the opportunity to back high-performing, overlooked investment managers. In 2022, this included investing in a fund launched by Raven Indigenous Capital Partners, an Indigenous-owned and -led impact investor based in Vancouver, to support innovative, mission-driven, businesses led by Indigenous entrepreneurs in Canada and the U.S.

MMCF 2022 Impact

11

total investments

\$13M+

total capital deployed

\$6.7M

to Black entrepreneurs

\$6.4M

to rural entrepreneurs

First Fund Initiative 2022 Impact

\$10.2M

of committed capital was called⁸

Total Investment

\$23.2M

of impact investing capital deployed by MassMutual in 2022

Empowering Hourly Workers – With the Support of MMCF

HourWork – an MMCF investee since 2021 – is on a mission to save the American dream for the tens of millions of wage workers who represent the majority of the U.S. workforce. HourWork's online platform connects hourly workers with national franchises, based on geographic location and experience. Rahkeem Morris, founder and CEO of HourWork, was motivated to start the company based on personal experience. As a former hourly worker, and having worked 13 hourly part-time jobs, he experienced first hand the challenges facing hourly workers and decided to create a new way of working.

To increase reliability and flexibility of hours, HourWork's platform enables workers to easily find new positions or pick up shifts, no matter where they are. Hourly workers are also given a voice to impact the quality of work they are provided, using a feedback function on the platform that rates participating businesses. This rating system also determines employers' access to worker profiles on the platform. For participating businesses, HourWork provides access to a labor pool that includes past applicants and former employees, streamlining the hiring, retention, and training processes.

Over the past two years, HourWork's model helped address widespread staffing shortages across the U.S., engaging millions of hourly workers on its platform. MMCF made its first investment in HourWork in July 2021, followed by two subsequent investment rounds in 2022.

⁸ Capital commitment includes money deployed into startups and for fund operation activities.

Investing Responsibly Through Our GIA

Considering material sustainability factors in the overall management of our GIA supports risk mitigation and long-term value creation. We continue to further embed these considerations into our investment process. Our [Sustainable Investment Policy](#), released in 2021, outlines our overall approach to the integration of sustainability factors in our asset allocation and investment process. The Investment Committee of our Board of Directors oversees implementation of the policy. Dedicated sustainability resources, supported by cross-functional working groups, guide overall sustainable investing strategy, monitor sustainability topics, and drive integration, in line with our overall company strategy. For more information on how we manage climate risks and opportunities, see [page 39](#).

In addition, MassMutual is a signatory of the Principles for Responsible Investment (PRI). As of the end of 2022, 97 percent of MassMutual's GIA assets under management were managed by signatories of the PRI. In 2022, we conducted a pilot survey of select firms that manage a portion of our GIA to better understand their sustainability policies and practices, and we plan to expand the survey in 2023.

We also continue to expand our assessment of sustainability risks and impacts in our investments, based on the proprietary sustainability scoring methodology of MassMutual's wholly owned global asset manager subsidiary, Barings, which manages the majority of MassMutual's GIA assets. In 2022, 78 percent of Barings-managed assets in our GIA were assigned a sustainability score. For more about how Barings integrates sustainability considerations into management of MassMutual's GIA, see the table at right.

Across all of our sustainable investing efforts, we take an engagement-centered approach with investment partners and portfolio companies, working in the interest of our policyowners while addressing sustainability risks and opportunities.

Sustainable Investing at Barings

Business Description	MassMutual's wholly owned global asset manager subsidiary; manages the majority of MassMutual's GIA.
Sustainable Investment Approach	“We believe that integrating the analysis of environmental, social and governance (ESG) information into our investment process gives us a more holistic understanding of the complex issues, risks, opportunities, and value drivers that may impact our clients' portfolios over time. In-depth, fundamental analysis is at the heart of our investment philosophy, and ESG analysis is embedded within the investment process across all asset classes. We are also active stewards of the entities in which we invest; this goes hand-in-hand with our active investment approach. Stewardship involves our efforts to, where possible, safeguard and increase performance for clients.” See Barings' PRI Assessment Report and ESG in Investing page for more details.
Sustainability Management	A dedicated Sustainability team guides overall strategy and policies, supported by a Sustainability Committee and Sustainability Working Groups. See Barings' Sustainability Report for more details.
Sustainable Investment Policy	Sustainability Policy
Engagement Policy	Public Equities ESG Integration & Active Ownership Policy
Proxy Voting Record and Policy	Global Proxy Voting Records and Proxy Voting Policy
PRI Signatory	Yes
Task Force on Climate-related Financial Disclosures Supporter	Yes
UN Global Compact Signatory	Yes



Sustainable Operations

MassMutual has a long history of working to minimize the environmental impact of our operations. We are focused on conservation and energy efficiency within our facilities, while contributing to a healthier environment for employees, building tenants, and the community. Our [Environmental Policy Statement](#) details our environmental priorities and actions, demonstrating our commitment to environmental stewardship. These collective efforts drive environmental benefits, strengthen the resiliency of our facilities, and can reduce costs.

Carbon management is central to our sustainable operations strategy, and in 2021, we committed to achieve net zero greenhouse gas (GHG) emissions in MassMutual's operations by 2030. As such, we have developed a multiyear roadmap and

near-term work plan to drive progress toward that ambition. Our approach includes measuring and tracking our emissions, setting an interim target, regularly reviewing our progress, and identifying and implementing opportunities to reduce emissions, including through renewable energy.

Following this approach, we have set an interim target to reduce our absolute Scope 1 and Scope 2 emissions 72 percent by 2027, compared to our 2019 baseline year. We considered available frameworks in formulating the target, including the Science Based Targets initiative's (SBTi) Corporate Net-Zero Standard. Our interim target is in line with a 1.5°C scenario and positions us on our path to reach net zero in our operations by 2030.

To enhance our ability to measure, manage, and report on our progress, we adopted a software platform to facilitate the calculation of GHG emissions from both our operations and our investment portfolio (see [page 11](#) for our approach to financed emissions).

We drive emissions reductions by integrating energy savings features into our facilities. As of December 2022, more than 94 percent of our corporate

facilities, based on square footage, were Leadership in Energy and Environmental Design (LEED®) certified. In 2022, MassMutual also achieved energy and cost efficiencies through real estate portfolio changes, including consolidating office space to better align with our hybrid workplace approach.

Additionally, we participate in energy demand-response and peak-demand programs at our Springfield headquarters to reduce energy

consumption and operational costs. As part of this effort, we have implemented automated processes for dimming lighting and slowing down or turning off heating, ventilation and air-conditioning equipment to reduce our power consumption when demands on the local electrical grid are high. We continually look for opportunities to improve the climate performance of our operations. To date, we have reduced absolute GHG emissions in our operations by 33 percent against our 2019 baseline.

Operational Greenhouse Gas Emissions

Emissions (market-based)	2019 (baseline)	2020	2021	2022
Scope 1	14,686	9,421	10,237	13,566
Scope 2 (market-based)	20,502	17,078	14,960	10,075
Total Emissions	35,188	26,499	25,197	23,641

Emissions (location-based)	2019 (baseline)	2020	2021	2022
Scope 1	14,686	9,421	10,237	13,566
Scope 2 (location-based)	20,502	17,078	14,960	14,270
Total Emissions	35,188	26,499	25,197	27,836

Scope 1 represents direct GHG emissions from leased and owned facilities and vehicles under MassMutual's operational control as of each reporting year. Scope 2 covers emissions from purchased electricity consumed at MassMutual's facilities. Market-based emissions include the impact of Green-e certified renewable energy certificates (RECs) purchased in the U.S.

The scope of our GHG emissions inventory is Massachusetts Mutual Life Insurance Company (MassMutual); subsidiaries are not included. This aligns with our statutory financial reporting filing. We will continue to improve our GHG coverage.



Hope Garden at Springfield campus, created by employees



Diversity, Equity, and Inclusion

At MassMutual, our commitment to diversity, equity, and inclusion (DEI) is a business imperative. We strive to create an environment that is equitable and inclusive for our employees, customers, business partners, and the communities that we serve. We stand firmly against racism, discrimination, and inequity in any form.

We seek diverse backgrounds, cultures, experiences, and perspectives to create a culture of inclusion and belonging at our company. This enables us to attract and retain the talent we need to deliver on our purpose

to help people secure their future and protect the ones they love. For more than a decade, we have been on a deliberate and focused journey to integrate DEI into all that we do. Our DEI strategy is comprised of three core pillars (see next page).

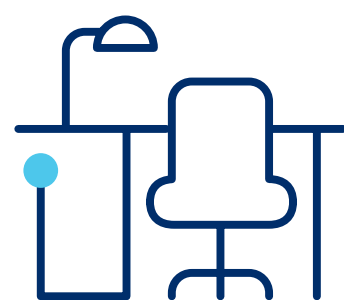
Underpinning our efforts is a focus on transformative education, creating shared accountability for our results, and being transparent about our progress. While we are proud of how far we've come in our DEI journey, we recognize there is always more we can do.

DEI Strategy Core Pillars



WORKFORCE

Ensure equity in our people policies, processes, and procedures to attract and retain diverse talent



WORKPLACE

Create an employee-centered work environment where all feel heard, valued, and respected



MARKETPLACE

Diversify our policyowners and bolster underserved and marginalized communities

A Diverse Workforce

Diverse teams create more innovative solutions and drive better decision-making and outcomes. We strive to create teams that reflect our customers and communities, fostering an environment where all employees are welcomed, valued, and heard.

Since 2017, we have included increasing workforce diversity as a measure of company performance and have integrated it into our annual incentive plan for all employees, including senior leaders and executives. We set an annual target to improve the overall diversity of our workforce, as measured by increases

in racial and ethnic diversity overall and in leadership roles, women in leadership roles, and those who voluntarily self-identify as veterans, individuals with a disability, or members of the LGBTQ+ community. We rigorously track our progress, with our Executive Leadership Team and Board receiving regular updates, and we continue to share our progress publicly on our [website](#).

We have made continued progress across these dimensions. Since 2017, we increased the racial and ethnic diversity of our overall workforce by 32 percent and our leaders by 40 percent, and we are working to reach gender parity for women leaders by 2030.

Recruiting Diverse Talent

To authentically reach more people on their terms, it is essential that we attract diverse talent that represents the customers and communities we serve. That's one of the reasons why we recruit and hire people across various dimensions of diversity, inclusive of race, age, gender, abilities, place of birth, religion, and who they love.

We have put structures in place to maintain an inclusive and equitable hiring process. In 2022, 89 percent of interview slates and 96 percent of interview panels were diverse. What's more, hiring



managers and interviewers – who play an important role in helping MassMutual realize our diversity goals – receive specific training to minimize bias during the interview process.

To continue to drive progress, we are taking steps to tap into the broadest pools of talent we can. We build and sustain strategic DEI partnerships with organizations that support us in diversifying our workforce. Additionally, in 2022, we launched a new effort focused on Historically Black Colleges and Universities (HBCUs) as part of a broader company effort around advancing equity, justice, and financial well-being. For more information on this work, see [page 22](#).

Advancing Pay Equity

At MassMutual, pay equity is part of how we do business, and for several years, we have been taking steps to support pay equity internally and in the broader community.

Pay equity factors into our pay decisions throughout the year and across the organization, supported by robust policies and practices. Our Statement of Respect and Anti-Discrimination and Harassment Policy prohibits discrimination in compensation decisions. As a standard practice, each time we make a pay recommendation for a new employee, promotion or otherwise, we review the pay of employees who perform similar work. In 2022, we further increased pay transparency by publishing salary ranges in the vast majority of our job postings,

regardless of location. This approach is consistent with the information we share with employees via our internal human resources platform and as part of their annual compensation review.

For the past 15 years, we have engaged independent human resources risk management firms to conduct annual adjusted pay gap reviews. These reviews compare compensation by gender and between minority and non-minority employees in the U.S., looking for differences within comparable work that could suggest a bias. The analysis looks at pay equity across base pay, bonus, and long-term incentives to ensure each component is used appropriately and considers factors such as type of role, work experience, and more. We review results and work with managers to adjust compensation packages as appropriate.

We understand and embrace our responsibility to use our influence to promote pay equity in the broader community as part of our unwavering commitment to DEI. As an anchor signer of the Boston Women's Workforce Council's 100% Talent Compact, we are committed to measuring the raw – or unadjusted – pay gaps for both women and U.S. minorities and to taking steps to eliminate any gaps found. This commitment to measure and address gender and racial pay gaps extends to our entire workforce. We have signed on to support additional DEI commitments that are helping to advance pay equity, including those led by Paradigm for Parity, CEO Action for Diversity & Inclusion, CEO Action for Racial Equity, and Ascend Foundation's 5-Point Action Agenda.



Diversifying Our Workforce (2017-2022)

40% ↑

increase in the racial/ethnic diversity of our leaders

39% ↑

increase in LGBTQ+ representation

62% ↑

increase in number of individuals with disabilities

42%

of our leaders are women, and we are working to reach our goal of gender parity by 2030



Building Cultural Competence

To maintain a truly inclusive culture and move our business forward, we must be committed to continuous learning, honest conversations, and adaptable thinking and behaviors. That's why MassMutual has invested in building inclusive leaders through a number of DEI and cultural competence training programs since 2010, which we continue to expand and innovate.

In 2010, we launched Leading Inclusively for Managers as well as Leading Inclusively for Individual Contributors. These two training programs are offered several times each year and provide participants the opportunity to increase personal awareness, learn practical tools to help mitigate bias in our workplace, and strengthen the leadership of inclusive teams. In 2022, more than 300 employees participated.

In subsequent years, we elevated our DEI learning offerings with the introduction of two multiday immersive learning labs designed to help leaders understand the impact of bias and systemic privilege while underscoring the pivotal role they play as allies. The dialogue started during these trainings helps motivate leaders to hire, engage, and develop diverse teams that can bring a broad range of ideas and perspectives. More than 60 leaders completed our more extensive four-day lab in 2022, adding to the hundreds of leaders who have completed these two programs in the last several years.

Additionally, we offer DEI-focused online learning to enable our employees to foster a culture of belonging, support their teams and each other, and build strong allies. The initial course, entitled Systemic Racism, focused on the Black/African-American experience. Since then other topics have been added, such as the LGBTQ+ experience, systemic racism toward Latinos, systemic racism toward Asian Americans, inclusion, and mental health. In 2022, our employees completed more than 2,800 DEI-focused online courses.

An Inclusive Workplace

We strive to embrace diversity in every sense to create a workplace where everyone feels they belong, continually challenging ourselves to find new ways to make the employee experience more inclusive.

Our Business Resource Groups (BRGs) serve to support DEI's three core pillars by helping to attract, develop, and retain a diverse workforce; fostering a

work environment where everyone is heard, valued, and respected; and bolstering the underserved and marginalized communities that we serve. We also make clear MassMutual's expectations for maintaining a professional and respectful work environment for all.

Elevating the Employee Experience

At MassMutual, our eight BRGs are some of our most important culture carriers, planning and executing events and programs to build awareness of the diverse communities represented within our company.

Open to all employees, our BRGs are an important vehicle for our employees to find community and engagement outside their immediate teams. In 2022, 34 percent of employees participated in MassMutual BRGs, representing Black/African American, Asian, and Hispanic/Latino/Latinx communities; members of the LGBTQ+ community; individuals with disabilities and their caregivers; members of the armed forces, veterans, and military family members; young professionals; and women. Our BRGs welcome members from both within and outside each affinity group.

Our BRGs create opportunities within MassMutual for their members to convene and be authentic and vulnerable as they tackle issues impacting their communities. Throughout 2022, they collaborated to host quarterly events for all employees, focused on issues that impact multiple populations, such as intersectional allyship, connection in a hybrid workplace, microaggressions, and honoring our veterans.



Maintaining Our Workplace Standards

To foster a culture of trust and accountability so we can best serve our policyowners and customers, we must operate ethically, with integrity, and in compliance with applicable laws. Our [Code of Conduct](#), along with our Statement of Respect and Anti-Discrimination and Harassment Policy, defines for our employees the expectations and principles for establishing and maintaining a professional work environment free of discrimination and harassment. For more on our approach to ethics and compliance, including avenues for employees to report concerns, see [page 37](#).

As an equal opportunity employer, MassMutual is committed to maintaining a nondiscriminatory work environment, where all individuals are treated with fairness and respect and are provided the opportunity to reach their full potential. For more about this commitment, see our [Equal Employment Opportunity Policy](#).

We take meaningful steps to foster a workplace free of discrimination. For example, in 2022, MassMutual engaged a third party to conduct an audit of our people processes, starting with performance check-ins, internal mobility, and employee relations practices, to help us address any potential bias in these areas.

A Vibrant Marketplace

Realizing our vision to provide financial well-being for all Americans requires listening, learning, and engaging with a diverse range of individuals, families, businesses, and communities to understand their unique needs. We work to ensure that our products and services are accessible and align with our policyowners' and customers' needs. We also have a responsibility to be inclusive in how we engage in the broader marketplace.

For example, in our Institutional Solutions business, we are intentional about expanding business opportunities with diverse firms. MassMutual is an issuer in the funding agreement-backed notes (FABN) market and, in 2022, continued to include investment banks that have diverse leadership and ownership in the syndicates for all U.S. dollar FABN transactions.

Engaging Diverse Suppliers

MassMutual actively seeks to do business with diverse suppliers, which helps ensure we are accessing the broadest available marketplace to source quality goods and services. We also recognize the economic imperative of providing all businesses the access to opportunities to grow and thrive – and that we can leverage our buying power to drive positive change.

In 2021, we launched our \$150 million, five-year commitment to utilize underrepresented, diverse businesses in our procurement operations. Through this effort, we are tapping into nontraditional networks to expand our base of suppliers, making intentional investments in diverse supplier development, and encouraging new ways of working across MassMutual. We achieved more than \$58 million in diverse spend in 2022, a 45 percent increase from 2021.

As part of the commitment, we launched Forward by MassMutual, a program that helps underrepresented, diverse businesses thrive and grow. Through this initiative and other strategic partnerships, diverse businesses selected by MassMutual receive comprehensive education, business planning, and mentorship. In its first full year, the program benefited 42 diverse businesses, contributing to our five-year goal of impacting 175 diverse-owned businesses. Additionally, we are creating a new mentor program designed to connect diverse-owned businesses with MassMutual decision-makers, and to teach them specifics about doing business with our company.

In 2022, we engaged suppliers using our framework for assessing and managing their DEI and sustainability performance, and we plan to continue maturing our approach. This year, we are integrating social standards into our [Code of Conduct for Suppliers](#) to include topics such as minimum living wages, health and safety, child labor, and more.



Advancing Equity, Justice, and Financial Well-Being for the Black Community

MassMutual is engaged in a company-wide effort to implement effective policies and initiatives that advance racial equity and justice and promote financial well-being for the Black community. The program is designed to support our policyowners, customers, employees, and the communities we serve. It builds on and aligns with MassMutual's ongoing efforts to help break down the structures that exacerbate racial and economic inequities – from supporting the growth of underserved businesses through impact investing and diverse supplier development to increasing diverse representation at all levels at MassMutual.

Core areas of this program are:

- **HBCU Engagement:** Implementing a comprehensive HBCU partnership strategy, including a \$1.2 million commitment to two HBCUs and two nonprofits, to identify opportunities to level the playing field for students and institutions
- **Association for Wholesaling Diversity:** Advancing Black talent within insurance wholesaling through a partnership with the Association for Wholesaling Diversity and the Coalition for Equity in Wholesaling
- **Black Consumer Marketing Campaign:** Exploring ways to effectively reach Black business owners and customers through intentional marketing efforts and engagement with a third-party diverse marketing advisor
- **Affluent Black Consumer Market Research:** Investing in research, to listen and learn how best to meet the needs of the Black community and close the wealth gap
- **The American College Partnership:** Promoting wealth building in the Black community through a partnership with the American College Center for Economic Empowerment and Equality®. In 2022, MassMutual made a \$2.5 million, five-year commitment to the American College

Driving Community Impact, Public Policy, and Advocacy

We partner with and invest in organizations that share our values and drive impact, and we use our voice as a company to affirm our values and amplify this work.

MassMutual continues to drive progress through its involvement in CEO Action for Racial Equity (CEOARE) – a coalition of nearly 100 companies that mobilizes a community of business leaders across multiple industries and geographies. Its mission is to identify, develop, and promote scalable and sustainable public policies and corporate engagement strategies that will address systemic racism and social injustice, as well as improve societal well-being.

MassMutual was instrumental in the launch of CEOARE in 2020 and continues to be engaged in supporting the

effort. Our CEO serves on the Governing Committee, and we lend up to six full-time employees as fellows to the organization for 12- to 24-month fellowships. In 2022, MassMutual successfully completed an inaugural cohort to the fellowship and launched our second class of full-time employees. The second cohort is focused on providing support in four areas: education and opportunity, economic empowerment, healthy communities, and public safety. MassMutual fellows have also held leadership positions within CEOARE, furthering our impact in the community.

Additionally, through the work of the MassMutual Foundation, we are investing in efforts to create more equitable access to social and economic opportunity in the communities where we live and work. For more about our community efforts, see [page 32](#).



Our People

Our dedicated and highly skilled employees are the reason behind more than 170 years of MassMutual's success. We continually work to cultivate a flexible and collaborative environment where all employees are seen, valued, and respected – and our culture is a key reason exceptional people join and stay with MassMutual. We look for employees who thrive in a culture based on trust and accountability, where diverse backgrounds, experiences, and perspectives are valued – and where there is a shared passion for greater equity and opportunity for all.

At the core of who we are is a company of people helping people in their time of need, and this translates into how we care for our employees.

We offer benefits that support our employees' holistic well-being, seeking to meet their evolving needs and to enable them to care for themselves and their loved ones in the ways that are true to each individual. We also continuously evolve our training and development programs to help our employees build skills and advance their careers, while preparing for the future strategic needs of the company.

For more on our diversity, equity, and inclusion (DEI) efforts, see [page 17](#).



2022 People Highlights

85%

overall employee engagement score

95%

of employees completed our Digital Foundations program

~\$1.3M

in well-being incentives earned by employees

460,000 hrs

invested by employees in training through our learning platforms

Recruiting Exceptional People

We work to attract exceptional employees so that we can continue to deliver holistic financial solutions to our policyowners and customers. As part of our recruitment strategy, we communicate differentiators of MassMutual's culture, like "Live Mutual" and "Embrace Diversity," so candidates can make informed choices about joining the organization.

We continually work to build a more diverse talent pipeline because we know that having a workforce that reflects our customers and communities enables us to serve them better. We take a multifaceted approach to diverse hiring and retention, including incorporating diversity measures as part of our company goals, committing to diverse interview slates for open roles, and providing training to minimize bias during the interview process.

In 2022, we continued to grow our network of partnerships with diversity-driven organizations to broaden our recruitment reach. This included partnering with external recruiting platforms to ensure our job postings receive the broadest possible visibility across sites dedicated to reaching diverse audiences. To further our investments in future talent, we also expanded our partnerships with Historically Black Colleges and Universities (HBCUs) by funding scholarships and sponsoring student leadership and networking events. For more information on our partnerships with HBCUs, see [page 22](#).

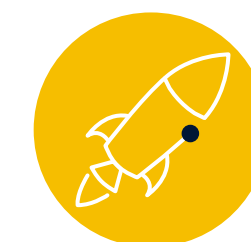
Additionally, as members of the Massachusetts Competitive Partnership – a nonprofit focused on job growth in the state – we helped design a customer service training curriculum for ethnically diverse talent without a college degree. In 2022, we hired the first cohort of program participants.

Our Employer Brand



Embrace Diversity

Bring the courage to be uncomfortable and the desire to fully embrace DEI



Think Forward

Be a curious self-starter, able to work with others who are equally determined to leave the company in a better place than you found it



Communicate Candidly

Be ready to have candid conversations in a genuine way, and to take honest feedback from others to grow and learn



Live Mutual

Be brave enough to rely on and be relied upon by those around you in our mutual way of life



Investing in Employee Development

At MassMutual, we invest in our employees so they can grow, develop, and perform at their personal and professional best. We offer a range of resources and programs to equip our employees with the knowledge, skills, and behaviors they need to succeed in their position, and we set a growth trajectory for them within the company. Through our learning resources, targeted training programs – including job-specific training programs – and performance management processes, we seek to build development opportunities that are equitable, accessible, and aligned with the needs of our diverse culture.

Onboarding New Employees

Starting with our processes for new employees, we infuse our culture and values into our employee experience. Our onboarding process includes an initial welcome session, and a series of informational meetings over the employee's first 90 days that focus on our business and strategy, culture, benefits, career development opportunities, community engagement efforts, and more.



Broadening Access to New Research and Talent in Data Science

In 2022, MassMutual donated \$3 million to Boston University's (BU) Faculty of Computing and Data Sciences to support the responsible use of data and the advancement of transparency, accountability, and trust in data-driven artificial intelligence (AI) solutions.

As part of this work, MassMutual will collaborate with BU students and faculty to examine the legal, social, and economic impacts of AI systems and solutions.

The 2022 gift builds on a \$1 million donation we made to BU in 2021, which was focused on professorships and long-term programming. Both donations support BU Spark!, an experiential learning lab that serves 700 students annually and aims to attract more – and more diverse – students to the high-growth field.

Empowering Career Development

Our talent management strategy guides our investments in the workforce to ensure we have a diverse, engaged, and highly skilled talent pool to support our company's key objectives. We believe that career development is most effective when employees have ownership. To guide learning and development pathways, we follow the "3E model," focused on three core elements:

- **Experience:** covering on-the-job elements, including stretch assignments, job rotations, and special projects
- **Exposure:** including learning that comes from relationships with peers and professionals
- **Education:** relating to formal trainings, workshops, and online educational content

For all employees, we offer a thorough performance feedback process with their manager that includes stakeholder and peer feedback, and we encourage two check-ins annually to discuss progress against goals and priorities.

We continue to strengthen our internal leadership pipeline, focusing on talent mobility, talent retention, succession plans, and long-term successors at all levels. We provide tailored data-driven assessments, programs, and coaching to ensure those in our

leadership pipeline have the skills to prepare them to succeed in future roles.

As an example of how we cultivate our talent pipeline, in 2022, we reintroduced our Leadership Forum, which brought 220 of our top leaders together to network and to deepen their understanding of global and economic trends as well as MassMutual's strategy and their role in executing it. Our Business Immersion Experience is designed to engage our leaders in simulated decision-making exercises on critical issues to hone their core leadership competencies. In 2022, we refined the immersive experience to more closely align with MassMutual's real-world strategic and cultural needs. In the past year alone, more than 160 leaders completed the program. In addition, we began a pilot program in 2022, called Better Conversations Everyday, which helps managers lead effectively in a hybrid working environment.

Moreover, MassMutual has partnerships with a range of organizations that offer development and external engagement opportunities for our diverse leaders. For example, we collaborate with the Executive Leadership Council to support the success of senior- and mid-level Black talent across the company, and we offer a women's leadership program in partnership with Simmons University.

Offering Educational Opportunities

We facilitate education and training opportunities for all employees at all levels through a variety of platforms and formats, including formal, informal, and self-directed programs to support different learning styles and delivery methods.

One way we do this is through the Degreed platform, which enables employees to pursue self-paced learning modules based on individual competency needs, with new learning pathways released annually. Another example is our Digital Foundations program, which we launched in 2021, to build a digital mindset across the company for all employees. Ninety-five percent of the company has completed the six-module online training program, designed to develop a digital-first, agile mindset, covering topics like customer-centricity and how to lead with data.

We continue to offer in-depth cultural competency trainings – covering issues like systemic racism and inclusion practices – for all employees. For more on our DEI efforts, see [page 17](#).

Our employees dedicated a combined 460,000 hours to skill-building through our learning platforms, equating to approximately 9.5 days of training per employee, in 2022. To encourage our employees' ongoing learning ambitions, we support continuing education and professional accreditations, distributing \$1 million in tuition reimbursements in 2022.





Supporting Holistic and Equitable Well-Being

At MassMutual, we take a holistic approach to benefits, making it easy for all employees and their loved ones to elevate their mental, physical, and financial well-being. Our pioneering suite of benefits has evolved over the years to enable our employees to better care for themselves and the people they love. The principle of equity is embedded into our employee benefits approach, reflecting a shared passion for greater opportunity for all that is at the heart of our culture.

We provide an array of benefits to all employees, including competitive compensation and incentive programs, along with an evolving suite of health, wellness, and leave offerings that provide a spectrum of support through all of life's big moments. When it comes to our leading caregiver, bereavement, and other essential leaves, "loved ones" is inclusive of anyone the employee holds dear, and they can use time off when and how it is most helpful to them.

In 2022, we enhanced our benefits to offer help with student loans and college savings. We also expanded medical travel reimbursement, provided additional mental and inclusive health benefits, and doubled our company-provided life insurance coverage, offering

up to two times annual base salary. In addition, we announced meaningful expansions of our benefits offerings in 2023 that are adaptable to the diverse needs of our employees. This includes a digital well-being wallet, as well as quadrupled paid leave to care for a loved one, which complements the range of family support services we offer, including backup and discounted child and elder care.

Evolving Our Inclusive Healthcare Benefits

The health and well-being of our employees and their families is a top priority. In 2022, we enhanced our benefits program to include faster access to high-quality mental health providers for employees and members of their households. MassMutual also understands that race, gender, and sexual orientation can impact one's healthcare experience. To that end, we now provide our Black and LGBTQ+ employees and their household members access to a team of diverse care coordinators who offer specialized health advocacy and navigation support. And, in the interest of offering equal coverage to all our U.S.-based employees, we expanded our medical travel plan reimbursement to allow employees to access covered services if they are not available in their state.

Listening to Our Employees

In 2022, 94 percent of employees responded to our annual employee engagement survey, continuing more than a decade of exceptional participation. The survey is an important way we listen to our employees to understand what is working and where we can improve. Our overall engagement score was a robust 85 percent, and many areas we measured outperformed our external benchmarks by double digits. The survey is just one of many employee listening activities conducted throughout the year.

Facilitating Employee Wellness

We take pride in helping our employees live their best life. As part of our early 2023 benefits expansion, we now offer employees a "well-being wallet," which reimburses them up to \$1,250 for a wide range of physical, emotional, and financial well-being resources. Covered expenses include gym memberships, specialty athletic equipment to aid people with disabilities, meditation apps, counseling, massages, licensed childcare and eldercare, financial planning, and more.





Our Policyowners and Customers

As a mutual company, we operate for the benefit of our participating policyowners and customers, with an enduring focus on providing them financial security, stability, and long-term value.

MassMutual offers a wide range of protection, accumulation, wealth management, and retirement products and services. Whether it's through our dedicated network of financial professionals, or other financial institutions, employers, or directly on phones or tablets, we are enhancing and evolving the way we connect with people to support them through life's changes and help them build a more confident future. We continually enhance and expand the solutions and experiences we provide to meet customers' evolving needs. Underpinning all of this is our unwavering focus on long-term stable performance, which enables us to deliver on our commitments to those who rely on us when they need us the most.

\$7.1B

paid in insurance and annuity benefits to policyowners and customers in 2022

\$1.9B

highest estimated dividend payout in our history⁹

⁹ The dividend and dividend interest rate are determined annually, subject to change, and are not guaranteed.

Reaching People on Their Terms

From the moment we issued our first policy, we have reached people through our dedicated network of financial professionals. With a broad range of protection and accumulation solutions that can meet needs for a lifetime, coupled with powerful digital capabilities that we are continuously expanding and improving, our financial professionals work with people each day to help them plan for the future with more confidence and hope.

At the same time, and as part of our commitment to provide financial well-being for all Americans, MassMutual is focused on expanding the channels through which we work with people on their terms. This includes MassMutual Strategic Distributors, which is how we offer our products through other financial institutions and independent financial professionals, as well as MassMutual Ascend – formerly known as Great American Life Insurance Company, which MassMutual acquired in 2021 – which has expanded our ability to offer lifetime income solutions through banks. We also reach people through their jobs with our Worksite business, as well as directly through their phone or tablet via Haven Life, our wholly owned digital direct-to-consumer insurance agency.

In 2022, the strong performance across these channels led MassMutual to report double digital sales growth through our domestic insurance business, led by steady demand for whole life insurance – where the company finished 2022 as the industry's No. 1 provider¹⁰ – as well as record annuity sales.

¹⁰ According to LIMRA's Fourth Quarter 2022 U.S. Retail Individual Life Insurance Sales Summary.

Digital Products and Services

We continue to enhance our digital capabilities and tools to make it easier for financial professionals and their clients to work with us. Central to these efforts is Advisor360°, our online platform launched in 2021, which provides integrated access and a holistic view of our customers' financial holdings. The platform enables financial professionals to work with their clients to develop a holistic plan for the future and provide a streamlined experience.

For insurance products, MassMutual continues to move with industry trends toward increased use of technology, such as fluidless and algorithmic underwriting, along with use of electronic health records, all of which can improve efficiency, reduce overall costs, and most importantly, make it easier and faster for people to acquire insurance protection.

As we expand our use of technology, we continue to enhance our approach to data privacy and security. For more information on our cyber security and data privacy practices, see [page 40](#). In addition, MassMutual is committed to ensuring that our websites, mobile applications, and other digital platforms are secure and accessible, and we detail our approach on our [website](#).

Creating a Technology Hub in the Commonwealth

MassMutual is committed to staying at the forefront of innovative and industry-leading technologies that can best serve our customers. As a founding member of the MassChallenge FinTech program and a Champion Partner in the HealthTech program since 2018, we have made significant contributions to help strengthen the financial technology (FinTech) and HealthTech ecosystems in Massachusetts and to explore ways of connecting with diverse, innovative startups.

Both the MassChallenge FinTech and HealthTech programs focus on accelerating the impact of innovative startups through partnerships with leading financial and healthcare companies. In 2022, 30 percent of the FinTech and HealthTech startups were minority-founded, and 56 percent were founded by women. Since 2018, roughly 50 percent of startup partnerships have turned into engagements for MassMutual, as customers, investors, or both.

In addition, MassMutual has spearheaded a public-private partnership called the Mass Fintech Hub. Launched in 2021 and consisting of leaders from industry, academia, startup and investor communities, and the state, the initiative aims to make Massachusetts a global hub for financial technology. In its first year, over 1,000 participants joined various programming, including FinTech bootcamps, career fairs, and mentoring workshops. The Hub also launched an Angel Investment Education series aimed at connecting a new wave of angel investors across the Commonwealth with the funding needs of entrepreneurs and early-stage startups.



Retirement Support

One of the primary ways we help our customers achieve financial security is by supporting them as they plan for retirement. A [2022 study](#) by MassMutual found that two-thirds of near-retirees are underprepared and ill-informed about their retirement. To address this information gap, we offer a range of resources to help people understand retirement savings basics, as well as a diverse lineup of products and services to enable our customers to meet their financial needs in retirement.

This includes a new variable annuity with an optional guaranteed lifetime withdrawal benefit, which MassMutual added into its suite of retirement income offerings in 2022. MassMutual EnvisionSM Variable Annuity can help individuals accumulate assets for retirement, with a wide variety of investment choices. Envision supplements MassMutual's existing strong portfolio of fixed annuity retirement products.

Understanding Customers' Needs

Having insight into what's working – and ways we can improve – when serving our customers is critical to enhancing how we support and build long-term relationships with them. In 2022, we continued to

expand our customer journey analytics to understand how customers interact with MassMutual every step of the way, while respecting their privacy, so we can provide them with the most relevant solutions.

We are committed to continually understanding how customers and financial professionals experience working with MassMutual. We use Net Promoter Scores (NPS) to understand customer satisfaction across our insurance, annuities, and wealth management businesses. Given their critical role in serving our customers, we track financial professionals' satisfaction and tied it to our annual goals in 2022. To ensure our top line results reflect the customer experience, we integrated customer NPS into our annual goals for 2023. We also continue to track customer and financial professional feedback at key touchpoints, such as sales, service calls, claims, and online self-service, allowing us to identify common themes and drive enhancements to improve their experience. We require customer service employees to take part in customer experience principles training, with a 99 percent participation rate in 2022.

These efforts help us identify ways to better meet the needs of our customers, while informing our strategies for making our products and services more inclusive and accessible to a broader range of people.

Transparent Information and Fair Advice

Our ongoing work to provide policyowners and customers with the solutions to meet their needs is supported by an ongoing commitment to ethics, oversight, governance, and risk management.

MassMutual has a Product Advisory Committee (PAC) responsible for the company's insurance product development pipeline and strategic alignment, product approval, and ensuring the overall product portfolio's risk profile is acceptable. The PAC is chaired by MassMutual's Chief Actuary and includes members of the Executive Leadership Team, including the CEO and Chief Risk Officer.

Similarly, we have dedicated compliance and legal teams that partner closely with our businesses on product development, customer acquisition, service, and claims processes. These teams thoroughly review our marketing materials to ensure that they are clearly written, accurately describe our products and services, and reflect the financial goals for which they are appropriate.

Our financial professionals complete annual regulatory training focused on responsible marketing and sales practices as well as other important topics, such as protection of customer privacy. They also

have access to a library of training and resources around best practices. Our financial professionals and their supervisors are provided with a comprehensive online Compliance Manual covering all aspects of compliance for business practices, customer privacy and recordkeeping, and product sales and marketing.

We maintain a robust program to monitor for improper sales practices and potential consumer complaints. For example, we closely monitor internet activity when MassMutual is mentioned to investigate and understand concerns. We conduct customer surveys, and documented complaints are referred to our compliance department. Through our supervisory program, we review our insurance professionals' communications to guard against misleading information provided to clients, and to uncover and investigate potential complaints. We regularly train our employees on how to identify and refer complaints to our compliance department for review.

In addition, we have an extensive program to safeguard our policyowners' and customers' personal and financial information. Our program includes dedicated compliance, risk, privacy, and data ethics associates. For more information on our cyber security and data privacy practices, see [page 40](#).

Long-Term Investment Performance

As a mutual company, our long-term, diversified approach to investing enables us to be there for our policyowners and customers, whether they need us today, tomorrow, or generations from now.

This approach is integral to the management of our General Investment Account (GIA), which backs the obligations we make to our policyowners and customers. Our GIA is well-diversified and managed with a long-term view that allows us to endure short-term fluctuations in asset values. We provide the framework for GIA portfolio construction and investment decision-making in our [Investment Philosophy](#).

MassMutual continues to deliver long-term value, including the approval of a record dividend payout to eligible participating policyowners in 2023, marking the 17th consecutive year we have paid an industry-leading dividend interest rate.¹¹ Our financial performance is summarized in our [Annual Report](#).



¹¹ The dividend and dividend interest rate are determined annually, subject to change, and are not guaranteed.



Our Communities

MassMutual and the MassMutual Foundation are dedicated to advancing social and economic opportunities so that all families can build their financial capability and thrive. Supporting the communities we serve is central to our Live Mutual philosophy and how we deliver on our vision to provide financial well-being for all Americans.

The concept of mutuality is integral to MassMutual's approach to investing in our communities. Beyond simply providing funding, we look for opportunities to activate connections by engaging residents, local organizations, and community leaders to co-create solutions that address their most pressing priorities. We also put our business and expertise to work

to build financial resilience and expand access to financial products. Additionally, we harness the commitment of our employees, who volunteer their time and skills to deepen the impact of our company's efforts and make a difference in their communities.

~\$23M

donated to community programs in 2022

The MassMutual Foundation

Many in the U.S. struggle to achieve financial resiliency and even meet basic needs, with one in three Americans reporting they would have difficulty covering an unexpected expense of \$400, such as a medical or car repair bill.¹² The MassMutual Foundation is dedicated to helping create financially healthy futures

for all. We do so by fueling initiatives that increase financial resilience within our communities and foster a culture of community engagement for MassMutual's employees and financial professionals.

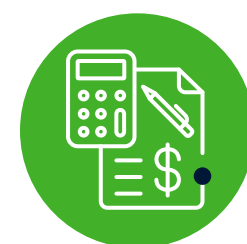
Building Financial Resilience: The MassMutual Foundation Model

We support organizations working to drive progress in four strategic areas that are essential for individuals and families to build – and sustain – financial resilience:



Use of Networks

Building social capital within communities by helping people connect with each other as well as community and financial resources



Financial Health

Investing toward financial well-being for all – supporting programs that increase savings, reduce debt, improve credit, and more



Basic Financial Needs

Expanding access to adequate housing, childcare, and other core needs



Employment and Income

Building skills-based knowledge and employment opportunities to help people become more financially stable in the long term

¹² According to the Federal Reserve's report, Economic Well-Being of U.S. Households in 2022.

MassMutual Named to The Civic 50

Our purpose and vision are inherently sustainability-minded, positioning MassMutual well for corporate leadership and commitment to civic engagement – which is critical for strengthening communities. In 2022, our efforts were recognized by Points of Light, the world's largest nonprofit dedicated to accelerating people-powered change, which named MassMutual to The Civic 50, a list of the 50 most community-minded companies in the U.S. MassMutual is proud and honored to receive this recognition for our enduring commitment to the success of all our stakeholders.



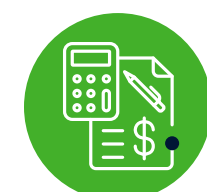
Supporting Communities in Massachusetts

While MassMutual and the MassMutual Foundation help individuals and families across the U.S. build their financial well-being, we have a special focus on investing in Massachusetts-based charitable causes and nonprofit organizations that help strengthen communities where we live and work.



Use of Networks

While access to housing is a critical building block of financial resiliency, strengthening community-based resources is also key to breaking down barriers to social and economic opportunity. In 2022, we made a \$1.5 million investment in support of New North Citizens' Council's Barbara Rivera Community Center in Springfield, which will act as a one-stop hub for social service programs that address housing and homelessness, violence prevention, food insecurity, and more.



Financial Health

In partnership with Western New England University School of Law's Center for Social Justice (CSJ) and their Consumer Debt Initiative, we supported the launch of a legal kiosk program to help economically and technologically disadvantaged Springfield-area residents access legal information and assistance. The CSJ has installed nearly a dozen legal kiosks, equipped with internet access and legal information in English and Spanish, across the city. The kiosks enable people to easily self-navigate through an electronic interface to get information about free legal services providers and other legal resources such as debt collection defense, and, at some locations, to access videoconferencing capabilities for remote court services.

¹³ According to the 2020 U.S. Census Demographic Data.



Basic Financial Needs

One way we support access to social and economic opportunity is through a \$2 million grant we made in 2022 to the City of Homes pilot program, to make the dream of homeownership a reality for families in Springfield, Massachusetts. Led by Way Finders, a local nonprofit community development corporation, the innovative program aims to expand equitable and affordable homeownership by restoring distressed or abandoned properties and selling them at affordable prices to qualified, first-time homebuyers. City of Homes is focused on Springfield's North End and Mason Square neighborhoods – where more than three out of four residents are Black or Hispanic and a large percentage live below the poverty line¹³ – helping to support housing stability and generational wealth in historically underinvested areas.



Employment and Income

Breaktime is a Boston-based nonprofit whose mission is to break the cycle of homelessness by equipping young adults with the jobs and financial security they need to establish housing security. By providing employment, wraparound services, and financial support, Breaktime works to ensure that every young person has the tools they need to achieve job, financial, and long-term housing security. Funding from the MassMutual Foundation helps support Breaktime's core transitional employment program, which provides three weeks of work readiness training, three months of paid job placement at a local nonprofit or business, and three years of continued wraparound support. Breaktime works closely with local nonprofit organizations, youth shelters, and short-term housing providers to identify young adults to enroll in the program.

Leveling the Playing Field With the Boston Red Sox

In 2022, MassMutual was proud to announce that we joined forces with one of the most iconic Massachusetts institutions – the Boston Red Sox – in a collaboration that combines our shared commitment to teamwork and community. As part of our 10-year signature partnership, the MassMutual Foundation will support the Red Sox Foundation in expanding the Fenway Park Learning Lab, an innovative and interactive learning program combining classroom-based lessons with an in-person experience at the ballpark. The MassMutual and Red Sox Foundations plan to broaden the program to eventually include all sixth graders in the Boston Public Schools system.





Expanding Access to Careers in Financial Services

MassMutual believes the financial services industry has a key role to play in helping close the wealth gap, and for our part, we're focused on expanding access to training and development for financial professionals. In April 2022, MassMutual committed \$2.5 million in corporate donations over five years to the American College Center for Economic Empowerment and Equality®. The Center, which is one of the American College of Financial Services' Centers of Excellence, is focused on promoting economic justice through a variety of approaches, including research, thought leadership, curriculum and course development, and scholarships.

Our \$500,000 annual commitment aims to help broaden and deepen access to training for a career in financial services, with a focus on supporting leadership development and education for Black financial professionals. In the process, our commitment will further the Center's mission to promote upward mobility, financial literacy, and wealth building among underserved and marginalized communities.

Supporting Financial Education

Expanding access to financial education is a key priority for MassMutual and the MassMutual Foundation because we know it is essential for achieving economic empowerment. Through FutureSmartSM, the MassMutual Foundation offers a national online education program that empowers middle and high school students to effectively manage their finances, make sound decisions, and become financially responsible. In fact, 90 percent of students who have participated in FutureSmartSM reported a significant increase in knowledge, regardless of their socioeconomic background. With our strategic partner EVERFI, we have continued to grow the program since its launch in 2015, reaching 3.7 million students as of the end of 2022. By 2025, we aim to reach 6 million.

In late 2021, we broadened the program's reach through the launch of an online portal tailored to educators and families. As curriculum needs and requirements around financial education continue to change, the new FutureSmartSM portal provides educators with much-needed resources to increase their impact in the classroom. Similarly, families of participating students can learn alongside their children, helping to cement important financial education concepts both inside and outside the home.

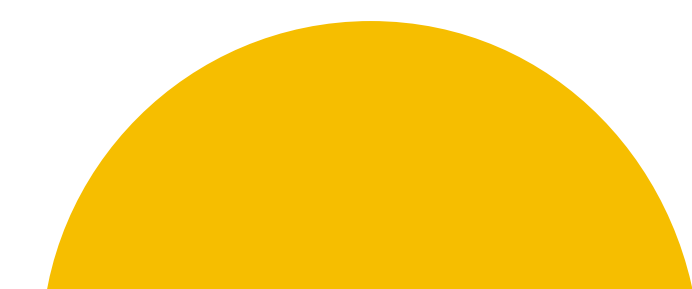
Integrating Community Responsibility Into Our Core Business

Through our core business, we support the financial resiliency of our policyowners and customers every day. We also continually look for opportunities to leverage what we do to advance our vision to provide financial well-being for all Americans.

One way we do this is through LifeBridgeSM, which provides free life insurance policies to eligible parents and guardians for their children's education expenses. MassMutual issues and pays the premiums for \$50,000, 10-year life insurance policies. In the event that the insured parent passes away during the period of the policy, a \$50,000 death benefit is paid to a trust that holds the funds to pay for the child's educational expenses.¹⁴ Since the launch of the LifeBridgeSM program in 2002, we have issued over 14,000 policies representing more than \$708 million in coverage, and we have paid \$3.15 million in claims.

Another way we put our business to work in support of our communities is through our impact investing, including the MM Catalyst Fund, which invests in Black-led companies and startups in rural areas of the Commonwealth. For more information, see [page 13](#).

¹⁴ Trust services are provided by the MassMutual Trust Company, FSB, a wholly owned stock subsidiary of MassMutual.



Engaging Our People

Our employees are an important part of our efforts to engage with communities in Massachusetts and beyond, and we support them in giving back to local organizations with their time and talent.

Each year, full-time employees receive up to 24 hours of paid time off to volunteer. In addition, the MassMutual Foundation donates up to \$1,500 per employee annually to eligible nonprofits, based on individual volunteer hours tracked. We also match employees' personal donations to eligible nonprofits, up to \$5,000 per employee annually. In 2022, our employees, together with the corporate match, contributed nearly \$2 million to over 1,700 nonprofits.

We partner with Catchafire to offer our employees skills-based virtual volunteer opportunities. The

program allows our employees to apply their skills or areas of interest to the specific needs of nonprofits, through short-term engagements like a consultative phone call, or more extensive projects such as website development. As part of the program, we also provide support for MassMutual Foundation grantees to tap into Catchafire's vast international network of volunteers. As of December 2022, more than 35 MassMutual Foundation grantees are benefiting from the program.

Recognizing the Community Service of Our Financial Professionals

MassMutual supports our financial professionals across the U.S. in their efforts to give back to the communities they serve. For the past 25 years, MassMutual has

supported our annual Community Service Awards (CSA) program, which recognizes the commitment of time, talent, and passion on behalf of MassMutual financial professionals to nonprofit organizations in communities where they live and work. This competitive program is now funded by the MassMutual Foundation and awards donations directly to the nonprofit organization on behalf of the volunteer.

Since the start of the CSA program, MassMutual and the MassMutual Foundation have made more than \$3 million in donations via approximately 300 awards, annually distributing a total of \$275,000 to over 30 eligible nonprofit organizations. In 2022, financial professionals participating in our CSA program donated more than 15,000 hours of service to nonprofit organizations across the country.

Helping Transform East Boston's Waterfront

MassMutual is excited to grow its presence in Boston and is committed to supporting organizations that help the city thrive. In November 2022, the company donated \$1 million to the Trustees of Reservations, a conservation-focused nonprofit founded in 1891, as part of the organization's plan to expand a waterfront park in East Boston. Known as Piers Park III, the development is the third phase of a wider expansion of green space along East Boston's shore. The project will be built and operated by the Trustees and will transform an abandoned pier into a green and multipurpose

community space, while improving climate resiliency for future generations. Combined with the first two phases of development, Piers Park will eventually offer all Boston residents nearly 15 acres of open space in the middle of the city.

MassMutual's funding will support the design and construction of the Piers Park extension as well as youth and educational programs operated by the Trustees at the park and around the state.





Governance and Ethics

Since our founding, MassMutual's policyowners and customers have entrusted us to help secure their future and protect the ones they love. We honor that trust with an unwavering commitment to doing business ethically and in compliance with governing laws and regulations.

MassMutual's dedication to integrity, ethics, and sound governance begins with our leaders and Board of Directors. Every year, the Board's Technology & Governance Committee nominates a class of Directors for reelection based on experience, business acumen, and other characteristics. The Committee considers diversity as part of this process, and as of year-end 2022, more than half of MassMutual's Board of Directors were women

or racially or ethnically diverse. Our [Corporate Governance Guidelines](#), which lay out the policies and practices of our Board, further stipulate that at least 75 percent of our directors must be independent.

Our Board Committees have oversight of corporate strategy, including such topics as diversity, equity, and inclusion (DEI); climate change; responsible investment; cyber security; and privacy. The [Sustainability Governance](#) section of this report describes how MassMutual manages sustainability issues, and more information on our committee charters can be found on our [website](#).



Our governance stems from, and supports, our mutual ownership structure. As a mutual company, MassMutual does not have shareholders, so we are able to do business with the long-term interests of our policyowners and customers in mind. We work every day to make decisions in order to meet their needs. Our structure also enables eligible participating policyowners to share in any dividends we declare. While dividends are not guaranteed, we have consistently paid out dividends since the 1860s, demonstrating our commitment to delivering policyowner value and our enduring financial strength, enabled by the robustness of our governance structure. In 2022, we approved an estimated dividend payout of \$1.9 billion to our eligible participating policyowners in 2023, the highest in our history and the 17th year in a row that MassMutual has paid an industry-leading dividend interest rate.¹⁵

Compliance and Ethics

MassMutual's Compliance and Ethics program protects our company, employees, policyowners, and customers, and promotes ethics and values in the workplace. Our [Code of Conduct](#) details our norms and expectations for employees to maintain the highest standards of ethics and integrity in their everyday work. We offer a comprehensive annual training program to all employees, including part-time and contractors, to ensure understanding of ethical practices across the business.

A key tenet of our approach to ethics training is helping employees and contractors identify compliance and ethics issues and giving them appropriate reporting tools. Our Compliance and Ethics Reporting toll-free hotline is administered by

an independent third party and is available to all employees globally, 24/7. We track all reports made by potential whistleblowers and actions taken in response, and we maintain a non-retaliation policy to protect reporting employees.

In 2022, we continued our "Speaking Up" campaign to encourage employees to report concerns. Now in its third year, the campaign was updated with a new course and survey to gauge employees' willingness to bring forth compliance and ethics issues in our new hybrid work environment.

In addition, each year we ask all employees and temporary personnel to acknowledge that they have read, understand, and commit to adhering to our Code of Conduct. The Code outlines standards of ethical and respectful behavior and references policies such as our Anti-Money Laundering and Anti-Bribery and Anti-Corruption policies.

MassMutual has built an effective compliance program that includes employee education, customer due diligence, transaction monitoring, and suspicious activity reporting, among other aspects. Our Anti-Money Laundering Policy and accompanying procedures lay out common "red flags" for potential money-laundering activities, reporting avenues for employees, and enforcement actions for employees who fail to report suspicious activity. Our Anti-Bribery and Anti-Corruption Policy guides employees on ethical behavior standards regarding activities such as interactions with government officials, business gifts and entertainment, political and charitable contributions, and others. The policy also outlines

responsibilities around recordkeeping, reporting of potentially unethical conduct, and enforcement actions for noncompliance.

MassMutual conducts annual audits of our Anti-Money Laundering Program in key areas of the business and periodic assessments of bribery and corruption risks facing the organization. Further, the compliance organization performs an annual assessment of its top compliance risks, which includes an evaluation of the ethical culture of the enterprise. On a quarterly basis, the compliance organization reviews metrics that are indicators of ethical culture, such as hotline call volume and employee ethics training completion rates. Internal Audit conducts periodic audits of the compliance and ethics program.

The Financial Crimes and Fraud Prevention Compliance team monitors international sanctions requirements together with existing business relationships with clients and company transactions, to ensure compliance with economic sanctions regimes to which the company is subject. Transactions are also monitored for other potential indicators of suspicious activity, including those that may indicate tax evasion. The Financial Crimes and Fraud Prevention Compliance team provides annual training to a broad set of employees on these topics. Our Head of Financial Crimes and Fraud Prevention Compliance oversees these programs and reports to the Chief Compliance Officer.

We expect our suppliers to operate according to the same standards of ethics and integrity we uphold. Our [Code of Conduct for Suppliers](#) outlines the principles, values, and expectations we have for our suppliers.

¹⁵ The dividend and dividend interest rate are determined annually, subject to change, and are not guaranteed.

Risk Management

Our Enterprise Risk Management (ERM) Framework is integral to serving our policyowners' and customers' long-term interests. Our comprehensive approach to risk identification and management is guided by principles set by our Board and considers strategic, financial, and non-financial risks, including sustainability-related risks where appropriate. We identify, assess, manage, and monitor enterprise risk exposures in line with our long-term strategy and ensure we can deliver on our commitments to our policyowners and customers.

We take a broad view of risk identification, from analyzing trends in the business environment to studying key performance metrics and assessing the capabilities of key competitors. We also analyze medical and public health developments to inform our risk assessments and business planning.

Our management approach is guided by three lines of defense, to clearly identify roles and responsibilities and ensure all employees are engaged in risk management at some level. Operational business lines are the first line of defense, and they own and manage risks. The second line of defense includes specialized risk managers, and our Internal Audit team is our third line of defense, providing assurance that the company is managing risks appropriately.

Risk owners across the organization utilize risk frameworks and indicators to guide their management of relevant risks. We use centralized technology to document our risks and ensure consistent management and reporting.

Our Chief Risk Officer (CRO), a member of the Executive Leadership Team, oversees our ERM function and reports directly to our Chief Executive Officer. The CRO also leads the Enterprise Risk Committee (ERC), which meets at least quarterly to approve significant risk decisions and policies and review the management of material risks. The Board receives regular reports on risk-related matters from the CRO. More information about our approach to risk management is available on our [website](#).



include regular reporting to our Executive Leadership Team and Board of Directors. At the Board and executive levels, oversight and management of climate-related risks and opportunities are embedded in MassMutual's overall sustainability governance structure and accountabilities. For more information on sustainability governance, see [page 8](#).

As a life insurance and financial products company, MassMutual's most significant exposure to climate-related risks is associated with our General Investment Account (GIA), although climate risks could potentially affect our services, physical operations, and product profitability as well. In order to develop a more detailed understanding of the potential risks we face, we launched an initial process in 2021 that concentrated on identifying and assessing climate-related risks and opportunities under different climate change scenarios. Our initial climate scenario analysis focused on understanding the transition risk to our public corporate bond portfolio. We used the findings from this analysis to increase internal awareness and guide additional climate risk analysis at the asset level.

To continue to align internal processes and future public disclosures more closely with the recommendations of the Task Force on Climate-related Financial Disclosures, we are identifying gaps and developing a roadmap to further integrate climate change risks into our existing risk management structures. As a part of this work, we are conducting

Our Enterprise Risk Management Framework



Climate Risk Integration

As part of our robust risk assessment process, MassMutual monitors a broad range of strategic, financial, and operational risks, including those related to sustainability and climate change. Within our ERM function, we have dedicated resources with responsibility for climate-related risks. In addition, our Climate Risk Working Group, which is comprised of representatives from our ERM, Global Sustainability, and Investment teams, leads and coordinates our process for identifying and assessing climate-related risks and opportunities across our business. Climate risks are integrated into our overall risk framework and processes, which

a qualitative climate risk assessment across our services, investments, and operations. In 2023, we will also expand the scope of our previous scenario analysis to quantitatively model the financial impact of transition risk on our corporate bond portfolio. Additionally, we will assess our real estate portfolio's exposure to physical climate risks. Both physical and transition risk scenario analyses will be conducted under multiple, forward-looking climate change scenarios and time horizons, to help us consider how a range of potential climate outcomes may impact our business.

This scenario analysis will provide insights into how we can navigate the transition to a low-carbon economy, adapt to the dynamic risks that climate change poses, and continue to integrate the potential impacts of climate change into our financial, strategic, and risk management decision-making.

In addition to further integrating climate-related risks into our strategy and risk management processes, we are advancing our progress toward net zero. This includes setting interim targets as part of our commitments to achieve net zero greenhouse gas emissions in our GIA by 2050 and our operations by 2030. For more about our net zero commitments, see [page 11](#) and [page 15](#). Working toward our net zero targets will contribute to management of transition risks associated with our investments. Together, implementing our net zero commitments and conducting climate risk scenario analysis will help us continue building organizational capability to integrate the financial and non-financial risks of climate change into our decision-making.

Our efforts to better understand climate risks and opportunities, and to apply these insights to our investment strategy, reflect MassMutual's commitment to the long-term interests of our policyowners, customers, employees, and communities. Evaluating what's at stake from a range of possible climate scenarios allows us to chart a course toward maintaining our enduring financial strength in a changing world.

Cyber Security and Data Privacy

Cyber security and data privacy are key concerns for MassMutual. Safe and responsible handling of our policyowners', customers', and employees' data is and will remain a top priority.

Our Enterprise Cyber Security program takes a comprehensive, risk-based approach to cyber security and data privacy. The program is aligned with the National Institute of Standards and Technologies (NIST) Cybersecurity Framework, a widely used approach created by the U.S. Department of Commerce.

The Head of Enterprise Cyber Security provides updates to the ERC monthly, and cyber risks are included in the review of top enterprise risks at every Board meeting. Privacy, Data, and Artificial Intelligence program risks are also reviewed regularly by the ERC, and the group receives a deep dive on cyber risk semi-annually.

We continue to refine our risk management techniques to identify areas of focus based on the threat, business, and technology landscapes. These techniques enable us to measure and evaluate risks to inform mitigation priorities and heighten awareness

of cyber risks. For example, in 2022, we performed an independent cyber security assessment to enhance our ongoing efforts to proactively identify and close any potential security gaps.

As our lives become more digitized, MassMutual continues to evolve our company's approach to data privacy. We maintain comprehensive Privacy and Information Security programs and align with varying privacy and security laws and regulations to safeguard the security, confidentiality, and integrity of personal information we receive from policyowners, customers, and employees.

In 2022, we took several steps to advance our data privacy efforts. As part of our commitment to collect, use, and disclose information consistent with applicable legal and regulatory requirements, we improved transparency about our privacy practices, expanded individual rights, and simplified navigation in the [Privacy and Security Center](#) of our website. We advanced our ability to understand and manage privacy risk across the company by aligning delegates from our Privacy team with each business unit, to develop more consistent and scalable approaches to privacy risk.

Our procurement policy requires all third-party service provider contracts to specify privacy, data protection, and information security approaches whenever personal information is being shared. In 2022, we completed a review of critical third-party contracts to confirm those specifics are included.

We provide a combined Data Governance, Data Ethics, Privacy, and Cyber Security course for all employees, including part-time employees

and contractors. The course covers applicable MassMutual policies and procedures that define how we expect employees and contractors to treat the data we receive from policyowners, customers, and employees. Approximately 98 percent of MassMutual employees completed the course in 2022, or a similar course tailored to the laws of employees' specific jurisdictions. Meanwhile, nearly 100 percent of new employees completed the same course as part of their new hire training.

Alongside our efforts to train all our employees in proper data stewardship, we are also working to develop the next generation of cyber professionals, to ensure we have the talent and expertise we need to maintain a best-in-class program. For example, in 2022, MassMutual launched the Cyber Security Career Pathfinder Program to guide early career employees toward a long-term career in cyber security. Participants, or "Pathfinders," are placed in three job roles over two years and receive a development plan and mentoring throughout each stage of the rotational program. In addition, MassMutual sponsored two scholarships for the Financial Services Information Sharing and Analysis Center Women in Cyber program, which provides financial support as well as mentoring for women pursuing cyber security careers in financial services.

More information on our approach to [cyber security](#) and [data privacy](#) is available on our website.



About This Report and Indices

This is MassMutual's second annual sustainability report, covering our environmental, social, and governance approach, activities, and performance for our fiscal year from January 1 to December 31, 2022. In some instances, activities from previous years and the first half of 2023 are included and clearly noted. This annual report focuses on the most relevant sustainability issues that matter to our business and our stakeholders.

We report on related disclosure topics identified by the Insurance and Asset Management & Custody Activities standards developed by the Sustainability Accounting Standards Board (SASB). The report content is also informed by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

The scope of this report is Massachusetts Mutual Life Insurance Company (MassMutual); subsidiaries are not included unless otherwise stated. This aligns with our statutory financial report filing.

For more information, visit [MassMutual.com](https://www.massmutual.com).

For more information on MassMutual's sustainability initiatives, visit our [website](#).

Contact Information:

MassMutual
1295 State St.
Springfield, MA 01111
sustainability@massmutual.com

Sustainability Accounting Standards Board (SASB) Index

Our sustainability report includes relevant disclosure topics identified by the Insurance and Asset Management & Custody Activities standards developed by SASB and overseen by the International Sustainability Standards Board (ISSB), a part of the International Financial Reporting Standards (IFRS) Foundation. We are committed to continually reviewing the metrics we disclose in line with SASB recommendations and best practices. All data is as of and for the year ended December 31, 2022, unless otherwise noted.

Topic	SASB Accounting Metric	Code	MassMutual Response
Industry: Insurance			
Transparent information & fair advice for customers	Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of insurance product-related information to new and returning customers	FN-IN-270a.1	MassMutual currently does not have material legal proceedings associated with marketing and communication of insurance product-related information to new and returning customers. For further information about legal proceedings generally, see Note 16d in MassMutual Statutory Financial Statements , page 87.
	Customer retention ratio	FN-IN-270a.3	MassMutual does not disclose this specific metric. The company measures customer satisfaction with a variety of metrics, including surveys, customer focus groups, and net promoter scores that track referrals from existing customers. Our Policyowners and Customers, pages 28-31
	Description of approach to informing customers about products	FN-IN-270a.4	For individuals considering the purchase of an insurance product, applicants receive information about the policy through product disclosures, illustrations, and client guides, all of which are designed to provide fair and accurate information and are reviewed and approved by our legal and compliance teams. Please see Our Policyowners and Customers section on pages 28-31 of this report for more information on our approach. We also provide consumers with a range of tools on our website, such as the Life Insurance Product Comparison , the Annuities Product Comparison , and the MML Investors Services Disclosure Center .
Incorporation of environmental, social, and governance factors in investment management	Total invested assets, by industry and asset class	FN-IN-410a.1	MassMutual Investment Philosophy MassMutual Statutory Financial Statements , pages 28-49
	Description of approach to incorporation of environmental, social, and governance (ESG) factors in investment management processes and strategies	FN-IN-410a.2	Sustainable Finance, pages 10-14 MassMutual Sustainable Investment Policy

Topic	SASB Accounting Metric	Code	MassMutual Response
Industry: Insurance			
Policies designed to incentivize responsible behavior	Discussion of products and/or product features that incentivize health, safety, and/or environmentally responsible actions and/or behaviors	FN-IN-410b.2	Sustainability and Mutuality, pages 6-9 Sustainable Finance, pages 10-14 Our Policyowners and Customers, pages 28-31 2022 Annual Report , pages 18-25
Systemic risk management	Exposure to derivative instruments by category: (1) total potential exposure to non-centrally cleared derivatives, (2) total fair value of acceptable collateral posted with the Central Clearinghouse, and (3) total potential exposure to centrally cleared derivatives	FN-IN-550a.1	MassMutual Statutory Financial Statements , pages 42-46
	Description of approach to managing capital- and liquidity-related risks associated with systemic non-insurance activities	FN-IN-550a.3	MassMutual Statutory Financial Statements , pages 84-89 Governance and Ethics, pages 37-40
Activity Metric: Insurance			
	Number of policies in force, by segment: (1) property and casualty, (2) life, (3) assumed reinsurance	FN-IN-000.A	As of year-end 2022, 1,961,755 individual and group life insurance policies are in force. For further information, see MassMutual Annual Statement – Exhibit of Life Insurance , page 108.
Industry: Asset Management & Custody Activities			
Transparent information & fair advice for customers	Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of financial product-related information to new and returning customers	FN-AC-270a.2	MassMutual currently does not have material legal proceedings associated with marketing and communication of financial product-related information to new and returning customers. For further information about legal proceedings generally, see Note 16d in MassMutual Statutory Financial Statements , page 87.
	Description of approach to informing customers about products and services	FN-AC-270a.3	For individuals considering the purchase of an insurance product, applicants receive information about the policy through product disclosures, illustrations, and client guides, all of which are designed to provide fair and accurate information and are reviewed and approved by our legal and compliance teams. Please see Our Policyowners and Customers section on pages 28-31 of this report for more information on our approach. We also provide consumers with a range of tools on our website, such as the Life Insurance Product Comparison , the Annuities Product Comparison , and the MML Investors Services Disclosure Center .

Topic	SASB Accounting Metric	Code	MassMutual Response
Industry: Asset Management & Custody Activities			
Employee diversity & inclusion	Percentage of gender and racial/ethnic group representation for (1) executive management, (2) non-executive management, (3) professionals, and (4) all other employees	FN-AC-330a.1	MassMutual Workforce Demographics , pages 3-7
Incorporation of environmental, social, and governance factors in investment management & advisory	Amount of assets under management, by asset class, that employ (1) integration of ESG issues, (2) sustainability themed investing, and (3) screening	FN-AC-410a.1	Sustainable Finance - Sustainable Investing, pages 11-14 MassMutual Sustainable Investment Policy
	Description of approach to incorporation of ESG factors in investment and/or wealth management processes and strategies	FN-AC-410a.2	Sustainable Finance, pages 10-14 MassMutual Sustainable Investment Policy
	Description of proxy voting and investee engagement policies and procedures	FN-AC-410a.3	Sustainable Finance, pages 10-14
Business ethics	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations	FN-AC-510a.1	For further information about legal proceedings generally, see Note 16d in MassMutual Statutory Financial Statements , page 87
	Description of whistleblower policies and procedures	FN-AC-510a.2	Governance and Ethics, page 38 Code of Conduct
Activity Metric: Asset Management & Custody Activities			
	Total registered and total unregistered assets under management (AUM)	FN-AC-000.A	2022 Annual Report , page 15

Task Force on Climate-related Financial Disclosures (TCFD) Index

Our sustainability report includes content that is informed by the recommendations of the TCFD. We are continuing to develop and expand our climate reporting in line with TCFD recommendations and best practices.

Core Element	TCFD Recommended Disclosure	MassMutual Response	Location of Additional Disclosures
Governance			
Disclose the organization's governance around climate-related risks and opportunities	<ul style="list-style-type: none"> Describe the board's oversight of climate-related risks and opportunities Describe management's role in assessing and managing climate-related risks and opportunities 	At the Board and executive levels, oversight and management of climate-related risks and opportunities are embedded in MassMutual's overall sustainability governance structure and accountabilities. Furthermore, we have dedicated resources within our Enterprise Risk Management function and a Climate Risk Working Group that is working to integrate climate-related risks and opportunities into our business.	Sustainability and Mutuality, pages 6-9 Governance and Ethics, pages 37-40
Strategy			
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material	<ul style="list-style-type: none"> Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario 	We recognize that climate-related risks and opportunities have the potential to impact our business across our products and services, investments, and operations. We believe that the most important strategic implications of climate change for MassMutual are associated with our General Investment Account. We are conducting a qualitative risk assessment to identify and assess our potential climate-related risks and opportunities and will continue building on our scenario analysis work. From these efforts, we will develop actionable guidance for integrating the insights from these analyses into our strategy and management processes.	Governance and Ethics, pages 37-40 Sustainable Finance, pages 11-12 MassMutual Sustainable Investment Policy

Core Element	TCFD Recommended Disclosure	MassMutual Response	Location of Additional Disclosures
Risk Management			
<p>Disclose how the organization identifies, assesses, and manages climate-related risks</p>	<ul style="list-style-type: none"> Describe the organization's processes for identifying and assessing climate-related risks Describe the organization's processes for managing climate-related risks Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management 	<p>The ongoing improvement of our climate risk assessment and management processes is focused on building out our scenario analysis capabilities. We are expanding the scope of our previous scenario analysis to model transition risk to our corporate bond portfolio, as well as physical risk to our commercial real estate loan portfolio. We are continuing to integrate climate-related risk into our existing risk framework.</p>	<p>Governance and Ethics, pages 37-40</p>
Metrics and Targets			
<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material</p>	<ul style="list-style-type: none"> Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets 	<p>We annually report greenhouse gas emissions, including Scope 1 and Scope 2. We have established a 2027 interim target to advance our commitment to achieve net zero operations by 2030. To advance our progress toward net zero portfolio emissions by 2050, we also established 2030 interim targets for our commercial real estate loans and selected carbon-intensive sectors within our public corporate bond portfolio.</p>	<p>Sustainable Finance, pages 11-12 Sustainable Operations, pages 15-16</p>



© 2023 Massachusetts Mutual Life Insurance Company,
Springfield, MA 01111-0001. All rights reserved.
MM202606-306028
MassMutual.com

