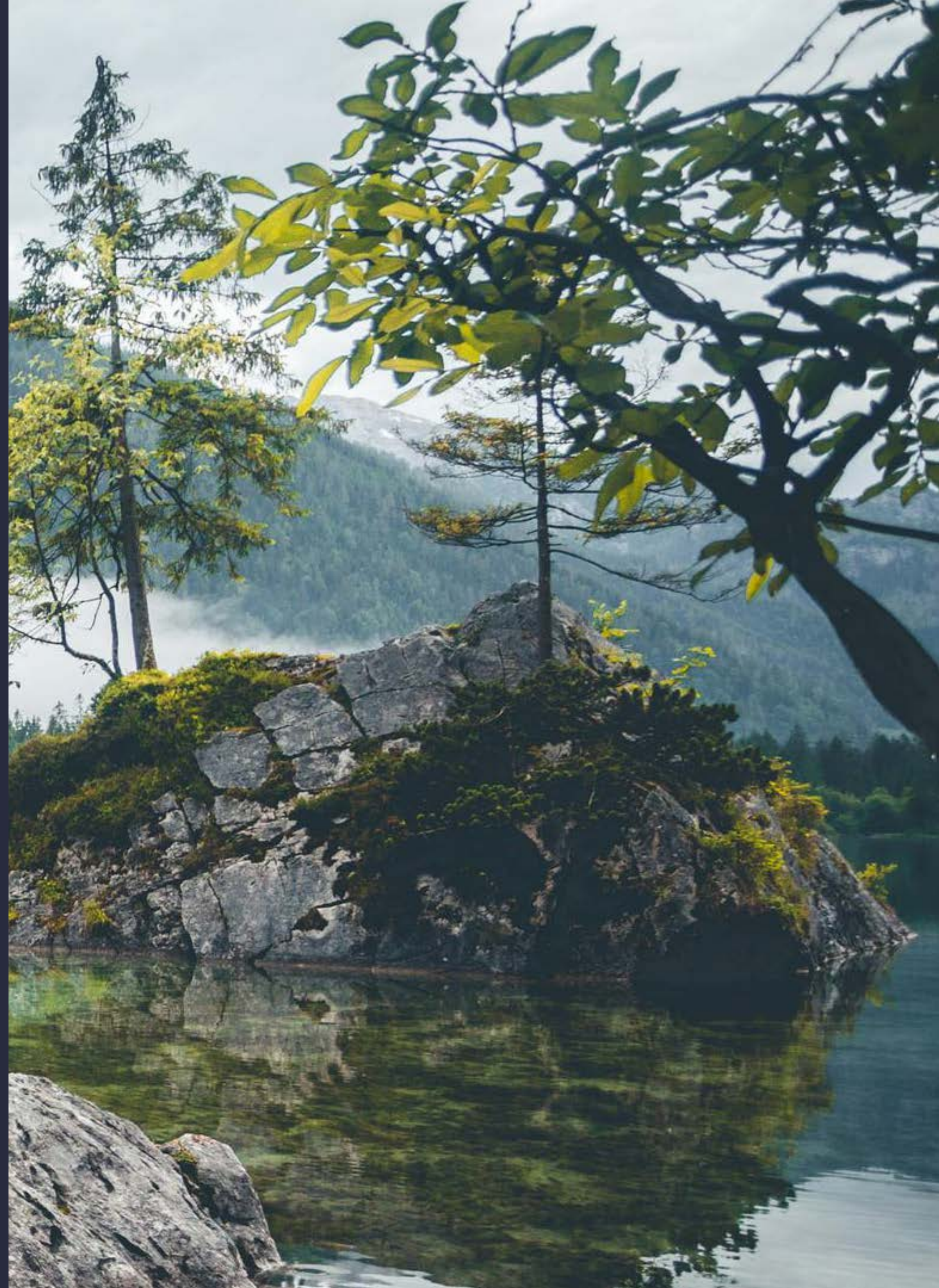




 **Manulife** Investment Management

# Sustainable and responsible investing report 2021



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# *A message* from Paul R. Lorentz

I'm pleased to present our latest sustainable and responsible investing (SRI) report—our third annual statement covering our global asset management business across public and private markets.

Highlights of our recent activities span advancements in ESG integration, the launch of several new sustainability-themed strategies, and deep involvement in active stewardship on behalf of our clients and in our capacity as an owner and operator of private assets.

Our timberland group was excited to announce its [inaugural impact-first investment](#) to be used primarily for carbon storage, while in public markets, I'm pleased to report that over 90% of our AUM in listed equity and fixed-income strategies achieved full ESG integration<sup>1</sup> status by the end of 2021.

Because we understand that systemic risks like climate change require collaborative solutions, we've remained deeply involved in a variety of global initiatives focused on climate change and biodiversity. We also became a signatory to the new [Finance for Biodiversity Pledge](#), which commits to protecting and restoring biodiversity through finance

activities and investments, and we signed on to statements to spur action from governments and issuers, including the [Global Investor Statement to Governments on the Climate Crisis](#). We also [responded directly](#) to the SEC's request for comments on a potential climate disclosure rule that focuses on the reporting of financially material sustainability data.

Our conviction in sustainable investing has never been greater. As a global asset manager, we seek to communicate the benefits of a sustainable investing focus for every investor's portfolio—in terms of potential resiliency to systemic risks and the potential for long-term value creation. This report communicates both the fundamental processes of our work in this regard and the latest updates on our outcomes-based stewardship practices. We hope you find it useful in learning more about our approach to sustainable investing.

**Paul R. Lorentz**

President and CEO

Manulife Investment Management

<sup>1</sup> Integration is based on Manulife Investment Management public markets proprietary integration progression levels, which measures investment teams' progress in ESG integration.

*Who we are*





## About Manulife Investment Management

Manulife Investment Management is the global brand for the global wealth and asset management segment of Manulife Financial Corporation. We draw on more than a century of financial stewardship and the full resources of our parent company to serve individuals, institutions, and retirement plan members worldwide.

Headquartered in Toronto, our diverse capabilities across asset classes are strengthened by an investment footprint that spans 18 geographies. We complement these capabilities by providing access to a network of unaffiliated asset managers from around the world.<sup>2</sup>

We're committed to investing sustainably across our businesses. We develop innovative global frameworks for [sustainable investing](#), collaboratively engage with companies in our securities portfolios, maintain a high standard of stewardship where we own and operate assets, and believe in supporting financial well-being through our workplace retirement plans. This range of activity brings a long-term focus to our investments that aligns with the vision of our clients, who are often looking many years into the future when the impact of sustainability challenges—environmental, social, and economic—may be felt more acutely.

<sup>2</sup> As of December 31, 2021. This report is limited to addressing the proprietary investment capabilities of Manulife Investment Management and does not assess the sustainability-focused activities of any unaffiliated asset managers.

# Manulife Investment Management at a glance

Part of Manulife, a leading global financial services group

Protecting  
customer assets  
**since 1887**

More than **38,000** employees  
serving more than **33M**  
customers worldwide

**\$1.4T**  
in AUMA

- Financial advice
- Insurance
- Global wealth and asset management

## Manulife Investment Management

- Institutional asset management
- Retirement
- Retail investments

**1,000+**  
institutional  
accounts

**\$1.1T**  
in AUMA

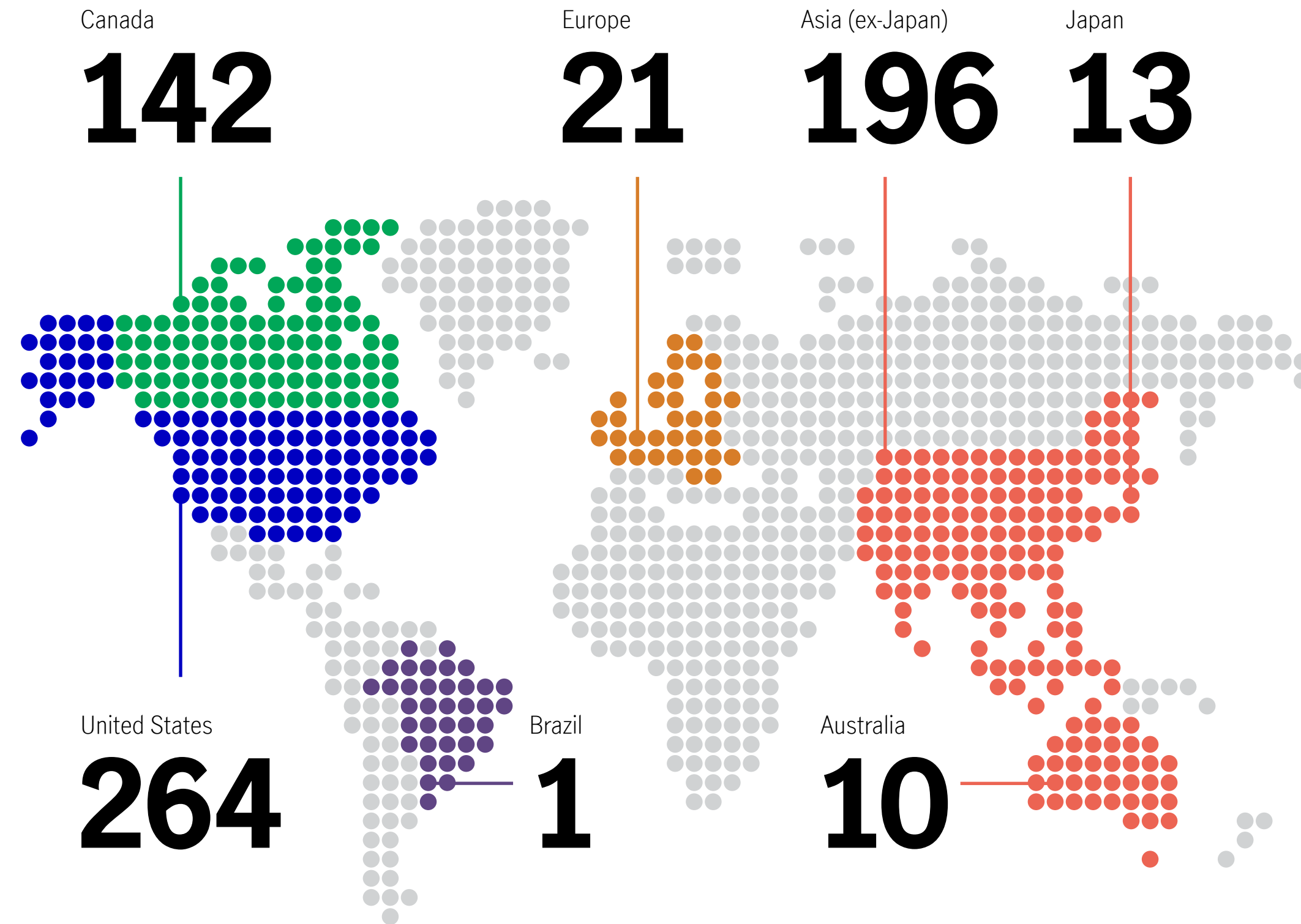
More than **15M** retirement  
plan participants and  
investor accounts

**250,462**  
retirement plans  
served globally

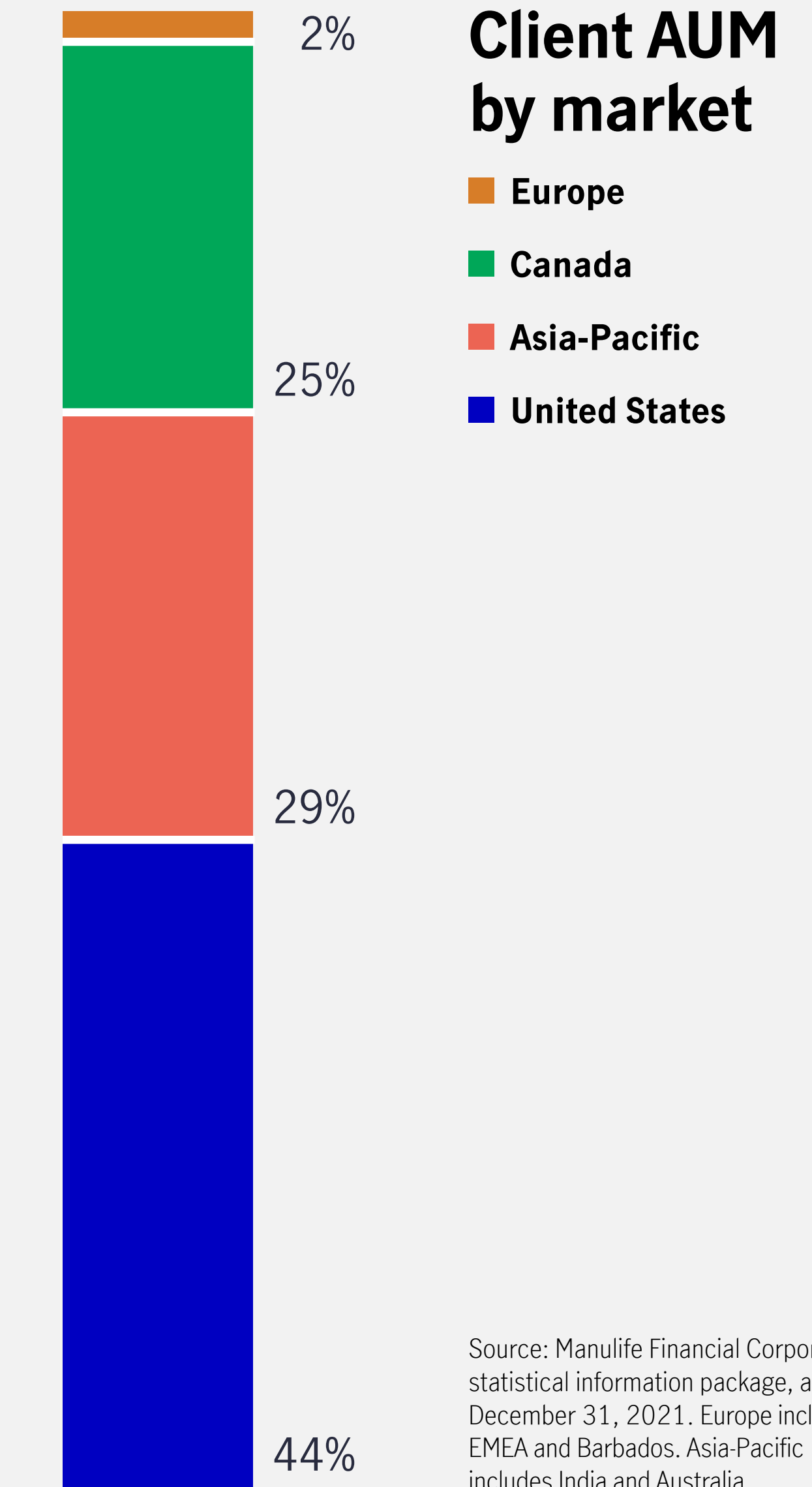
Source: MFC statistical information package as of December 31, 2021. Manulife Investment Management is the unified global brand for Manulife's global wealth and asset management business, which serves individual investors and institutional clients in three businesses: retirement, retail, and institutional asset management (public and private markets). Global wealth and asset management's assets under management and administration (AUMA) are as of December 31, 2021, and \$246.8 billion of assets managed on behalf of other segments and \$187.6 billion of assets under administration. Assets are shown in Canadian dollars.

# Combining local insight with global reach

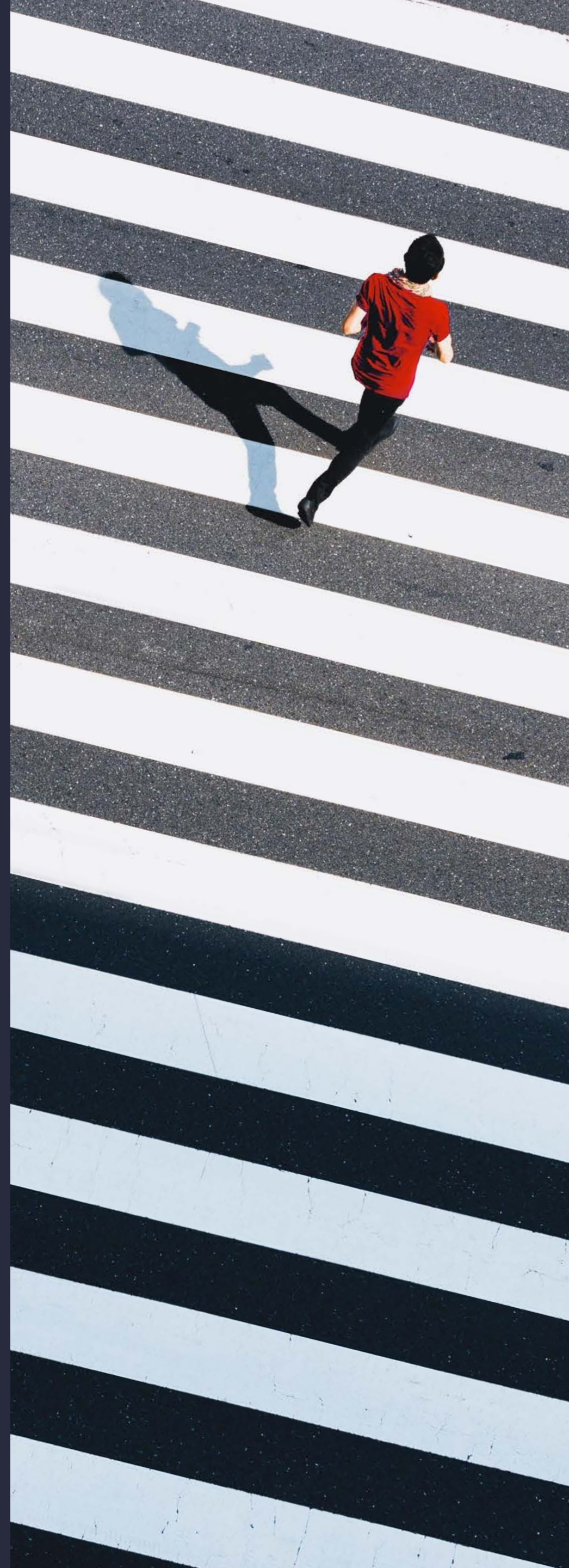
More than 600 investment professionals with offices in 18 geographies



Source: Manulife Investment Management, as of December 31, 2021. Manulife Investment Management's global investment professional team includes expertise from several Manulife Investment Management affiliates and joint ventures. Not all entities represent all asset classes. Total investment professionals comprises individuals from Manulife Investment Management; Manulife-TEDA Fund Management Co. LTD.; a 49% joint venture between Manulife Financial and Northern International Trust; part of the Tianjin TEDA Investment Holding Co. Ltd. (TEDA); and Mahindra Manulife Investment Management Private Limited, a 49% joint venture of Manulife and Mahindra AMC. Asia includes India and Australia, and Europe includes Europe, the Middle East, and Africa (EMEA) and Barbados.



Source: Manulife Financial Corporation statistical information package, as of December 31, 2021. Europe includes EMEA and Barbados. Asia-Pacific includes India and Australia.



## What makes us unique?

Manulife, our parent company, has a storied history dating back more than 130 years in Canada, 125 years in Asia and 155 years in the U.S. Manulife Investment Management shares much of this history. We have strong footholds in North America and Asia, which include some of the fastest-growing economies in the world. We are a global company, and our commitments extend to clients around the globe.












At Manulife Investment Management, we seek to provide solutions for clients using a wide breadth of capabilities, including a specialist approach embedded in a deep commitment to invest sustainably. In addition, our manager-investor/operator model in some sectors gives us a dual perspective on sustainable business practices and concerns. Beyond buying and selling securities, we're also stewards of assets that we own and operate—such as real estate, timberland, and agriculture—and so we have a deep appreciation of the challenges and potential benefits of adhering to sustainable operating practices.



## We're committed to sustainable investing

Our latest summary scorecard from the Principles for Responsible Investment (PRI) demonstrates the depth of our commitment.

### Manulife Investment Management 2020 PRI summary scorecard<sup>3</sup>

AUM	Module name	Our score	 Manulife Investment Management score Median score
	01. Strategy & Governance	A+	
<b>Direct and active ownership modules*</b>			
10%–50%	10. Listed Equity - Incorporation	A+	
10%–50%	11. Listed Equity - Active Ownership	A	
10%–50%	12. Fixed Income - SSA	A+	
<10%	13. Fixed Income - Corporate Financial	A	
10%–50%	14. Fixed Income - Corporate Non-Financial	A	
<10%	15. Fixed Income - Securitised	A	
<10%	16. Private Equity	B	
<10%	17. Property	A	
<10%	18. Infrastructure	B	

\* Listed equity, fixed income, and multi-asset integration reflects Manulife Investment Management Public Markets activities only.

<sup>3</sup> As of December 31, 2019, the most current data available. Please visit the PRI website to learn more about the [assessment methodology](#) or to see our [transparency report](#). The [PRI has notified respondents](#) that the 2021 assessment report will be delayed. Download our [2020 PRI assessment report](#).



## A dedicated team of sustainability professionals

Our 25 sustainability professionals act as subject matter experts focused on critical ESG themes and work at the cutting edge of developments in their respective areas. They participate in engagements where their expertise is particularly relevant, and contribute to industry collaborations to advance the firm's stewardship goals. This group operates globally to advise the broader team of investment professionals managing money on behalf of our clients.<sup>4</sup>

## Our global team of sustainability professionals



<sup>4</sup> As of December 31, 2021.

# Our sustainability-focused professionals support our asset management teams globally

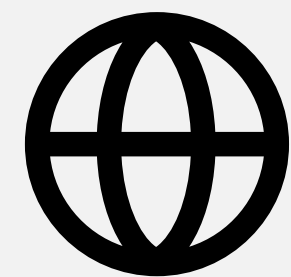
**25**

dedicated sustainable investing professionals

**400+**

investment professionals are advised on sustainability and stewardship activities

Reflects key investment professionals including portfolio managers, analysts and traders.



Global expertise across regions and asset classes



**ESG research and analysis**



**Implementation of sustainability practices**



**Training and education sessions**



**ESG monitoring (investment monitoring)**



**Proxy voting research**



**Stewardship practices for operation of real assets**

## Investment teams

Integrating environmental, social, and governance (ESG) factors and stewardship in their investment activities

- Listed equity
- Fixed income
- Multi-asset solutions
- Real estate
- Infrastructure
- Private equity and credit (PE&C)
- Timberland
- Agriculture

## Real asset operation teams

Integration of sustainable investing within assets we own and operate in real estate, timberland, and agriculture

Source: Manulife Investment Management, as of December 2021.  
Listed equity, fixed income, and multi-asset integration reflects Manulife Investment Management Public Markets activities only.



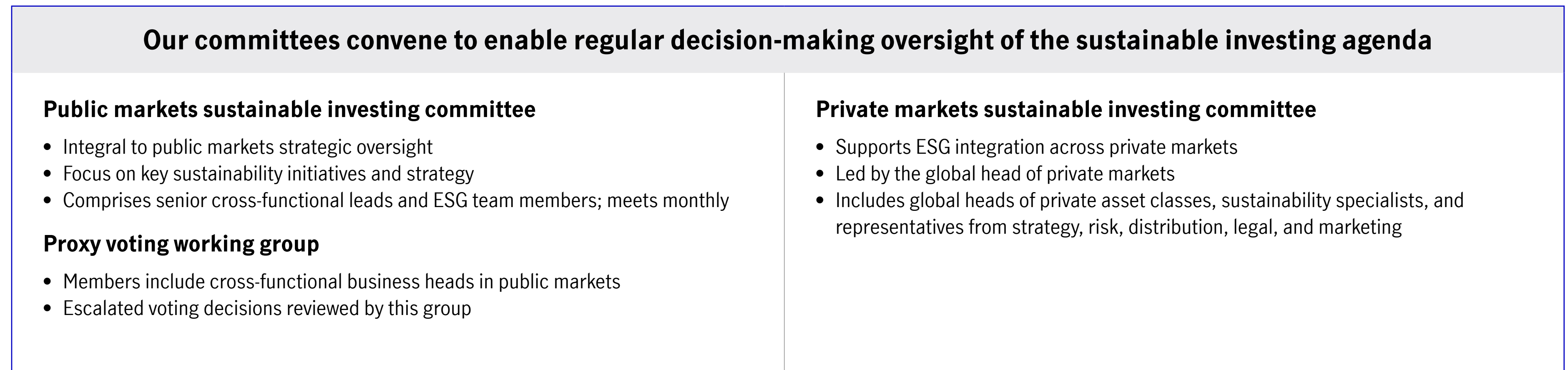
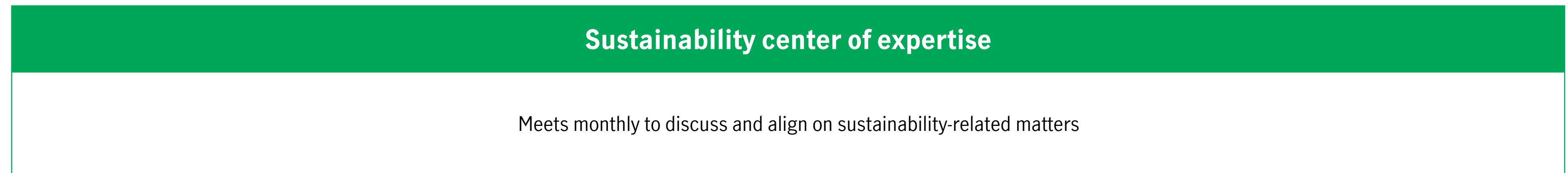
## **A governance approach integrated with that of our corporate parent**

We view the involvement of leaders in all asset classes, as well as representatives from functional areas such as operations, legal, compliance, risk, and technology, to be crucial in supporting our sustainable investing activities across the organization and ensuring the buy-in and commitment required for success. As a result, governance bodies across Manulife Investment Management think about sustainability issues as part of their long-term business strategy and day-to-day work activities.

In addition, the sustainability governance structure of Manulife Investment Management is connected to larger sustainability governance at Manulife. The CEO of Manulife, CEO of Manulife Investment Management, and the global chief sustainability officer of Manulife, along with other senior Manulife leaders, sit on the Manulife executive sustainability council. The council also works closely with the leaders of our sustainable investing teams.

# Our sustainability governance

■ Manulife ■ Manulife Investment Management



This governance structure supports Manulife Investment Management's teams of sustainable investing professionals that facilitate the implementation of our sustainable investing agenda.

These teams pursue a variety of activities and projects, including identifying and developing sustainable investing best practices, supporting investment and operating teams to develop tools and methodologies to adopt these best practices across the investment lifecycle, and leading the firm's participation in external initiatives and collaborative industry engagement.

## **A focus on creating an engaged workforce and a diverse, equitable, and inclusive culture**

### **Putting DEI at the forefront of leaders' agendas**

Different diversity metrics are tracked in different markets depending on the regional legislative requirements and frameworks. To strengthen leadership and business accountability for diversity, we've introduced customized leader diversity, equity, and inclusion (DEI) dashboards, which are reviewed quarterly by our CEO and executive leadership team, and we've included DEI training in all people leadership goals. All segments and functions also develop their own action plans to improve DEI based on their specific challenges.

Across our global offices—and in alignment with the beliefs and practices of our parent company, Manulife—we focus on a shared set of six core values that helps engender high employee engagement and define who we are and how we work together:

- 1 Own it**—We feel empowered to make decisions and take action to deliver our mission.
- 2 Think big**—Anything is possible. We can always find a better way.
- 3 Share your humanity**—We build a supportive, diverse, and thriving workplace.
- 4 Get it done together**—We're surrounded by an amazing team. We do it better by working together.
- 5 Obsess about customers**—We predict their needs and do everything in our power to satisfy them.
- 6 Do the right thing**—We act with integrity and do what we say.



Drawing strength from these values, our goals and efforts toward fostering better DEI at our firm demonstrate our commitment to our employees' health and professional growth as well as to the strength of the communities in which we live and work. We believe we're stronger when we embrace our differences and that diversity in gender, race, religion, identity, and ability plays a key role in driving innovation and growth within our company.

Our employee resource groups, which are founded within the greater Manulife organization and include Manulife Investment Management employees, play an integral role in championing diversity and building an inclusive work environment. United by a common identity, trait, and/or interest, these voluntary, employee-led networks are a much-used resource for both employees and the firm. They enable us to work together to address barriers to advancement and provide personal and professional development opportunities.

We're committed to being authentic and transparent about our DEI challenges and the steps we're taking to address them. While we've made progress, we also know there's more to do, and we're working hard to understand our current reality, set progressive goals, and drive meaningful change.

In 2020, Manulife announced that it would invest more than \$3.5 million over the next two years to promote DEI in the workplace and our communities. Over \$2 million has already been allocated<sup>5</sup> to various diverse and underrepresented groups in supporting talent growth, hiring, and the community. We'll continue to engage various underrepresented groups around the world in 2022 to further advance DEI. The goals of these focused investments are threefold: to increase the representation of diverse talent at all levels in the organization, to create greater inclusion across the company through enhanced training, and to support organizations helping Black, Indigenous, and People of Color (BIPOC) communities.

<sup>5</sup> As of December 2021.



## Three pillars of our approach to DEI

Our DEI strategy focuses on three pillars:

- 1 Talent**—Diversity at all levels in the organization that’s reflective of the communities we serve
- 2 Culture**—Helping employees thrive by creating an environment in which they can bring their authentic selves to work
- 3 Community**—Strong partnerships and DEI support in the external communities in which we live, work, and serve

Our global DEI strategy is spearheaded by our global chief DEI officer, the global DEI team, and our global DEI executive council, which collectively guide, support, and facilitate the implementation of our DEI approach. Chaired by our CEO, the executive council comprises leaders who are passionate about DEI and who play a key role for the areas of business they represent. Council members meet quarterly and act as advocates in their respective divisions and functions on an ongoing basis. We’ve also created multiple DEI councils, including country-specific groups in Malaysia and Singapore and discipline-specific teams in areas such as tech and operations, legal, compliance, audit, and governance. These groups help us further our DEI agenda within their respective areas.



## We're committed to DEI principles in our hiring and governance structure

# 54%

of the independent directors are women

# 23%

of the independent directors are racially/ethnically diverse

# 31%

of Manulife's VP-level roles and above are held by women, an increase in representation of 4% from last year, achieving our 2022 target ahead of schedule

Source: Manulife, as of December 31, 2021.

## Progress toward Manulife's DEI targets

**Goal**—Invest **\$3.5M** to promote DEI in our workplace by 2022

\$2M invested

**Goal**—Achieve **30% women representation** at VP+ level by 2022

31% achieved

**Goal**—Increase BIPOC talent by **30%** at director+ level by 2025

17% achieved

**Goal**—Achieve **25% BIPOC representation** in annual new graduate hiring

50% achieved

Source: Manulife, as of December 31, 2021.

## Manulife is a member of the

# 30% Club

Investor Group, Canada. A global group committed to gender balance in business leadership

Source: Manulife, as of December 31, 2021.

## Gender statistics for Manulife Investment Management

	Female (%)	Male (%)
<b>By region</b>		
Asia	55.7	44.3
Canada	49.3	50.7
All	45.3	54.7
Europe	43.6	56.4
United States	37.9	62.1
Other	27.0	73.0
<b>By organizational level</b>		
AVP, director, manager	37.4	62.6
VP and above	23.6	76.4

Source: Manulife Investment Management, as of December 31, 2021. Data excludes staff who chose not to respond/preferred not to disclose; globally, this represented 0.6% of staff. "Other" includes Australia, New Zealand, Chile, and Brazil.

## Training and development

Manulife is committed to creating a workplace that offers opportunities for employees to realize their career goals.

- \$31.8 million invested in training and development—\$847.43 per employee
- 19.8 average hours spent in training per employee

We provide employees with opportunities for learning and development at all stages of their career. In addition to on-the-job training, mentoring, coaching, in-house programs, and online learning resources, Manulife often subsidizes the cost of continuous learning and examinations as employees pursue their education and individual development plans.

While the COVID-19 pandemic limited in-person learning, employees were able to continue acquiring new skills and knowledge through various digital educational assets, virtual classes, and bite-size modules. Uptake of the training programs was high; for example, LinkedIn Learning experienced an activation rate of over 64% in only a 9-month period, with over 23,000 users who, in aggregate, logged more than 100,000 hours of training. In addition to this, average learning hours per employee increased from 9.33 in 2020 to more than 19 hours in 2021. There was also notable improvement in our engagement survey score related to learning and development.

## Launched Fuel-Up Fridays

To support the well-being of our team members through both learning and rest, in September 2021, we introduced Fuel-Up Fridays: Mornings focused on learning and building new skills and afternoons focused on resting and recharging in a way that was meaningful to each individual. This was in addition to five additional days of paid leave made available to all team members in 2021. In 2022, we continue to offer Fuel-Up Fridays with afternoons offered for learning and development, as well as the additional five days of paid leave.

## Employee recognition

# 83% of our employees

were recognized through Podium during 2021, with 10,293 awards given.

Source: Manulife, as of December 31, 2021.

## Employee engagement scores

2021	2020
4.19	4.16

This puts us in the 66<sup>th</sup> percentile against Gallup's financial and insurance company benchmark.

Source: Manulife, as of December 31, 2021. Engagement scores are rated on a five-point scale.

## Engagement and recognition

We use the global recognition platform Podium, which enables employees at all levels to give and receive frequent recognition. The program has six award levels, with corresponding points toward merchandise and gifts cards, to recognize varying levels of contribution. In 2021, we built on our program by launching services milestones in Podium to celebrate anniversaries at one, five, and every additional five-year increments.

## Employee benefits and wellness

Manulife has provided employees with extra personal days. In 2021, and again in 2022, all Manulife employees were given five additional personal days to use during that calendar year in appreciation of all the hard work they've done in helping people make decisions easier and lives better. Manulife also provided a thank-you day off for employees in mid-June in 2020 and 2021.

## Paid time off for vaccine appointments

In 2021, we began providing up to four hours of paid time off for COVID-19 vaccination appointments during business hours, for a total of eight hours if the vaccination requires two separate doses.

## Flexible work program

The remote work environment that dominated during the first two years of the pandemic taught us a lot about working together as a global team. In 2021, we reinvented how we work and collaborate through a new flexible work program. This new approach guides how we manage schedules and connect with each other to boost our effectiveness. All 38,000 Manulife employees globally have the flexibility to balance their time within a hybrid model that sees them work remotely twice per week if they choose. We've also developed a set of guidelines for managing calendars that should help our employees make the most of each day.

## Recent sustainability milestones

Since we became a PRI signatory in 2015, we've enhanced our sustainability practices across asset classes and deepened our involvement in initiatives addressing global sustainability challenges.



### 2021

- 100% of our U.S. farmlands is certified under the [Leading Harvest](#) Farmland Management Standard<sup>6</sup>
- Published our inaugural [stewardship report](#) and accepted as signatory to the [UK Stewardship Code](#)
- Published our first Task Force on Climate-related Financial Disclosures (TCFD)-aligned [climate risk report](#) for our real estate portfolio
- Timberland group makes its [inaugural impact-first investment](#) to be used primarily for carbon storage
- Launched our first global climate strategy for listed equities
- Awarded [Global Real Estate Sustainability Benchmark \(GRESB\)](#) Sector Leader designation by placing first in global real estate peer group
- 82% of global real estate assets held a third-party green building certification
- Over 90% of assets under management (AUM) listed equity and fixed-income strategies fully integrate ESG<sup>1</sup>

<sup>6</sup> As of May 17, 2021.



## 2020

- Named to the [PRI Leaders' Group 2020](#)<sup>7</sup> for excellence in climate reporting
- Launched new sustainable thematic products
- Joined the Informal Working Group catalyzing the launch of the [Taskforce on Nature-related Financial Disclosures](#) (TNFD)
- Began providing ESG reporting for institutional clients
- First participated in [GRESB's Infrastructure Asset Assessment](#)

## 2019

- Launched internal framework for ESG integration across equities and fixed income<sup>8</sup>
- Top rating (A+) from the [PRI for strategy and governance](#)
- Published our inaugural sustainable and responsible investing report
- Over 80% of global [real estate](#) assets held a third-party green building certification
- Winner of 2019 Sustainable Development Goals (SDG) [Leadership Awards](#) from Global Compact Network Canada
- Joined the [Investor Advisory Group of the Sustainability Accounting Standards Board \(SASB\) Alliance](#)
- Rolled out methodology to incorporate ESG factors into sovereign credit model

<sup>7</sup> [As of September 18, 2020](#), the most recent PRI Leaders' Group. PRI has announced that the [2021 PRI Leaders' Group on Stewardship has been postponed](#). <sup>8</sup> Referenced ESG integration framework for equities and fixed income and sovereign credit refer to Manulife Investment Management Public Markets.



## 2018

- Became a founding member of [Climate Action 100+](#)
- Joined United Nations Environment Programme Finance Initiative ([UNEP FI](#)) scenario analysis pilot program



## 2017

Launched Sustainable Building Standards for our real estate portfolio



## 2016

Timberland group celebrates planting of 1 billion trees since inception in 1985



## 2015

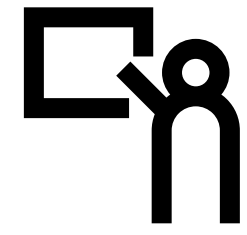
- Became a signatory to the [PRI](#)
- First participated in [GRESB's Real Estate Assessment](#)

Timeline is as of December 31, 2021.

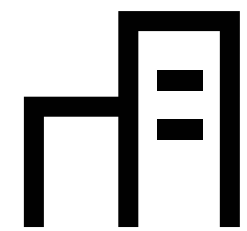
An aerial photograph of a dark, calm lake surrounded by a dense green forest. The water reflects the sky and surrounding trees. The text is centered over the lake.

Our sustainability  
*highlights*

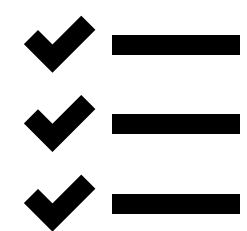
## Advancements in ESG integration



We continued to train our investment professionals on the latest developments in sustainable practices and ESG integration. In 2021, topics included nature and biodiversity, climate resilience, and shareholder rights.



We kicked off our first ESG monitoring program for our infrastructure and PE&C investments.



We developed sustainable development guidelines for new construction in real estate equity. In addition, we launched two new proprietary building standards in our real estate portfolio—climate change resilience and greenhouse gas (GHG) management—to help our properties mitigate climate change.

# 90%+

The vast majority of our listed equity and fixed-income AUM was fully ESG integrated as of year-end 2021.<sup>1</sup>



# New strategy

## Global Climate

The strategy uses the temperature goals of the Paris Agreement and science-based targets (SBTs) as a framework for its stock selection process by investing in companies that are making positive contributions to climate change. It recognizes that to reach these ambitious goals, countries, companies, and individuals will have to change how they think about and interact with the environment and how that affects the economy.



We consider that the integration of sustainability risks in the decision-making process is an important element in determining long-term performance outcomes and is an effective risk mitigation technique. Our approach to sustainability provides a flexible framework that supports implementation across different asset classes and investment teams. While we believe that sustainable investing will lead to better long-term investment outcomes, there is no guarantee that sustainable investing will ensure better returns in the longer term. In particular, by limiting the range of investable assets through the exclusionary framework, positive screening and thematic investment, we may forego the opportunity to invest in an investment which we otherwise believe likely to outperform over time. Strategy-level information may differ from vehicle-specific information. Not all vehicles are available in all locations and may be offered through affiliates of Manulife Investment Management.

# Stewardship

**805**

equity and fixed-income issuers engaged by our public markets investment and sustainable investing teams

**126**

other entities engaged, including regulators, sovereigns, influencers, nongovernmental organizations (NGOs), and vendors

**280,000**

acres of farmland certified under the Leading Harvest\* Farmland Management Standard—a standard we helped develop

**82%**

rate of global green building certification

**100%**

of our 5.8 million acres of sustainably managed timberland is third-party certified

**479,000**

acres of sensitive lands protected

As of December 31, 2021. Equity and fixed income engagement by Manulife Investment Management Public Markets.

\* Includes both third-party leased and directly operated assets. Oliver Williams, global head of agriculture, is current chair of the Board of Directors for Leading Harvest. For more information on Leading Harvest, please see [leadingharvest.org/about](https://leadingharvest.org/about).

*Signatory of:*



**STEWARDSHIP  
CODE | 2021**

Accepted as an inaugural signatory to the UK Stewardship Code

# Global collaboration



We were appointed to the [PRI Infrastructure Advisory Committee](#) and the PRI Real Estate Advisory Committee



Participating member of the [UNEP FI](#) pilot project Phase II



Participated in the Informal Working Group of the [TNFD](#) and became a member of the TNFD Forum



An active member and participant of [30% Club Investor Group, Canada](#)



We're a participating member of the [Cambridge Institute for Sustainability Leadership](#)



Support research into the resilience of agriculture and forestry to climate change at [MIT's Joint Program on the Science and Policy of Global Change](#) with the University of California, Davis



Participate in the [World Business Council for Sustainable Development's](#) (WBCSD's) Forest Solutions Group, Scaling Positive Agriculture, and Nature Action projects



We became a [member of the Finance for Biodiversity Pledge](#) to deepen our commitment to biodiversity

As of December 31, 2021.

## Climate action

# 80%

targeted GHG reduction by 2050 across our real estate portfolio

# Net zero

in Manulife's operations, achieved due to the carbon removals from substantial owned and operated forests and farms outweighing emissions

## Lead engagement investor

for a large chemical company as part of [Climate Action 100+](#)

# 35%

is Manulife's commitment to reducing scope 1 and scope 2 emissions by 2035 and making its general account investment portfolio net zero by 2050

# 3 M MtCO<sub>2</sub>

is estimated amount of CO<sub>2</sub> removed from the atmosphere by our managed [forests and farms](#) on a five-year rolling average—4x more CO<sub>2</sub> than is involved in managing these properties

## We issued our first TCFD-aligned climate disclosure

for our real estate portfolio, and we expect to issue our second disclosure covering all asset classes in 2022

As of December 31, 2021. Scope 1 emissions measure direct GHG emissions from operations. Scope 2 includes indirect emissions from the consumption of energy.

# IIGCC

CLIMATE  
ENGAGEMENT  
CANADA

We signed on to statements to spur action from governments and issuers, including the [Global Investor Statement to Governments on the Climate Crisis](#). We joined the [Climate Engagement Canada initiative](#) with goals to encourage Canadian corporate issuers to manage, and report on, their transition to a net zero economy.

# Recognition



We were accepted as a signatory to the [UK Stewardship Code](#) in the inaugural round of reviews.



We earned a Green Star ranking in all six of our [GRESB real estate submissions](#), including three 5-star ratings for the third straight year. Our real estate GRESB submission for our global portfolio of AUM was recognized as a [GRESB Sector Leader](#), ranking first in its peer group. Our infrastructure team received a 30/30 and 29/30 management scores for our first and second fund in the GRESB Infrastructure [Fund Assessment](#).



We entered the [2021 Responsible Investment Brand Index](#) for the first time and were awarded the top Avant Gardist category.



In response to promoting healthy buildings, in 2021 our real estate portfolio in North America received Fitwel Virus Response's entity-level certification with distinction. Receiving entity-level certification signifies our consistent wellness, design, development, and operation policies across our North American portfolio.



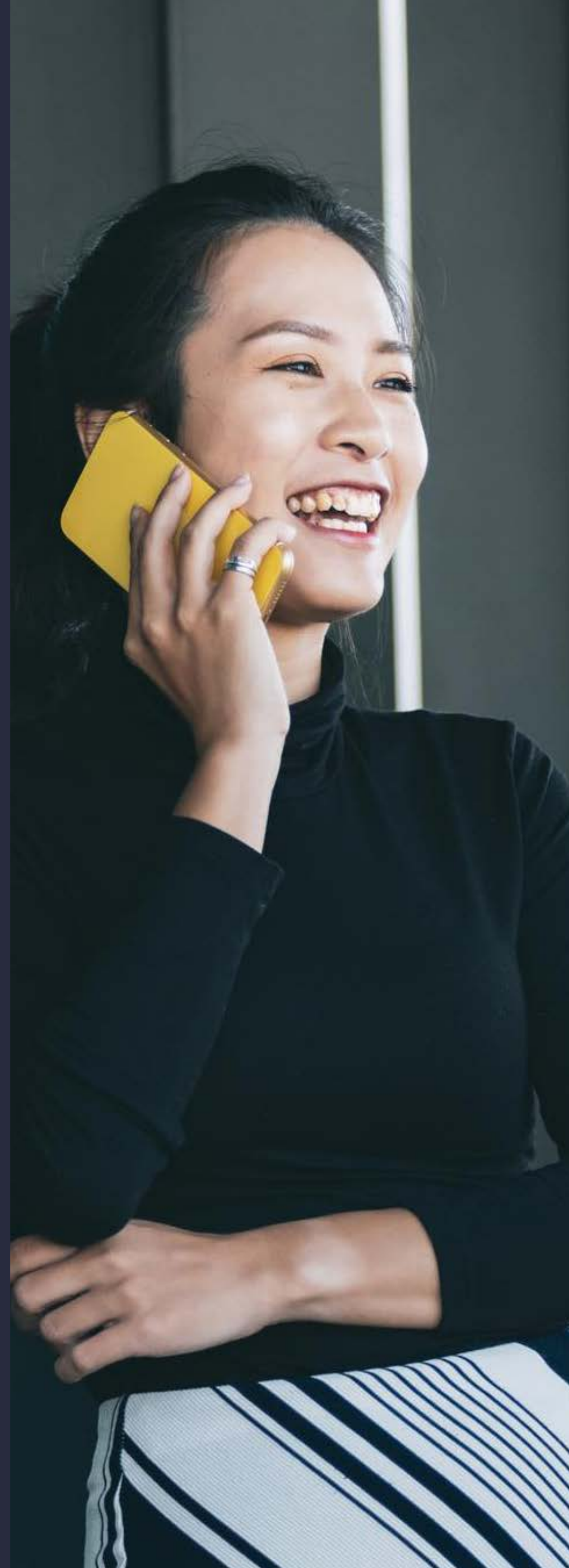
In 2021, our timberland investment team acquired nearly 90,000 acres of forest in Maine for Manulife's general account, our inaugural impact-first investment for the primary purpose of carbon sequestration, winning Agri Investor's Americas Deal of the Year Award.



Our thought leadership article, "[Valuing biodiversity: the tools at our disposal](#)," was Highly Commended in the [Best ESG Paper](#) category in the Savvy Investor Awards 2021, building on our participation in the TNFD.

Our role as  
*investors*





## **Our purpose is embedded in our strategy and culture**

Our purpose as an asset manager is to deliver strong risk-adjusted investment returns for our clients over time while having a positive impact on the environment and society through strong stewardship. We believe a commitment to sustainable investing is a necessary condition for investors to be successful over meaningful time horizons.

With a culture steeped in careful and objective analysis, knowledge sharing, and global collaboration, we see clearly why sustainability principles should inform our investment practices from the bottom up. In our view, sustainability and stewardship drive financial value and help us build strong relationships with our stakeholders, from clients and employees to tenants, borrowers, and investment partners.

As a fiduciary and steward of our clients' investments, sustainable investing is integral to our business and culture. We recognize that our clients' needs in this area are expanding and that their own stakeholders are demanding a formal adoption of sustainable investing practices. Our commitment to sound practices is consistent with our responsibility to help clients achieve their goals.

## Our beliefs

Manulife Investment Management's commitment to sustainable investing is driven by our beliefs.



### **Sustainability isn't a given**

Achieving sustainable outcomes requires asset managers and investors to display leadership around and commitment to principles of sustainability.



### **The future of sustainability and active investment management is interlinked**

As financial data and investment processes become increasingly automated, active investment management is necessary to deeply understand and harvest the value implicit in ESG factors.



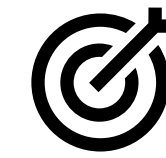
### **Sustainability helps drive financial value**

The ability to create financial value is affected by the health of our natural environment and the strength of the social infrastructure in our communities. As such, we believe that sustainability analysis is integral to understanding the true value of an investment.



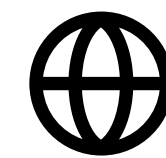
### **We hold ourselves to a high standard of stewardship**

Where we own and operate our assets, we believe it's our responsibility to pursue the best sustainability processes and standards for ourselves and our employees. We also take seriously our potential influence over the sustainability trajectory of companies we invest in.



### **We share sustainability goals with our clients**

We strive to provide transparency about our asset management process, including our approach to sustainable investing, in order to support our clients in responding to their own stakeholders.



### **Our commitment to stakeholders goes beyond financial performance**

While our commitment to our clients is paramount, as a global financial institution, we have a role in making a positive contribution to society in addition to our financial performance.



## How we help our clients

Our sustainable investing capabilities are broad, ranging from ESG integration to thematic investing. In some cases, we can tailor these capabilities to our clients' needs.

- We seek to support our clients' needs through our sustainability and investment expertise across a broad range of asset classes.
- We continuously seek to enhance our product offerings and our reporting in line with industry standards and best practices.
- We take a consultative approach to meeting our clients' sustainability objectives.
- We host sustainability education and training for our employees, clients, and other industry participants.

Where our clients include socially responsible investing considerations or screening requirements in their investment guidelines or mandates, we'll evaluate their parameters and determine if we're able to offer a version of the strategy customized to those guidelines.

## Robust communications

We work hard to understand the needs and desires of our clients through regular communication. In these discussions, we ask clients to reflect on their investment goals, and we'll specifically review sustainable investment goals as directed by individual clients.

Over the last couple of years, our clients have asked increasingly sophisticated questions about our approach to sustainable investing and stewardship. In light of these questions, we continue to revisit our current practices and iterate forward.

To ensure robust communications with our clients and to provide answers to their questions, we publicly report high-level information about our sustainable and stewardship practices through several avenues.

- **PRI assessment report**—We aim to publish [our annual PRI assessment report](#) in line with the PRI's reporting cycle.
- **ESG client reporting**—We continue to enhance our ESG reporting, which includes a variety of sustainability metrics for equity and fixed-income investors, following industry best practices in terms of transparency. The feedback we've received has been very positive, and we look forward to strengthening our reporting based on future suggestions from our clients. In private markets, we respond to information requests from investors with additional information on our investment practices, examples of ESG-related engagement, and updates we've made to our sustainable investing program.
- **SRI report**—On an annual basis, we publish this report providing an overview of our sustainability-focused research capabilities, updates on our active ownership practices, and details of our climate-related strategy and risk management.
- **Stewardship report**—On an annual basis, we publish a report focusing on our culture of stewardship, risk management, and how our active ownership practices are driven by our client and stakeholder focus.
- **Proxy voting dashboard**—We disclose our quarterly public markets proxy voting records, which can be accessed through our [institutional investor website](#).

On request from a client, we provide more detailed information about the engagement and proxy voting activities undertaken in relation to holdings in that client's portfolio. We may share specific engagement outcomes or a review of votes on shareholder proposals to provide information as to how we practice stewardship on behalf of an asset owner.

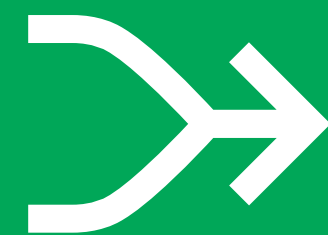


Our approach to  
*sustainable* investing

Our approach to sustainable investing rests on three pillars: integration, stewardship, and collaboration. While their expressions may vary by asset class and investment team, each pillar is fundamental to our investment approach and forms the basis on which we pursue our sustainability objectives and those of our clients.

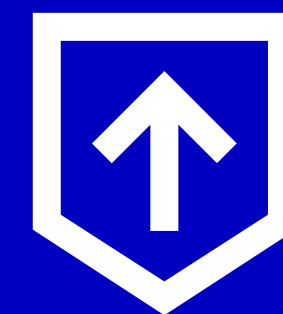
## Integration

- Incorporate material ESG considerations throughout the stages of our investment and lending lifecycles
- Strengthen the potential risk/reward profile of our clients' portfolios
- Exercise rights to encourage best practices in sustainability factor reporting and management (e.g., proxy voting)



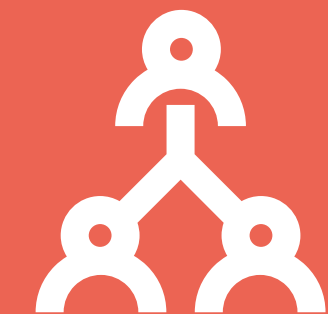
## Stewardship

- Engage with companies to mitigate ESG-related challenges and enhance ESG-related opportunities
- Protect and enhance the value of assets we own or operate



## Collaboration

- We actively collaborate with organizations across the world to amplify our impact on global, systemic issues
- This work allows us to expand the scope of our sustainability-focused activity while helping to build more resilient portfolios





## Integration

We combine active investment management with a deep understanding and integrated analysis of sustainability issues.

Our integration practices grow from the unique philosophies and approaches of our investment teams across asset classes. Each team's approach is informed by the global and regional perspectives of our 25 sustainability professionals.<sup>9</sup> This support extends across the investment, product, and asset class lifecycles and includes:

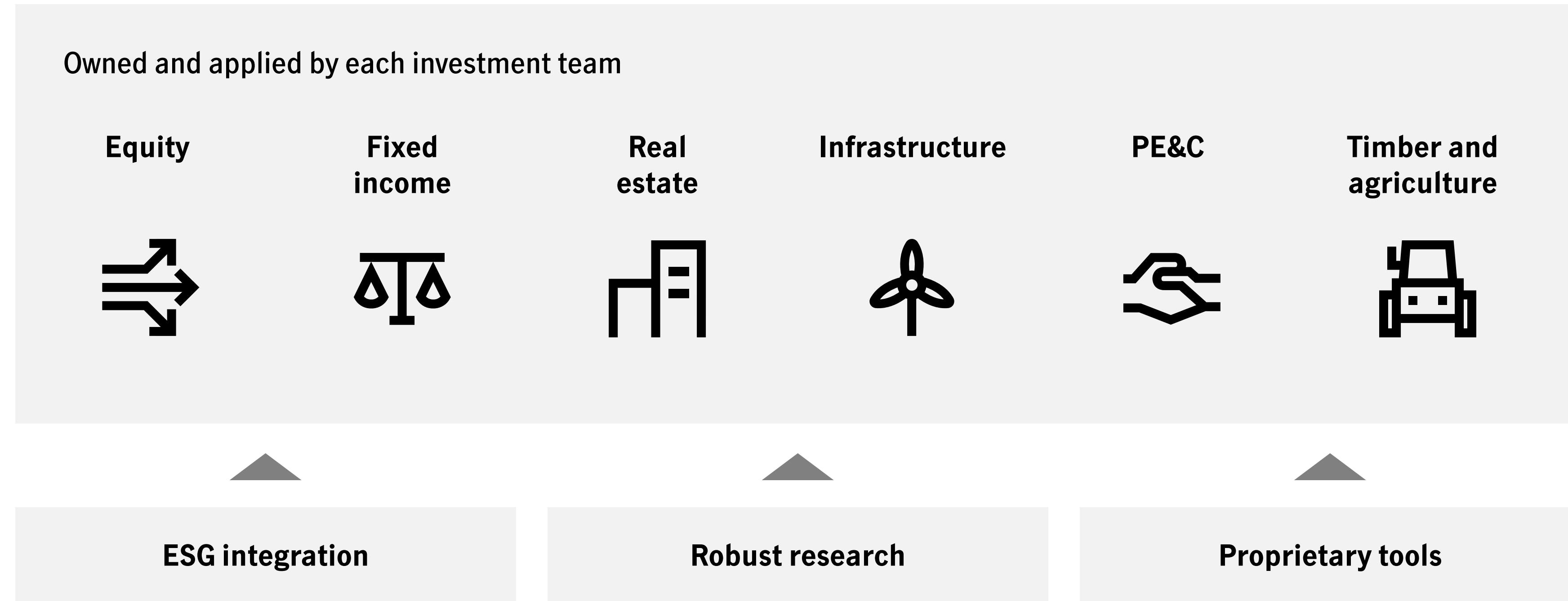
- Analysis of sustainability risks and opportunities
- Development of tools to aid sustainable investing
- Engagement with management teams
- Training and education
- Guidance on exercising rights associated with an asset class

### Internal assessments of our ESG integration efforts

To instill a sense of responsibility among our public markets investment teams, Manulife Investment Management has developed a proprietary, internal system to assess and monitor the level of each team's ESG integration efforts. At year-end 2021, over 90% of our AUM in public equity and public fixed-income strategies was fully integrating ESG factors under our proprietary assessment framework.<sup>1</sup> We understand that sustainable investing requires ongoing change and improvement, and we look forward to implementing a number of additional assessment criteria to evaluate and measure our investment teams' progress. Within private markets, ESG is 100% integrated across all our investment strategies.

<sup>9</sup> As of December 31, 2021.

## Sustainability is integrated as standard across all asset classes<sup>10</sup>



<sup>10</sup> For illustrative purposes only. We look to incorporate material ESG considerations throughout the stages of our investment and asset ownership lifecycles, taking into account the characteristics of the asset class and investment process in question, as well as industry and geography, among other factors. Each investment team operates in different markets and with different nuances to its approach to investing. Accordingly, each team integrates ESG factors into its investment process in a manner that best aligns with its investment approach. Integration of equity and fixed income by Manulife Investment Management Public Markets only.

## In addition to strategies that integrate ESG analysis,<sup>10</sup> we also provide tailored sustainability solutions

### Positive screening

Target companies or industries with more sustainable business models



### Negative screening

Industry sectors or companies excluded/divested to avoid risk or better align with values



### Thematic investing

Invest in companies that offer solutions to particular social or environmental challenges



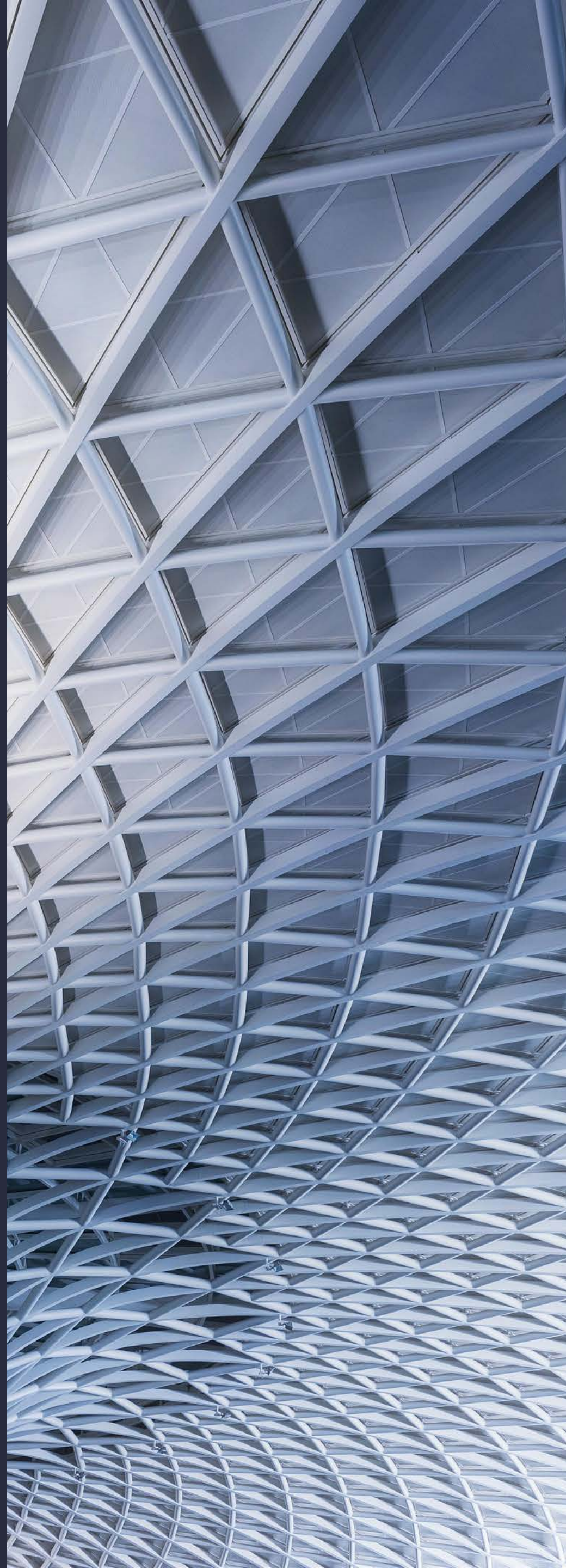
### Climate aligned

Target companies that are aligned with the temperature goal of the Paris Agreement



We also offer thematic funds built around sustainability topics. Similar to our other offerings, we consider the risk/reward profile of investments through consideration of ESG factors, but we also add positive and/or negative screens to these products that consider the relevant theme (e.g., companies reducing their greenhouse gas emissions). Generally, we attempt to avoid investments

that are poor performers on a factor while identifying and including investments that provide real-world solutions. We believe these solutions combined with our investment stewardship activities, can have a real-world impact and achieve sustainable outcomes for investors.



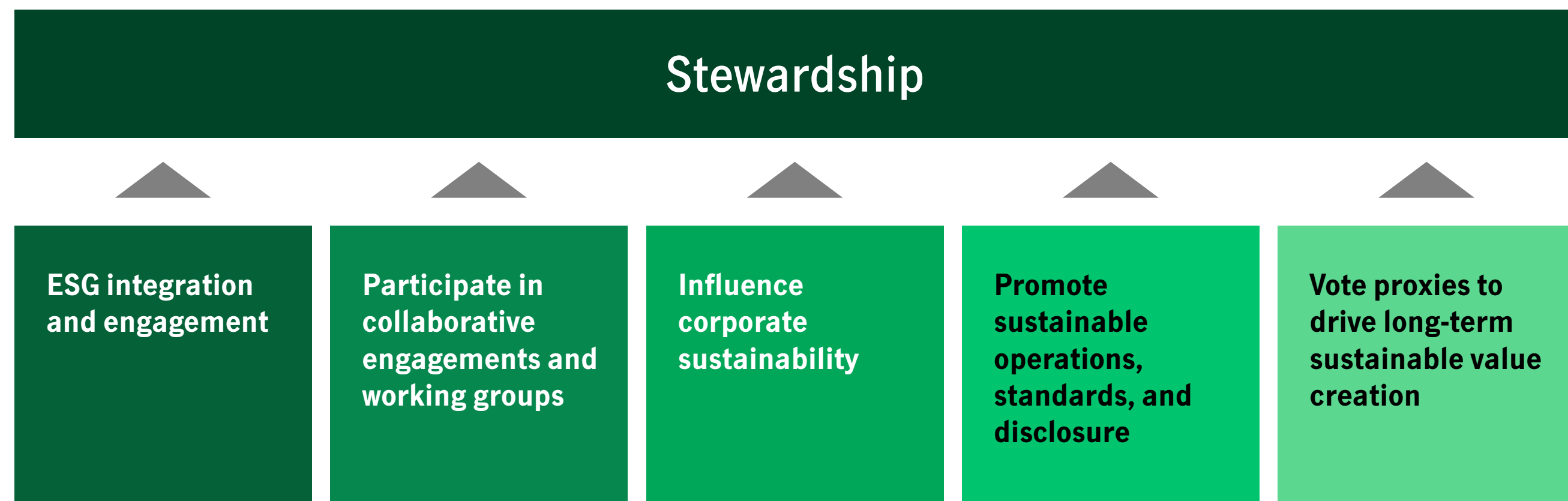
## Stewardship

We believe that [good stewardship](#) is fundamentally linked to good investing and is therefore an essential part of how we seek to enhance the resiliency of our clients' assets as well as the markets on which they depend.

In our management of timberland, agriculture, and real estate, our sustainability priorities are woven into our operations. Throughout the investment lifecycle of these asset classes, as well as in our infrastructure and PE&C portfolios, we continuously engage with our co-investors, investees, and business partners to encourage best practices, and we seek to monitor available ESG-related data to help ensure the efficacy of our approach.

In public equities and fixed income, one aspect of our stewardship efforts is to engage with company management. We use our findings from these engagements to help determine intrinsic valuation, and we also collaborate with issuers through these conversations to encourage best practices related to issuer-specific sustainability factors.

### Stewardship activities can advance sustainability objectives and operating strength



## From engagement volume to a focus on impact

The investment and sustainable investing teams have conversations with issuers throughout the year. Some of these conversations are focused on due diligence around strategy, performance, and management execution, while others focus on influencing firms to mitigate the impact of material sustainability risks.

Although we recognize that the focus on achieving sustainability outcomes through engagement can take months—if not longer—to achieve our desired results, we believe our focus on collaborating with firms to mitigate risk is beneficial to our portfolios and clients over the longer term.

**1,313**

total engagements in 2021

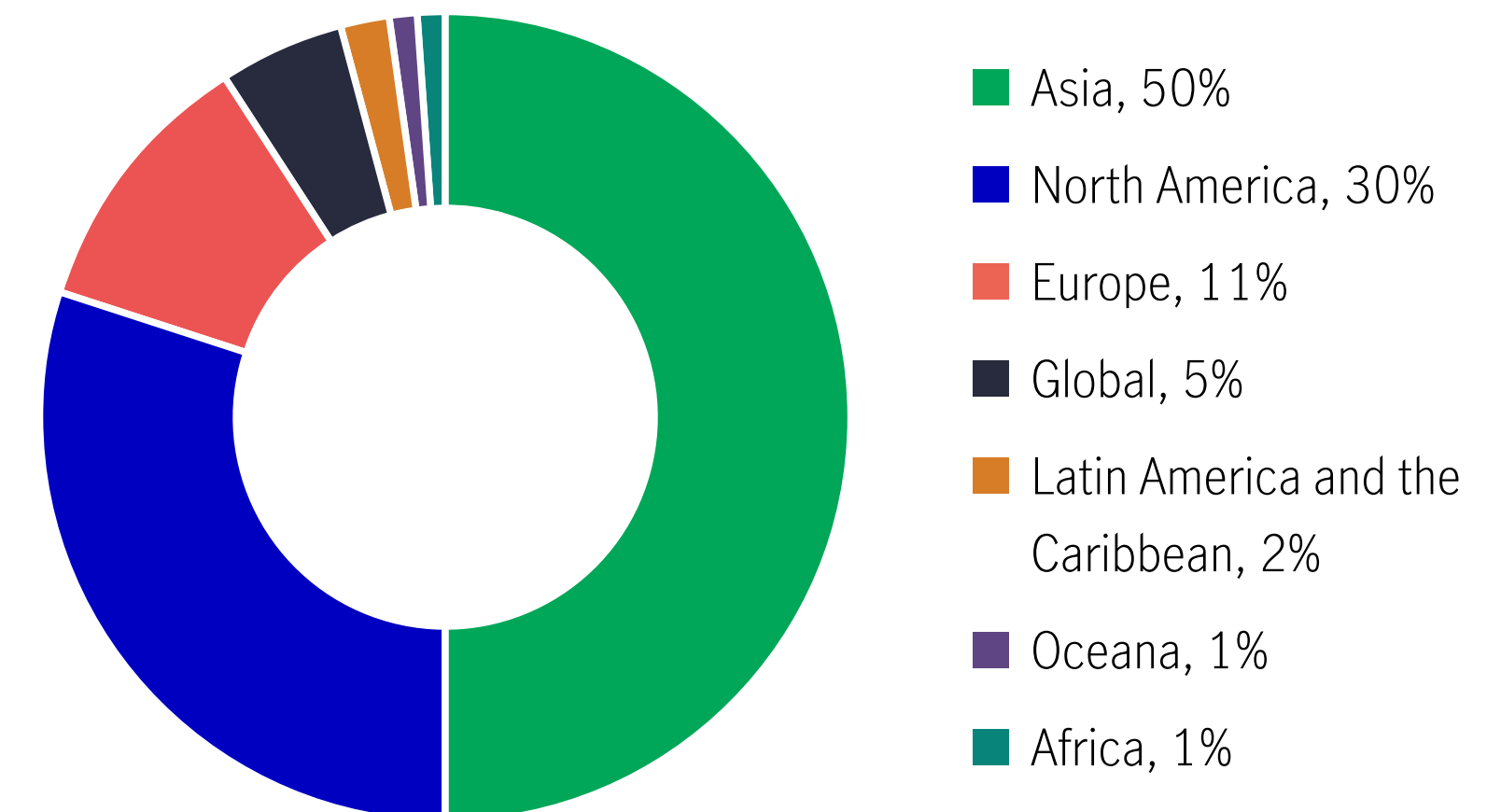
**805**

equity and fixed-income issuers engaged

**126**

influencers, regulators, NGOs, governments, and vendors engaged

### Engagements by region



As of December 2021. The global category includes vendors, NGOs, and influencers with a worldwide focus and coverage. Mexico is included in the Latin America and Caribbean category. Percentages may not add up to 100% due to rounding.



## Thoughtful execution of proxy voting rights

Manulife Investment Management's public markets teams execute proxy voting rights in accordance with our [global proxy voting policy and procedures](#). We take a thoughtful approach to voting that involves voting decision reviews and suggestions from our investment professionals and sustainability professionals through the lens of our proxy voting principles.<sup>11</sup> Our proxy voting principles outline our general approach to proxy voting matters, including director elections, executive remuneration, shareholder rights, and ESG issues. Some high-level voting trends for our funds across proposal types are listed below.

	Proposal	Number of proposals	Votes contrary to management	Reasons voted contrary to management
<b>Environmental</b>	Climate change action and reporting on climate change	51	84%	Disclosure would help shareholders assess governance and strategy related to the management of physical and transition risks associated with climate change
	GHG emissions	13	62%	Disclosure would help assess company strategy in the face of increasing costs associated with emissions
<b>Social</b>	Equal opportunity employment data	12	83%	Data would help shareholders assess representation through employee base and associated promotion rates
	Labor issues	25	88%	Reporting on harassment issues and rates of complaints will help shareholders assess company culture and associated risks
<b>Governance</b>	Executive compensation	4,458	15%	<ul style="list-style-type: none"> <li>• Misalignment between pay and performance</li> <li>• Lack of performance-based remuneration</li> <li>• Short vesting periods</li> <li>• Lack of rigor in performance metrics</li> <li>• Outsize pay versus peers</li> <li>• Discretionary payments</li> <li>• Problematic severance arrangements</li> </ul>
	Shareholder rights	180	92%	We generally support creation/enhancement of shareholder rights, including the ability to nominate and vote on directors, call a special meeting, and align voting rights with economic interest

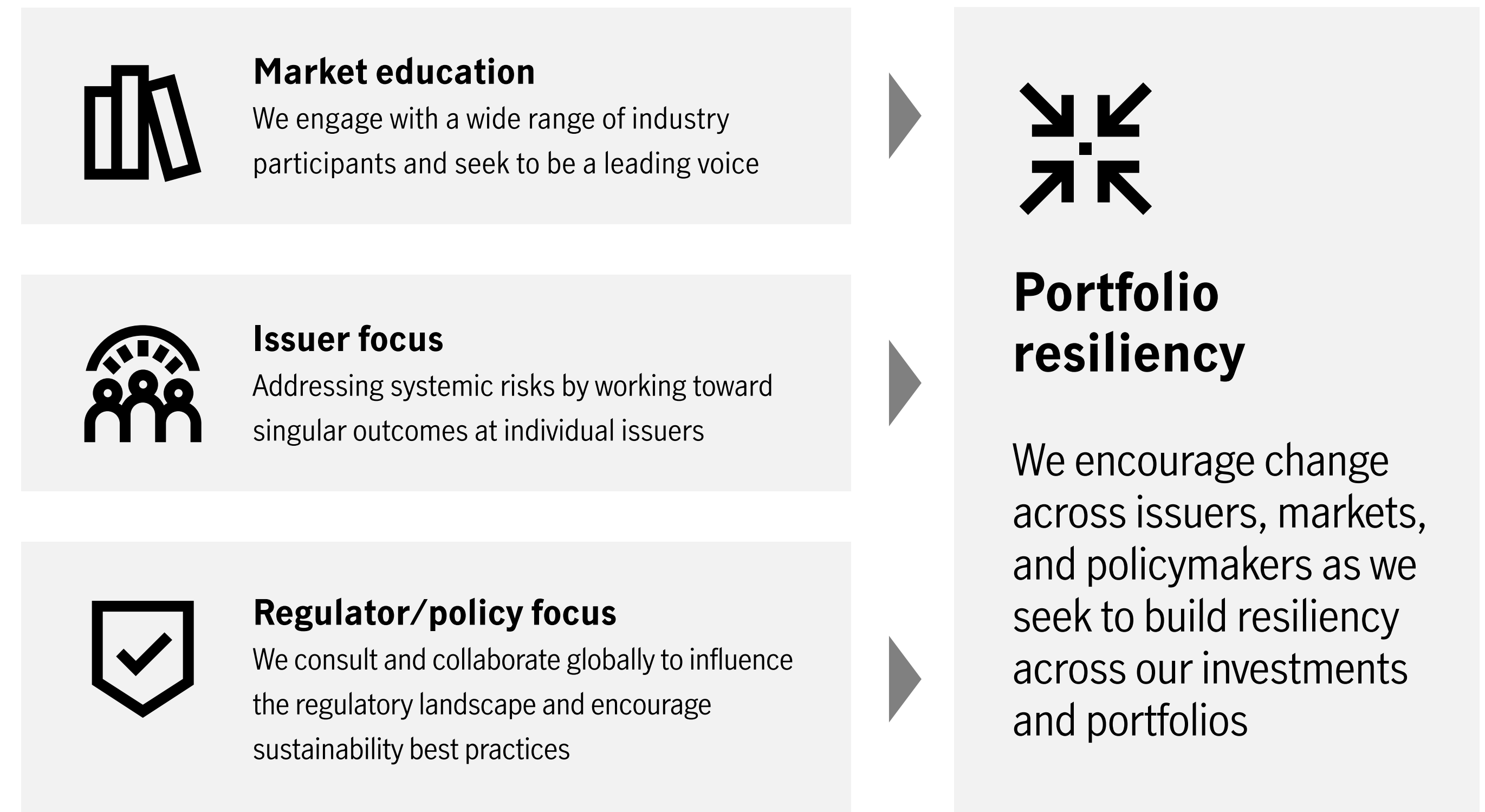
<sup>11</sup> Manulife Investment Management's proxy voting principles can be found in Appendix B of our [proxy voting policy](#).



## Collaboration

Around the globe, we participate in a wide variety of collaborative engagements with industry peers, nonprofits, NGOs, and supranational entities. This work allows us to expand the scope of our sustainability-focused activity while helping us build more resilient portfolios.

**We seek to amplify our impact through global collaboration**



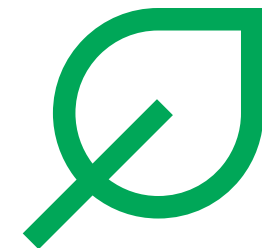


**In 2021, we contributed to and supported many collaborative initiatives**



## Climate

- Took on a lead role for a [Climate Action 100+](#) engagement
- Signed the [Global Investor Statement to Governments on the Climate Crisis](#)
- Joined [Climate Engagement Canada](#)



## ESG disclosure and transparency

- [Commented to the U.S. Securities and Exchange Commission](#) on proposed sustainability disclosure requirements
- Joined the [Emerging Markets Investors Alliance \(EMIA\)](#)
- Participated in the [Institutional Limited Partners Association \(ILPA\) ESG Assessment Framework](#) Working Group
- Appointed to be chair of the [PRI Infrastructure Advisory Committee](#)
- Appointed to the [PRI Real Estate Advisory Committee](#)



Please see the [appendix](#) for a full list of industry groups and initiatives through which we collaborate on systemic sustainability issues.



Sustainable investing  
in *action*

## Listed equities

AUM: \$148.6B<sup>12</sup>

Investment professionals: 155+<sup>13</sup>

### Overview and highlights

- In Q1 2021, we launched our first climate equity strategy, which invests in companies that we believe are making progress on mitigating climate change.
- We supported over 60% of shareholder resolutions, in aggregate, across all equity holdings in active and passive portfolios.

## Integration

The sustainable investing framework employed within our equity portfolios is an extension of our fundamental, bottom-up research process, and our equity investment teams are committed to the integration of ESG factor analysis in their approaches.

Each equity team bears responsibility for the evaluation of ESG factors throughout the due diligence and decision-making processes in the pursuit of attractive risk-adjusted returns and capital preservation objectives. Each team integrates ESG factors in a manner that best complements their own unique strategies. Although each team has a unique investment process, the overall approach to ESG integration is consistent for the asset class and occurs throughout the investment lifecycle of due diligence, risk monitoring, and active ownership. Through their fundamental research process, the equity teams derive a risk/reward profile incorporating ESG risks and opportunities that could manifest through fluctuations in cash flows in future periods.

<sup>12</sup> Manulife Financial Corporation, as of December 31, 2021. Excludes subadvised assets under management. Assets are shown in Canadian dollars. AUM includes certain equity and fixed-income portions of balanced investments. The methodologies used to compile the total AUM are subject to change. <sup>13</sup> Manulife Investment Management's global investment professional team includes expertise from several affiliates and joint ventures; not all entities represent all asset classes.

## Stewardship

As a signatory to various stewardship codes, we believe adherence to them demonstrates our belief that sustainable investing requires discipline and an appropriate governance framework. Our stewardship activities are evident in the extensive engagement discussions between the investment teams and the companies they work with. Complementing these engagements are escalation techniques deployed in the event of failure to make progress.

Our stewardship for the equity asset class includes both engagements and proxy voting. In 2020, we introduced outcome-based engagements with issuers, requesting they take specific actions linked to ESG factors. In 2021, we began to see the results of this approach, with benefits for the companies that responded positively to our engagement efforts and for investors through enhanced disclosures and reduced risks.

We take our active ownership responsibility seriously. In 2021, we voted against 11% of management proposals. We also supported over 60% of shareholder resolutions, in aggregate, across all equity holdings in active and passive portfolios. Our support for climate-related shareholder resolutions increased by 16 percentage points year over year, as highlighted in an industrywide [report by Ceres](#).

Our investment teams conduct active reviews of proxies, with over 400 deep reviews executed in 2021.

## Collaboration

We believe collaboration on systemic ESG issues is aligned with our fiduciary duty to our clients. Through collaborative engagements, in which we work with industry partners and sustainability-focused organizations, we seek to amplify our collective impact, reduce the noise of numerous points of view by speaking with one voice to key corporate management teams, and help companies focus on setting goals with meaningfully positive outcomes. In these efforts, we leverage the full range of knowledge available to us across our global platform.

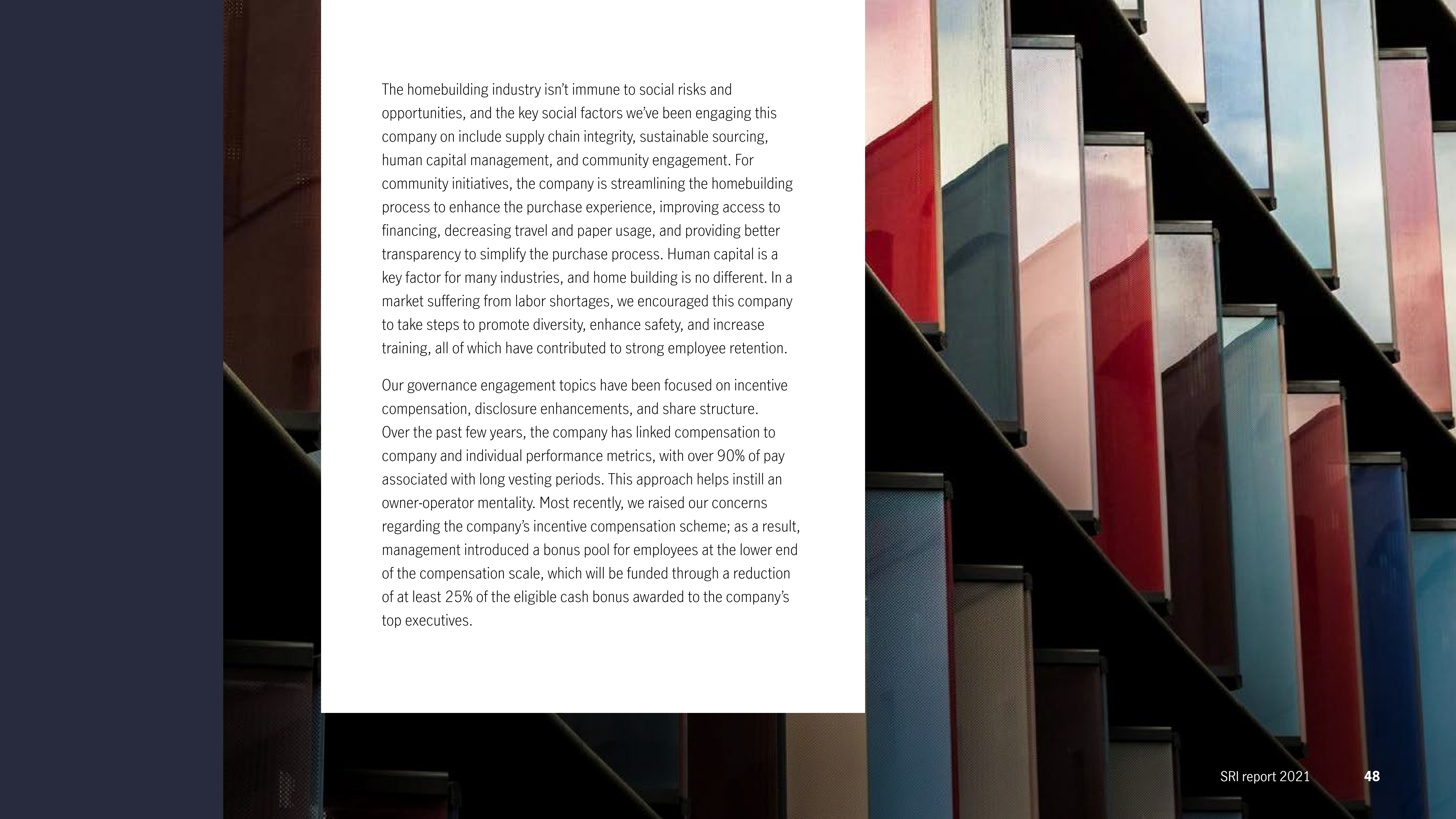
[PRI Listed Equity Advisory Committee](#)—As a member of the PRI Listed Equity Advisory Committee, we provide input, advice, and insight to support the design and development of an ambitious strategy for listed equities that reflects the need for action to address critical ESG issues.

# Case study

## U.S. homebuilder

We've held a U.S. homebuilder for over a decade. Historically, this company was lacking credible ESG disclosures, but through our interactions and encouragement, the company produced its first stand-alone sustainability report in 2021. As a long-term investor, we see the progress the company is making on its sustainability goals across each of our ESG pillars.

We believe this homebuilder is at the forefront of sustainability in its industry; for example, the company has a dedicated gray water program in place that recycles shower water through a home's septic system. This can reduce water demand in drought-prone areas and is a feature of interest to more environmentally conscious consumers. The company is also installing solar panels in new homes to reduce energy demand and using circular economy concepts to reduce building material and construction waste while simultaneously lowering its environmental impact.



The homebuilding industry isn't immune to social risks and opportunities, and the key social factors we've been engaging this company on include supply chain integrity, sustainable sourcing, human capital management, and community engagement. For community initiatives, the company is streamlining the homebuilding process to enhance the purchase experience, improving access to financing, decreasing travel and paper usage, and providing better transparency to simplify the purchase process. Human capital is a key factor for many industries, and home building is no different. In a market suffering from labor shortages, we encouraged this company to take steps to promote diversity, enhance safety, and increase training, all of which have contributed to strong employee retention.

Our governance engagement topics have been focused on incentive compensation, disclosure enhancements, and share structure. Over the past few years, the company has linked compensation to company and individual performance metrics, with over 90% of pay associated with long vesting periods. This approach helps instill an owner-operator mentality. Most recently, we raised our concerns regarding the company's incentive compensation scheme; as a result, management introduced a bonus pool for employees at the lower end of the compensation scale, which will be funded through a reduction of at least 25% of the eligible cash bonus awarded to the company's top executives.



## Fixed income<sup>14</sup>

AUM: \$258.7B<sup>15</sup>

Investment professionals: 170+<sup>13</sup>

### Overview and highlights

We were awarded A+ for sovereign, supranational, and agency and A for corporate financial, corporate nonfinancial, and securitized from the PRI on ESG integration in fixed income.<sup>3</sup>

Sustainability risk analysis is an integral part of our credit research process. Our fixed-income teams adapt their approach to ESG integration, stewardship, and collaboration with both internal and external stakeholders to meet the unique considerations of their respective strategies and the regions in which they operate.

### Integration

Our approach to fixed-income ESG integration is adapted to identify the material issues for each industry, issuer, country, and investment vehicle in which we invest. In addition to assessing the materiality of ESG risks, our fixed-income investment professionals seek to assess the timing of likely impact.

Our fixed-income teams use a variety of proprietary tools and frameworks as part of their ESG integration process.

- **Internal industry and company ESG ratings**—Our credit analysts have developed their own ESG scoring system that can be applied to each company and industry. When assigning scores, the teams consider multiple sources of data, including third-party data providers, company filings, and presentations by company management. Our analysts use materiality matrixes at an industry level for assigning industry and company scores, as well as company outlooks. This ESG assessment is completed by each analyst and is an extension of the fundamental research process that's consistent through our research teams.

<sup>14</sup> Manulife Investment Management defines fixed income in this context as public fixed income and may include corporate bonds, sovereign bonds, municipal bonds, preferred income, and securitized debt. The information in this section of the report relates to these types of fixed-income investments that are managed by Manulife Investment Management public markets. <sup>15</sup> Manulife Financial Corporation, as of December 31, 2021. Excludes subadvised AUM. Assets are shown in Canadian dollars. AUM excludes liability-driven investing assets and includes certain equity and fixed-income portions of balanced investments.

- **Proprietary sovereign ESG risk model**—A unique product of collaborative work between our global ESG research and integration team and our veteran sovereign debt and multi-sector fixed-income professionals, this model provides our portfolio teams with a dynamic top-down perspective on sovereign strengths and weaknesses and complements our ESG credit risk analysis template, which helps our teams assess the potential impact of ESG factors on spreads and default risk. Countries are classified by development status, and ESG assessments are generated relative to their peer group.
- **Municipal bond ESG framework**—Our municipal bond framework covers a dozen U.S. municipal sectors based on issuance volumes, including water, housing, and infrastructure. Our framework incorporates quantitative and qualitative inputs and enables our teams to evaluate each issuer with a range of 6 to 12 material factors contingent on the sector. The model uses an assessment scheme of 1 (low risk) to 4 (high risk) for each issuer, consistent with our ESG risk integration process for corporate credit.
- **Credit notching in Asia**—Our fixed-income team in Asia has a unique approach to credit analysis and notching, having developed an ESG scorecard to use in its regular credit research process to quantify how ESG factors affect credit rating decisions. The scorecard categorizes the ESG risk of an issuer into one of four risk-intensity rankings for each ESG factor based on various qualitative attributes. Credit analysts are empowered to determine if a different magnitude of notching is appropriate when considering potential mitigating factors such as government support, business diversification, and financial strength. The team will negatively notch the issuer credit rating for failure to address a material ESG risk, which ultimately implies a lower valuation.
- **Approach to ESG integration in securitized debt**—Our securitized debt team first focuses on the corporate entity by analyzing the originator of the security, either its sponsor, servicer, or trustee, as applicable. This helps the team understand how corporate policies regarding lending practices and delinquencies can affect the associated collateral; where applicable, we rely heavily on the opinion of our credit team’s analysis to inform our view. We then use this framework to form a basis of opinion for similar sponsors in the same industry and for which a corporate ESG rating doesn’t exist. Furthermore, we evaluate the collateral in terms of geographical concentration and regulatory risk.
- **Provincial bond ESG framework**—In 2021, the ESG team collaborated with the Canadian credit research team to initiate the further development of the ESG integration process for provincial and municipal bond issuers. Due to the lack of relevant data from various ESG service providers, we developed a proprietary framework to assess ESG risks and opportunities for a majority of the provincial and municipal issuers in the Canadian fixed-income market. Our ESG framework for Canadian subsovereign issuers recognizes the differences between government and corporate entities and is tailored for the analysis of Canadian subsovereigns. In 2022, our provincial model will be strengthened to incorporate more raw data from the various provinces to enhance our assessment.

## Delivering sustainable solutions in fixed income: Sustainable Asia Bond Strategy

Our Sustainable Asia Bond Strategy, launched in 2020, seeks to identify and invest in debt securities that demonstrate strong or improving sustainability attributes.

**ESG integration**—We believe that ESG considerations are valued inefficiently, and we fully incorporate these considerations into our time-tested four-step investment process

**Normative screening**—Avoiding negative impact by actively excluding companies involved in, for example, controversial weapons, alcohol, tobacco, gambling, adult entertainment, and UN Global Compact violators

**Positive tilts**—Active focus on best-in-class\* issuers with lower ESG risk intensity; issuers are identified by our analysts based on track record and forward-looking stance

**ESG-themed bonds**—Active exposure to ESG-themed bonds (currently 33%), such as green, social, and sustainability bonds; supporting market innovation in new key performance indicator-linked, transition, and blue bonds

**Active stewardship**—Engagement at least once a year with all portfolio companies; focus on working with companies toward sustainability outcomes

**Positive impact**—Pursuing positive impact through three main portfolio themes: climate change mitigation, aging population support, and sound governance promotion



Source: Manulife Investment Management, December 31, 2021. For illustrative purposes only. We consider that the integration of sustainability risks in the decision-making process is an important element in determining long-term performance outcomes and is an effective risk mitigation technique. Our approach to sustainability provides a flexible framework that supports implementation across different asset classes and investment teams. While we believe that sustainable investing will lead to better long-term investment outcomes, there is no guarantee that sustainable investing will ensure better returns in the longer term. In particular, by limiting the range of investable assets through the exclusionary framework, positive screening and thematic investment, we may forego the opportunity to invest in an investment which we otherwise believe likely to outperform over time.

\*Best-in-class ESG is industry terminology referring to an investment approach that selects companies that are leaders from an ESG perspective.



## Stewardship

We engage with issuers on various ESG topics, which gives us insight into their respective business models, strategies, and risk profiles. The representatives with whom we speak can differ by fixed-income asset type. With corporate bonds, we seek to interact with senior management teams. When engaging sovereign and municipal bond issuers, we'll speak with a government representative in an environmental or financial role and local finance and elected officials. For securitized debt, we engage management teams, investment bankers, rating agencies, and industry trade associations. Through our engagements as bondholders, we seek to protect and grow invested capital while also supporting the resiliency of the capital markets.

We engage issuers through the investment lifecycle and aim to maximize our influence through strategically planned engagements. By engaging with companies when they need to fund-raise, we seek to influence issuers to commit to adopt best practices in sustainable risk mitigation. Through credit events, we may also have the opportunity to renegotiate terms, or we may emerge from the event with equity and voting rights that we exercise to protect our interests and those of our clients.

We continue to build our influence with debt issuers, and we're finding that bondholders may not be taking full advantage of their rights to advance sustainable outcomes; for example, we've heard from some issuers that they're generally not engaged by debt holders on sustainability risks and opportunities, and we're encouraged by the fact that they're responsive when we approach them.

# Case study

## U.S. insurer addresses ESG disclosure and strategy

Our Japan fixed-income team started to engage with a large U.S. insurer in 2018 whose MSCI ESG rating was B at the time. Our team noted that the company's ESG strategy and disclosure were somewhat lacking, and the firm's CFO acknowledged that he wasn't aware of their MSCI ESG rating. The company worked on our comments and subsequently formulated a disclosure and performance strategy. As of this writing, the firm dedicates several pages of its investor relations presentation to ESG disclosure, and its MSCI ESG rating has improved to a BBB rating. The CFO thanked our team and said that our engagement was the catalyst for the company to think about improving its ESG activities.





## Collaboration

We engage collaboratively with other investors, industry experts, and issuers to discuss systemic, secular risks. We may also join a collaborative effort as a means of escalation regarding risks at a single issuer.

- **[Credit Roundtable](#)**—We're a member of the Credit Roundtable, an association of corporate bond market participants focused on education, outreach, and advocacy designed to give debt holders a stronger voice with debt-issuing companies.
- **[PRI Sovereign Debt and Sub-Sovereign Debt Advisory Committees](#)**—Fred Isleib, Director, ESG research and integration, and Saad Qazi, associate portfolio manager, are on the PRI Sovereign Debt and Sub-Sovereign Debt Advisory Committees, respectively, comprising representatives from PRI signatories focused on promoting more systematic and transparent ESG integration in sovereign/subsovereign debt investing. In their role as committee members, they contributed to published papers, including:
  - **Sovereign debt engagement**—Assessing current market practices and identifying opportunities for investors to better engage with sovereign issuers
  - **ESG integration in subsovereign debt**—Highlighting that commercial and regulatory incentives for U.S. municipal bond investors to formalize consideration of ESG factors are growing
- **[TCFD](#)**—Our Japan fixed-income team is an active participant in the Japanese government-backed TCFD Consortium, which fosters valuable disclosure of climate-related risks by member companies.
- **[EMIA](#)**—We're a member of EMIA, a nonprofit organization that enables institutional emerging-market investors to support good governance, promote sustainable development, and improve the adoption of ESG best practices. We're part of EMIA's debt and fiscal governance working group, which brings together institutional investors, policy experts, and government finance officials with the goal of advancing fiscal transparency and sustainability in emerging markets. We're also a member of the organization's agriculture, ESG, and extractive industries working groups.

## Multi-asset solutions

AUM: \$217.2B<sup>16</sup>

Investment professionals: 40+<sup>13</sup>

As allocators of capital, the multi-asset solutions team (MAST) has taken a top-down approach to constructing diversified portfolios across multiple asset classes and sectors, combining dynamic asset allocation with holistic risk management. The team is focused on evaluating potential opportunities and risks in order to achieve tailored investment outcomes and solutions on behalf of clients. The analysis and integration of ESG factors are a natural complement to the research put forth by MAST. Further, the team believes ESG factors play a meaningful role in the evolution of capital markets and, as such, embraces the principles of sustainability that help drive improved outcomes for stakeholders.

In 2021, the MAST made significant advances in the integration of ESG analysis in its investment approach. Examples of ESG analysis in the investment process include the incorporation of climate risk analysis in the forecasts of GDP, inflation, and interest rates. These macro factors are translated into five-year capital market assumptions, which form the building blocks of top-down investing. The team incorporates ESG data points from external sources into its own portfolio construction tools—

such as quantitative optimizers that are linked to specific asset classes—as a means of evaluating the materiality of each data point. The team has also historically executed fundamental deep dives into Global Industry Classification Standards sectors to identify fundamental drivers within those sectors. As an evolution of this process, the team is fusing these sector reviews with an ESG assessment of material risks and opportunities to develop wider viewpoints of asset risk and reward profiles.

The investment process for the MAST has four pillars: traditional fundamental analysis, macroeconomic reviews, sentiment, and technical analysis. The team believes that ESG analysis should interact with these pillars today as well as in the future.

In a multimanager model, the team's visibility into the sustainability approach of underlying managers is enhanced through manager research, including a risk management tool that identifies ESG characteristics of underlying investments.

Among several other factors in strategic implementation, the team evaluates the investment strategies of underlying mutual funds and ETFs with a focus on sustainability.

<sup>16</sup> Manulife Financial Corporation, as of December 31, 2021. Excludes subadvised AUM. Assets are shown in Canadian dollars. AUM includes \$5.3 billion in nondiscretionary advice for the Manulife general account.

## Infrastructure

AUM: \$13.7B<sup>17</sup>

Investment professionals: 22<sup>18</sup>

### Overview and highlights

- The infrastructure team has over \$1.24 billion in renewable energy equity investments, including wind, solar, and battery storage.<sup>12</sup>
- For our annual [GRESB Infrastructure Fund Assessment](#), we received management scores of 30/30 and 29/30 for our first and second funds, respectively.
- At the start of 2021, John Anderson, our global head of corporate finance and infrastructure, was appointed as a new signatory representative (1 of 5) to the [PRI Infrastructure Advisory Committee](#).

## Integration

We combine traditional investment analysis with a deep understanding and integrated analysis of sustainability issues.

The importance of sustainable investing in infrastructure is due to the long-term nature of the assets and the investment horizon. Ultimately, we believe that active oversight of ESG risks and opportunities in our infrastructure investments is supportive of sustainable returns over the long term. Our team's integration practices include the following key steps.

- 1** We use our proprietary ESG due diligence process, which is based on a combination of external resources from SASB and the PRI as well as our own expertise.
- 2** We document ESG due diligence in an investment memorandum that's evaluated during the investment committee approval process.
- 3** Once an investment is made, we continue to monitor material aspects that might affect an asset or company, including ESG factors.
- 4** We communicate ESG-related information regularly to our investors through our quarterly reports, at annual general meetings, and on an ad hoc basis when requested by investors.

<sup>17</sup> AUM data is on a fair value basis based on a combination of independent third-party appraisals and sponsor valuations as of December 31, 2021, and is reflected in Canadian dollars. Data includes assets managed by Manulife Investment Management and affiliates on behalf of Manulife's Canadian and U.S. general accounts, and also certain third-party investors. AUM does not include unfunded commitments. <sup>18</sup> Investment professionals includes individuals who manage assets on behalf of both the Manulife general account and external third parties.



## Stewardship

We work selectively with entities in which we invest to help them become more sustainable in the context of our investment horizon.

Our infrastructure team typically seeks to monitor and influence an investment through a board seat, protective controls, or governance or a combination of these. These rights enable the investment team to exert influence regarding key decisions made with respect to a company's commercial or financial operations, as well as management and oversight of relevant sustainability risks and opportunities. Board seats, in particular, allow us to engage directly in the activities of a given investment.

To enhance our ESG monitoring practices, our sustainable investing team in private markets is implementing an annual ESG monitoring process to collect ESG-related data across our infrastructure portfolio. The data collected during the monitoring process will be used to track and measure the ESG performance of our investments.

## Collaboration

We work with a range of market participants, regulators, and NGOs to address global sustainability challenges.

The infrastructure team recognizes the importance of collaborating with other investors and industry experts, both to gain insight into evolving best practices and to contribute to the development and adoption of ESG integration globally. With this in mind, the infrastructure team has been involved in the following initiatives.

- [PRI Infrastructure Advisory Committee](#)—As of the beginning of 2021, John Anderson, our global head of corporate finance and infrastructure, sits on the PRI Infrastructure Advisory Committee as a representative for Manulife Investment Management. The committee advises the PRI on the overall strategic direction of the infrastructure workstream and supports the delivery of key projects and initiatives within the workstream.
- [Long Term Infrastructure Investors Association \(LTIIA\)](#)—Recep Kendircioglu, our vice president and senior managing director of power and infrastructure, sits on the board of the LTIIA. The LTIIA works with a wide range of stakeholders—infrastructure investors, policymakers, and academics, among others—to enable the long-term, responsible deployment of private capital in public infrastructure projects around the world.

# Case study

## Nature-focused approach to renewable energy projects

Beginning in 2021, and completed in early 2022, we partnered with a recognized solar industry leader in the United States to bring cost-effective renewable energy to communities across the country. The company takes a unique project development approach, focusing on designing utility-scale solar power projects with nature in mind to create environmental, social, and economic benefits while pursuing attractive risk-adjusted returns for its investors.

As opposed to demolishing land to build solar farms, the company works with local farmers on the co-development of clean power generation and regenerative agriculture on project sites. Land, vegetation, and livestock are managed together with solar power projects to increase biodiversity, sequester carbon, revitalize soil organic matter, and improve root health and water quality while generating renewable energy.

While the investment presents the opportunity to meet the rising demand for clean energy, it also allows us to work closely with a partner that lives our value of good stewardship. Investing in biodiversity is a crucial lever to help preserve the world and its natural resources.

## Private equity and credit

AUM: \$23.6B<sup>19</sup>

Investment professionals: 60<sup>18</sup>

### Overview and highlights

- In 2021, we kicked off a formal ESG monitoring process to measure the ESG performance of our investments in PE&C.
- We contributed to ILPA's ESG Assessment Framework, a tool designed to help limited partners (LPs) evaluate and benchmark general partner (GP) responses to due diligence efforts, inform goal-setting conversations with GPs, and measure ESG integration progress over time.

### Integration

Within PE&C, we use sustainability analysis in our process of accounting for potential risks and opportunities.

Our PE&C teams conduct an ESG assessment of each investment as part of their due diligence and incorporate findings into their fundamental analysis; for our co-investments, secondaries, senior credit, and junior credit investments, our teams also assess the ESG capabilities of the sponsor, when applicable. To inform their assessments, our teams use an internally developed ESG due diligence tool, which is based on external resources from the SASB standards and the PRI as well as our own expertise.

The outcomes of ESG due diligence are documented in the final investment memorandum, which is presented during the investment committee approval process. ESG documentation in the investment memorandum includes a summary of material sustainability factors, identification and discussion of risks and opportunities, areas for improvement, areas not assessed, and areas in which the portfolio company is already well advanced.

Once an investment is made, our teams work closely with their investment partners to monitor all material items that might affect the investment or company, including sustainability factors. The investment teams leverage a variety of tools such as shareholder rights, board seats, and our broader relationships with investment partners, who typically control the underlying portfolio companies, to ensure material sustainability issues aren't overlooked.

<sup>19</sup> AUM data, as of December 31, 2021, and is reflected in Canadian dollars. Data includes assets managed by Manulife Investment Management and its affiliates on behalf of Manulife's Canadian and U.S. general accounts, and also certain third-party investors. AUM includes funded committed capital. The total value includes \$6.3B of unfunded commitments.

## Stewardship

During the holding period of our PE&C investments, we aim to work with our investment partners and portfolio companies to support sustainability objectives.

To enhance our active ownership practices, we developed an ESG monitoring process. The outcomes of this process will allow us to measure ESG performance across our PE&C portfolios. The data we collect may further enhance our own practices and allow us to report to investors on ESG-related activities and metrics.

We seek to actively engage with the General Partners of funds that we invest in, and GPs and other equity partners for our direct investments. Typical conversation topics may include the firm's recent investment activities, notable business updates, and personnel and quarterly performance updates. If we have board seats or board observer rights, we participate in quarterly board meetings as well as any interim update calls. In our fund investments, we may participate in key decisions as a member of the LP advisory committee (LPAC), which gives our team access to all key decision makers at the ownership and management levels. When holding a seat on an LPAC, we review matters related to conflicts of interest, waivers of LP restrictions, and any other related matters. Although we may be one investor as part of a consortium, most significant decisions are made at the board or member level with the full support of all parties.

## Collaboration

We work with a range of market participants, policymakers, regulators, and NGOs to address global sustainability challenges.

The PE&C teams recognize the importance of collaborating with other investors and industry experts in order to gain insight into evolving best practices and to contribute to the development and adoption of ESG integration globally.

In our capacity as an institutional investor, we seek to engage in constructive dialogue with firms and organizations on a variety of investment matters, with the goal of enhancing long-term investment value. When appropriate, we may engage with companies to seek positive change in their disclosure, management, and performance related to ESG factors.

# Case study

## Social considerations in senior credit

When investing in senior credit, we place a strong emphasis on preinvestment ESG due diligence. Unlike majority equity owners, senior lenders typically have limited influence concerning a company's ESG risks and opportunities postinvestment. This front-end investigative work is particularly important when evaluating investments in potentially controversial industries.

In one instance, we evaluated an investment in a company that provides products for outdoor recreational firearm enthusiasts. During our due diligence, we discovered the firm designed and supplied shooting accessories, with a focus on firearms that included AR-15s, AK-47s, and Glocks. Such firearms aren't traditionally used for hunting or sport shooting. As such, we determined there was a material social risk associated with the investment and decided not to move forward with the deal.

In another instance, we evaluated an investment in a provider of outpatient substance abuse treatment that specialized in opioid addiction. While a potentially controversial area of investment, our team undertook extensive due diligence around the treatment method and potential adverse social impacts of the treatment and found that the company's treatment methods are considered best practice. Our investment team decided to move forward with the investment as they believed the company had strong management controls in place and viewed the company as being part of the solution to the U.S. opioid epidemic.

## Real estate

AUM: \$24.4B<sup>20</sup>

Investment professionals: 95+<sup>18</sup>

### Overview and highlights

- Our global real estate portfolio was recognized as a [GRESB Sector Leader](#), ranking first in its peer group.
- In response to promoting healthy buildings, our real estate portfolio in North America received the [Fitwel Viral Response](#) entity-level certification with distinction.
- We developed sustainable development guidelines for new construction in real estate equity.
- We launched two new proprietary building standards in our real estate portfolio—climate change resilience and GHG management—to help our properties mitigate climate change.
- 100% of our Canadian-managed fund properties continued to hold a green building certification.<sup>21</sup>
- We set a GHG-reduction target of 80% by 2050,<sup>22</sup> and we initiated a GHG management working group to implement a carbon reduction strategy.

## Integration

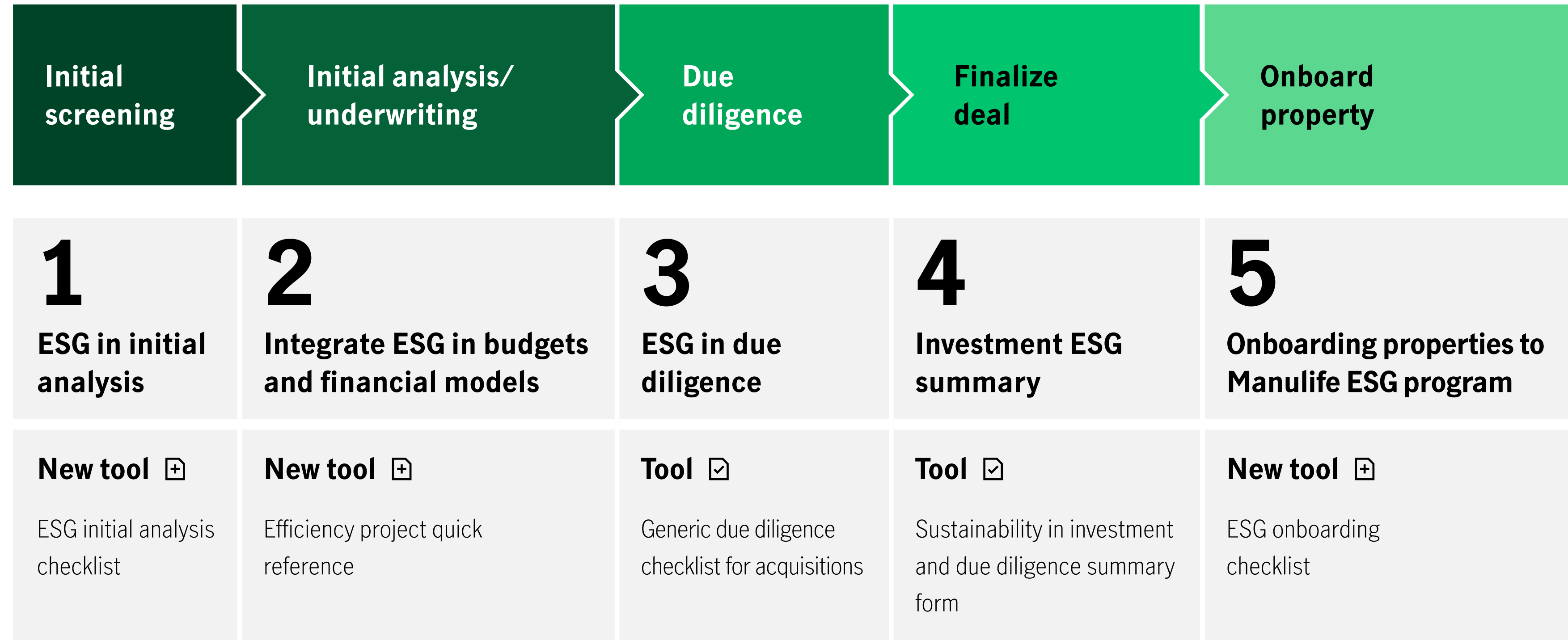
We incorporate ESG considerations into all our investment management and operational practices across the real estate value chain.

Our real estate investment teams have access to an ESG tool kit that helps them assess both environmental and social factors that are potentially material to new acquisitions. This provides both a quantitative score that's based on the walkability of the asset location, proximity to outdoor green spaces, indoor health amenities, climate risk, and a qualitative assessment that's based on health and safety management programs, electrical vehicle charging, bicycle storage, shower facilities, and indoor air-quality features, such as demand-controlled ventilation, sensors, and monitoring.

<sup>20</sup> AUM data is on a fair value basis as of December 31, 2021, and is reflected in Canadian dollars. Data includes assets managed by Manulife Investment Management and affiliates on behalf of Manulife's Canadian and U.S. general accounts, as well as certain third-party investors. The real estate equity team manages \$1.1 billion in AUM on a discretionary basis. The methodologies used to compile the total AUM are subject to change and may not reflect regulatory AUM as reported on certain affiliates' Form ADV. <sup>21</sup> This covers a range of certification programs, including BOMA BEST, LEED, Energy Star, and Fitwel. <sup>22</sup> Target is an intensity-based reduction of scope 1 and scope 2 emissions for the properties that are within our operational control.

# Real estate ESG integration tool kit

## High-level investment process



For illustrative purposes only. New tools were added in 2020.

At Manulife Investment Management, we recognize that physical climate risk has progressively become a critical real estate issue. As the impacts of climate change are increasingly felt worldwide, it's vital for our investors, employees, and tenants to understand the importance of addressing the issue.

While we continue our efforts to mitigate climate change by transitioning our operations and supply chain to low carbon, we also recognize that we must build sustainability within our real estate portfolios and across our management practices.

## Stewardship

As building owners and operators, we follow five sustainable real estate commitments:

- 1** Minimize our environmental impact
- 2** Support health and wellness
- 3** Engage our stakeholders on sustainability
- 4** Promote responsible business practices
- 5** Be accountable for our performance

Our [sustainable real estate framework](#) outlines our five sustainability commitments and details our key areas of focus; we then validate practices and performance through public reporting and industry benchmarking. We continue to advance sustainability initiatives for investments, asset management, and new developments. To ensure that we're accountable to all stakeholders, we report on our performance using globally accepted standards and disclosure frameworks, including PRI, SASB, and GRESB.

Across our global portfolio, we set energy-reduction targets, as well as targets for water use and waste diversion and, in 2020, we set a GHG emissions-reduction target of 80% by 2050.<sup>23</sup> We report on progress toward these targets annually in our [publicly available reports](#).

<sup>23</sup> Intensity-based target of scope 1 and scope 2 emissions for assets under our operational control.

## Expanding our sustainable building standards: integrating climate change and resilience

Climate change is one of the greatest challenges we face today. For our buildings and our communities, it poses both physical and transitional risks. To help guard against these risks, in 2021 we developed two new sustainable building standards: a climate change resilience standard and a GHG management and planning standard.

To develop the climate change resilience standard, we used forward-looking, third-party climate risk data to evaluate our global portfolio's exposure to climate and extreme weather risks. These risks include floods, sea-level rise, extreme windstorms, wildfires, heat stress, water stress, and earthquakes.

We also inventoried our entire portfolio for property resilience, the presence of features and practices—such as risk awareness, resilience management, emergency management, business continuity, and building attributes—that help mitigate these climate risks.

This robust assessment allowed us to better understand the risks our properties are facing—and how well they might handle them. The resulting climate change resilience sustainable building standard incorporates risk and resilience practices into property operations. It enhances property resilience through a range of initiatives, including education, emergency planning, and resilience assessments and improvements.



To support our property teams with this new standard, we provided companywide training and a property resilience tool kit. The tool kit helps teams screen and prioritize resilience improvements based on their climate risk exposure and existing resilience measures and practices.

To further enhance our sustainable building standards, our carbon management working group developed a GHG management and planning standard. The goal of this standard is to help our property and asset management teams create realistic emissions-reduction plans in order to meet our long-term GHG emissions-reduction target of 80% by 2050.

Integrating education, opportunity identification, and emissions-reduction planning into operations allows our property and asset teams to reassess the practical and financial implications of reduction pathways. Expert guidance and proprietary tools will help each asset build its decarbonization plan and budget, which we plan to roll out globally in 2022.

Realizing our ambition to manage our carbon impact is more important than ever. Reducing our carbon footprint is not only the right thing to do, it's also critical to our long-term success and to the global transition to a low-carbon economy.

## **Collaboration**

We work with a range of market participants, policymakers, regulators, and NGOs to address global sustainability challenges.

## **Healthy buildings**

Supporting the health and wellness of our tenants and employees is one of the core commitments in our real estate sustainability framework, which we established in 2017.

Since then, we've been very active in this space, and even more so in the context of the COVID-19 pandemic. In 2020, we created a task force charged with reviewing our existing policies and procedures with respect to mitigating risks due to the virus in our office properties. We engaged Dr. Joseph G. Allen from the Harvard School of Public Health, who helped us develop our first "Return to office playbook." This provided a clear overview of how our buildings should be managed amid the rapidly evolving conditions and included guidelines on employee behavior, communication standards, and operational system upgrades.

We believe the COVID-19 pandemic has elevated the expectation for healthy indoor environments. In another example of our work, we partnered with Institutional Real Estate, Inc. to host Dr. Allen for a discussion on [healthy buildings](#).

At this event, we addressed how centering decision-making around buildings to prioritize people presents a massive opportunity for developers, investors, and tenants alike. We also discussed how building owners and investors can prepare their workplaces for a healthy and safe return, as well as the [economics of healthy building investments](#).

## **Sector leadership: GRESB ranks global real estate portfolio first in peer group**

In 2021, Manulife Investment Management achieved a new milestone: We were recognized as a [GRESB Sector Leader](#), ranking first in our peer group for our global real estate portfolio.

GRESB is the global standard for assessing the ESG performance of real estate companies and funds. By scoring and benchmarking a collection of standardized data, GRESB provides investors with transparency on how well companies and funds are managing material ESG issues, such as energy consumption, GHG emissions, corporate governance, and employee and tenant satisfaction and well-being.

In 2021, over 1,500 entities participated in the GRESB assessment, which represents nearly 117,000 individual assets with a total value of US\$5.7 trillion. Sector leaders are the best performers across the entire GRESB assessment, categorized by sector, region, and nature of ownership.

Our global portfolio covers our direct real estate investments around the world, including all funds and our general account. GRESB evaluates our management of these assets through the formal ESG policies, processes, and programs we have in place. More important, GRESB rates our assets' actual ESG performance to determine the impact of our efforts and initiatives.

Our 2021 results highlight the strength of our ESG integration practices. Contributing to our top ranking were portfolio-wide reductions in GHG emissions and energy and water consumption, as well as improvements in waste output and diversion.

Manulife Investment Management has participated in GRESB since 2018, and the annual assessment is a crucial part of our ESG strategy. It provides ongoing transparency to our investors, allows us to better understand our strengths, and helps identify areas in which we can continue to improve. We look forward to continued participation in 2022.

# Timberland

AUM: \$14.3B<sup>24</sup>

Investment professionals: 20+<sup>18</sup>

## Overview and highlights

- Through our substantial forest carbon sequestration, we continued to help Manulife achieve net zero emissions in its operations.
- We acquired nearly 90,000 acres of forest in Maine for Manulife's general account, making our first impact-first investment for the primary purpose of carbon sequestration and winning Agri Investor's Americas Deal of the Year Award.
- We made two timberland investments in Brazil, returning to the country after a six-year hiatus.
- We achieved third-party verification of our GHG inventory.
- We continued to achieve 100% sustainability certification for all our global timberland.
- We conducted five TCFD climate scenario analysis workshops with our global timberland operations.
- We applied our proprietary sustainability tool kit in due diligence for every acquisition.

- We published award-winning thought leadership on biodiversity in our article "Valuing biodiversity: the tools at our disposal," in connection with our participation in the TNFD.
- We launched Manulife's carbon principles, insisting on high-integrity carbon project development under the auspices of our carbon standards working group.

## Integration

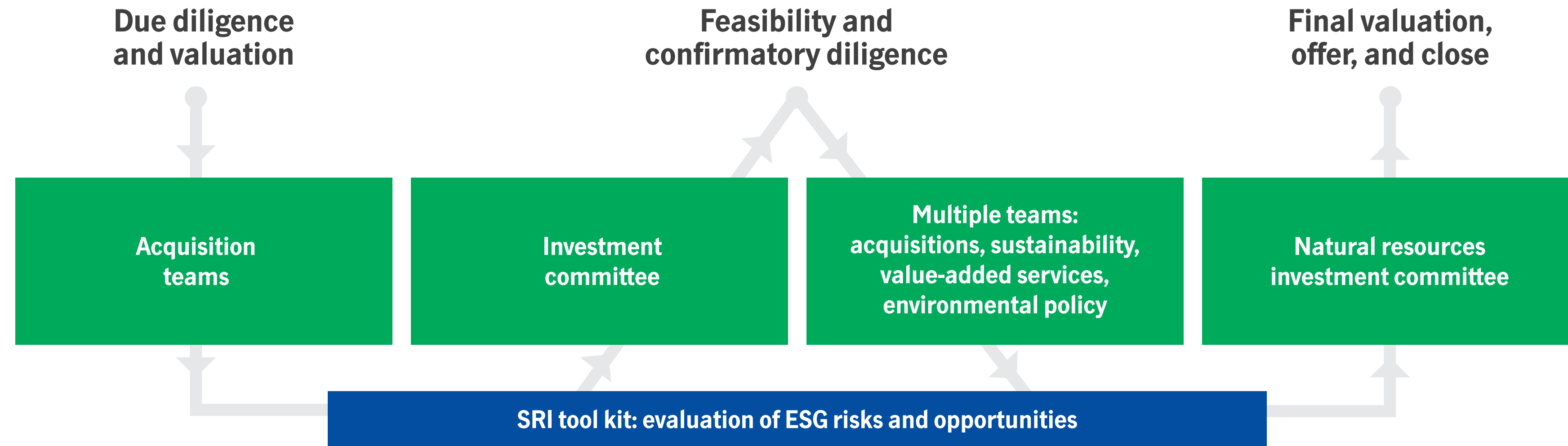
When the investments you manage are living organisms and ecosystems, you see them differently. We're directly dependent on the health of our forests, both for our clients' financial success and for our own. And those forests depend on, and are affected by, our management decisions.

We manage the assets under our care to ensure their optimal health, both because it's the right thing to do and because there's no other way to do it. From our investment process to our property management, sustainability is a core consideration that underpins everything we do.

In our investment process, we use a proprietary question-based tool co-developed in house by our acquisitions and sustainability teams to identify, assess, and eventually score ESG components of every deal we consider. Together with our zero-deforestation policy and carbon principles, this approach helps to ensure our climate impact is both positive and science based.

<sup>24</sup> AUM data is on a fair value basis as of December 31, 2021, and is reflected in Canadian dollars. Data includes assets managed by Manulife Investment Management and affiliates on behalf of Manulife's Canadian and U.S. general accounts, as well as certain third-party investors.

## Our SRI tool kit



SRI theme	Climate stability	Ecosystem resiliency	Watershed protection	People empowerment	Community prosperity
<b>Risks and opportunities</b>	<ul style="list-style-type: none"> <li>• Climate change impacts</li> <li>• Emissions</li> <li>• Deforestation</li> <li>• CO<sub>2</sub> sequestration</li> </ul>	<ul style="list-style-type: none"> <li>• Sensitive lands</li> <li>• Protected areas</li> <li>• Biodiversity</li> <li>• T&amp;E species</li> <li>• Mitigation banking</li> </ul>	<ul style="list-style-type: none"> <li>• Water quantity/quality</li> <li>• Flood, drought risk</li> <li>• Groundwater depletion</li> <li>• Water banking</li> </ul>	<ul style="list-style-type: none"> <li>• Health and safety</li> <li>• Training and development</li> <li>• Labor practices</li> <li>• Human rights</li> </ul>	<ul style="list-style-type: none"> <li>• Community relations</li> <li>• Indigenous peoples</li> <li>• Job creation</li> <li>• Research, internships</li> </ul>



## Stewardship

We manage our forests and farms not only to secure competitive financial returns, but also to achieve key environmental and social objectives set out by third-party sustainability standards, such as the [Sustainable Forestry Initiative \(SFI\)](#) and the [Forest Stewardship Council \(FSC\)](#).

In order to ensure that we operate consistently within these standards, we follow a comprehensive set of stewardship principles that integrates the development, management, and operation of working lands for useful products with a commitment to conserve soil, air, and water quality; biological diversity; wildlife habitats; and participation in vibrant, healthy communities. These principles inform more granular stewardship policies that guide our property management professionals in day-to-day asset management decisions.

We're proud that as of year-end 2021, 100% of our forests were certified under either SFI (3.6 million acres in the U.S. and Canada) or FSC (2.2 million acres in Australia, New Zealand, and Chile).

## Examples of sustainability principles and objectives in third-party certification

### SFI principles

- 1 Sustainable forestry
- 2 Forest productivity and health
- 3 Protection of water resources
- 4 Protection of biological diversity
- 5 Aesthetics and recreation
- 6 Protection of special sites
- 7 Responsible fiber sourcing
- 8 Legal compliance
- 9 Research
- 10 Training and education
- 11 Community involvement and social responsibility
- 12 Transparency
- 13 Continual improvement



### FSC principles

- 1 Compliance with laws
- 2 Workers' rights and employment conditions
- 3 Indigenous peoples' rights
- 4 Community relations
- 5 Benefits from the forest
- 6 Environmental values and impacts
- 7 Management planning
- 8 Monitoring and assessment
- 9 High conservation values
- 10 Implementation of management activities



## Collaboration

Getting things done together is one of our core values, with collaboration being a cornerstone of our business. We recognize that we can't specialize in everything, and we seek to establish mutually beneficial relationships with organizations and companies that can complement our strengths and have a similar culture and values. So does our extensive partnership network with forestry research cooperatives and the way our teams pitched in to help each other during a recent hurricane.

These relationships not only help us improve our sustainability performance, but they also reflect our conviction that when it comes to solving global challenges, we're all in this together. The following are some of the organizations we actively partnered with in 2021, whether through program participation, research funding, or charitable contributions.

- We support research into the resilience of agriculture and forestry to climate change at MIT's [Joint Program on the Science and Policy of Global Change](#) with the University of California, Davis.
- We actively participate in the [WBCSD's](#) Forest Solutions Group and Nature Action projects in collaboration with industry partners, focused on scaling forestry as a natural climate solution.

- We support the [Michigan State University Department of Forestry Forest Carbon and Climate Program's](#) mission to increase the understanding and implementation of climate-smart forest management.
- We provide funding to the [American Bird Conservancy](#) for its work in conserving wild birds and their habitats throughout North America, including threatened and endangered species.
- We support [The Conservation Fund's](#) efforts to protect land and water resources for wildlife habitat, climate change mitigation, recreation, and working lands.

# Case study

## Climate opportunities

In many ways, our most [significant acquisition](#) of 2021 was an 89,800-acre forest in the U.S. state of Maine. The property, named Blueback for the highly sought-after subspecies of Arctic char native to this region, is a contiguous block of timberlands with a diverse mix of naturally regenerated spruce fir and northern hardwood tree species. Blueback will be managed for Manulife's general account as an impact-first investment underpinning the firm's net zero journey.

The core of the investment thesis is centered on the timberlands being used primarily to store carbon. Manulife reserves the option to sell the carbon credits as offsets or use the carbon removals as insets for the purpose of meeting the firm's net zero commitments. Additionally, the lands are subject to a working forest conservation easement and offer unique recreational opportunities given the scenic lakes, rivers, and ecological features of the region. A portion of the lands will also be used for sustainable stewardship practices as a working forest.



## Agriculture

AUM: \$5.2B<sup>25</sup>

Investment professionals: 20+<sup>18</sup>

### Overview and highlights

- In 2021, we certified our entire 280,000+ acre U.S. agriculture platform to Leading Harvest\* standards.
- We grew our global water team from two to five professionals, spanning the full range of operations, policy, and strategy expertise, to become more responsible stewards of water.
- We conducted climate change scenario analysis workshops with operations in our three major growing regions.
- We built a market sustainability assessment tool to deliberately evaluate which markets to enter, or not, using a sustainability lens.
- We continued our journey toward using regenerative farming techniques where they make sense environmentally and economically—nearly two-thirds of our permanent crop and half of our row crop farms do so—and we’re seeking to do more.
- We’re now incorporating sustainability considerations into our valuations using factors to flex hurdle rates up or down based on a farm’s anticipated sustainability performance.
- In recognition of the pivotal role sustainability plays in our strategic direction, we established our agriculture stewardship committee to make key decisions on these matters.

## Integration

How you grow and what you grow are both important. The how considerations include when and how to plant and harvest, how much of each input to use and when to apply it, and techniques for working with the soil. The what considerations recognize that certain crops grown in certain regions for certain markets may have particular environmental and/or social footprints. All of these are important ESG considerations.

We address the how questions with our proprietary sustainability tool kit, a question-based tool co-developed in house by our acquisitions and sustainability teams, to identify, assess, and eventually score the ESG components of every deal we consider. The tool kit considers a wide range of factors, including anticipated climate risks, adherence to our zero-deforestation policy, water availability, biodiversity, working conditions, renewable energy opportunities, and ability to positively impact surrounding communities.

Last year, we built a similar tool to evaluate the sustainability of particular markets—to evaluate not only the how but also the what. This market sustainability tool has quickly become an important component of our agriculture investment strategy committee’s market suitability assessment. We ask approximately 30 questions covering the full breadth of social and environmental factors, both on the farm and within the value chain, to develop an overall aggregate score. This is paired with, and may even help to inform, our view of the market’s profitability.



**View our SRI tool kit**

<sup>25</sup> AUM data is on a fair value basis as of December 31, 2021, and is reflected in Canadian dollars. Data includes assets managed by Manulife Investment Management and affiliates on behalf of Manulife’s Canadian and U.S. general accounts, as well as certain third-party investors. \* Includes both third-party leased and directly operated assets. Oliver Williams, global head of agriculture, is current chair of the Board of Directors for Leading Harvest. For more information on Leading Harvest, please see [leadingharvest.org/about](https://leadingharvest.org/about).

## Stewardship

We manage our forests and farms not only to secure competitive financial returns, but also to achieve key environmental and social objectives set out by third-party sustainability standards, such as [Leading Harvest](#), [GlobalG.A.P.](#), [USDA Good Agricultural Practices \(GAP\)](#), [LODI RULES](#), and [SAI-FSA](#).

In order to ensure that we operate consistently within these standards, we follow a comprehensive set of stewardship principles that integrates the development, management, and operation of working lands for useful products with a commitment to conserve soil, air, and water quality; biological diversity; wildlife habitats; and participation in vibrant, healthy communities. These principles inform more granular stewardship policies that guide our property management professionals in day-to-day asset management decisions.

We're proud that as of year-end 2021, our entire U.S. agriculture platform, including nearly 70,000 acres of permanent crops and over 200,000 acres of row crop farmland, achieved certification to the Leading Harvest Farmland Management Standard. Leading Harvest demonstrates our commitment to sustainability, providing our key stakeholders assurance of sustainable practices, robust management, and continuous improvement.

## Why Leading Harvest?

We were an early mover in third-party forest certification and have managed third-party-certified timberland investments for over two decades. Yet, until recently, the agriculture sector lacked a sustainability standard that could work across different crop types, production systems, scales, and geographies. In 2017, we began collaborating with leading environmental organizations and farmland owners and managers to build such a standard. Five years later, the [Leading Harvest Farmland Management Standard](#) is growing rapidly.

The Leading Harvest principles begin by identifying the need to meaningfully assess the positive or negative impact farmland assets have on their local environments and communities, aiming to:

- Define materiality on a sector-specific basis
- Set out clear principles and objectives for operating in a sustainable manner that are relevant to that sector
- Identify a range of practices that could be employed to achieve those principles and objectives
- Evaluate the extent to which those practices are being followed
- Require an external auditing process that ensures rigor and verifiability of the sustainability claims being made

Learn more about [our work with Leading Harvest](#).



## Collaboration

Getting things done together is one of our core values, with collaboration being a cornerstone of our business. We recognize that we can't specialize in everything, and we seek to establish mutually beneficial relationships with organizations and companies that can complement our strengths, with a similar culture and values. Leading Harvest exemplifies this. So does our extensive partnership network with forestry research cooperatives and the way our teams pitched in to help each other during a recent hurricane.

These relationships not only help us improve our sustainability performance, but they also reflect our conviction that when it comes to solving global challenges, we're all in this together. The following are some of the organizations we actively partnered with in 2020, whether through program participation, research funding, or charitable contributions.

- We support research into the resilience of agriculture and forestry to climate change at [MIT's Joint Program on the Science and Policy of Global Change](#) and the University of California, Davis.
- We actively participate in the [WBSCD's](#) Forest Solutions Group, Scaling Positive Agriculture, and Nature Action projects in collaboration with industry partners, focused on scaling agriculture as a natural climate solution.
- We support the [Pollinator Partnership's](#) efforts to promote pollinator health—critical to food and ecosystems—through conservation, education, and research.
- We provide funding to the [American Bird Conservancy](#) for its work in conserving wild birds and their habitats throughout North America, including threatened and endangered species.

# Case study

## Environmental water and waterfowl in New South Wales

The Murray-Darling Basin is one of Australia's largest and most important river basins. It covers more than 14% of Australia's land mass and provides water resources for urban and rural communities, as well as for industry and agriculture. It also has significant environmental importance for a variety of ecosystems, wetlands, forests, and cultural sites. As a result of development over hundreds of years, many important environmental and cultural sites no longer receive natural water flows.

In response to this issue, we made our irrigation infrastructure available for delivering water to the disconnected wetlands and priority environmental sites that adjoin our farms. Since 2019, we've worked with the provincial government to deliver water every year to Bingera Creek, which adjoins our Goodnight almond orchard—wetting approximately 6.5 kilometers of channel and 50 hectares of wetlands and providing habitat for frogs and waterfowl.



*Appendix*

## Global collaboration

Below are examples of current sustainability/ESG industry groups and initiatives with which we're engaged.

Organization	Joined	Region	Focus	Manulife Investment Management's involvement
<a href="#">30% Club Canadian Investor Group</a>	2019	Canada	A group of asset owners and asset managers committed to exercising their ownership rights to encourage increased representation of women on corporate boards and in executive positions	We have a target list of Canadian companies established annually; we engage with select companies from this list.
<a href="#">Asian Corporate Governance Association (ACGA)</a>	2016	Asia	Promotes implementation of effective governance practices in Asian companies on behalf of institutional investors and regulators	We're an active member in the association in addition to participating in the China and Korea working groups.
<a href="#">Asia Investor Group on Climate Change (AIGCC)</a>	2016	Asia	Works with Asian asset owners and financial institutions to create awareness about the risks and opportunities associated with climate change and low carbon investing	We're an active member of the group and chair the physical risk and resilience working group.
<a href="#">Board Diversity Hong Kong Initiative</a>	2018	Asia	Commits to an ongoing engagement on diversity at all levels with listed companies in Hong Kong, starting with the board of directors	We're one of the founding members of the Board Diversity Hong Kong Initiative. We believe diversity on boards encourages better leadership and better corporate governance, and it ultimately increases corporate performance and global competitiveness for both companies and their shareholders.
<a href="#">Building Owners and Managers Association (BOMA) Canada</a>	2018	Canada	Implements timely, responsible, and consistent policy positions on important issues to the Canadian real estate industry; acts as the voice representing the industry by advocating on members' behalf on a national or provincial platform	We attend quarterly meetings and aid in developing tools and standards for the commercial real estate industry on how to integrate resilience best practices and adapt to changing climate conditions.
<a href="#">Canadian Coalition for Good Governance (CCGG)</a>	2012	Canada	Focused on corporate governance organization in Canada	We have representation on the environmental and social committee.
<a href="#">Canadian Infrastructure Bank—National Energy Efficiency Retrofits Financing Program Owners &amp; Operators Working Group</a>	2020	Canada	Intent to accelerate deep energy retrofits in buildings in the private, commercial, institutional, and industrial buildings through a targeted federal government investment of up to \$4 billion over 6 years	We actively engage in the working group.
<a href="#">CDP</a>	2018	Global	Advocates for disclosure of company data to measure and manage the environmental impact (carbon, water, forestry); one of the first ESG disclosure initiatives in the financial industry	We're a member of CDP and participate in various initiatives such as the Science Based-Targets initiative (SBTi).

Organization	Joined	Region	Focus	Manulife Investment Management's involvement
<a href="#">Ceres Investor Network</a>	2016	Global	Promotes discussion and collaboration on how to address climate risk and other sustainability challenges among institutional investors	We participate in discussions and initiatives brought forward by Ceres. We're also a member of the Investor Water Hub and founding member of the valuing water investor working group.
<a href="#">Climate Action 100+</a>	2018	Global	Collaborative engagement with largest corporate GHG emitters	We're a founding member of Climate Action 100+ and co-lead several engagements across North America and Asia.
<a href="#">Climate Smart Land Network (CSLN)</a>	2015	North America	Provides forest landowners and managers with direct access to forest and climate experts and the opportunity to benefit from other forest landowners in the network	Our timber and agriculture team has been a member since CSLN's inception. We continue to share information at their annual member gatherings as well through emails and monthly calls aimed to support the acceleration of natural climate solutions.
<a href="#">Concordia University</a>	2020	Canada	The sustainable investing practicum (SIP) enables undergraduate business students to better understand the principles of ESG investing in a capital market environment. Students make fund management recommendations to a supervisory committee based on sustainable investing criteria	Concordia's John Molson School of Business (JMSB) signed a partnership agreement with Manulife Investment Management that established the first sustainable investing practicum at a Canadian university.
<a href="#">Emerging Markets Investors Alliance</a>	2015	Global	A central hub for information, education, and networking for investors in emerging markets	We're an active member of the extractive industries working group.
<a href="#">Global Impact Investing Network (GIIN)</a>	2018	Global	Organization dedicated to increasing the scale and effectiveness of impact investing	We're a member company and contributor to sector-specific databases and reports and a participant in the sustainable agriculture working group.
<a href="#">Global Real Estate Sustainability Benchmark (GRESB)</a>	2015	Global	Validates, scores, and benchmarks ESG performance data for real assets, providing business intelligence and engagement tools to investors and managers	We report to the GRESB real estate and infrastructure assessments on an annual basis.
<a href="#">Hong Kong Green Finance Association (HKGFA)</a>	2018	Hong Kong	Promotes adoption of green finance and investment by gathering industry experts to provide policy suggestions to the Hong Kong government and other regulators	We contribute to the working groups, including on topics such as green bonds and product innovation as well as external collaborations.
<a href="#">Institutional Limited Partners Association (ILPA)</a>	2014	Global	Engages, empowers, and connects limited partners to maximize their performance on an individual, institutional, and collective basis	We're an active member of the ILPA ESG working group.
<a href="#">International Corporate Governance Network (ICGN)</a>	2019	Global	Promotes effective standards of corporate governance and investor stewardship to advance efficient markets and sustainable economies worldwide	We're an active member of the stewardship committee.
<a href="#">Investment Company Institute (ICI)</a>	2015	Global	Encouraging adherence to high ethical standards by all industry participants; advancing the interests of funds, their shareholders, directors, and investment professionals; and promoting public understanding of mutual funds and other investment companies	We're involved in calls and discussions on sustainability-related disclosures for asset managers.

Organization	Joined	Region	Focus	Manulife Investment Management's involvement
<a href="#">University of Cambridge Investment Leaders Group (ILG)</a>	2020	United Kingdom	A global network of pension funds, insurers, and asset managers, with over £14 trillion under management and advice, committed in its mission to advance the practice of responsible investing A voluntary initiative, driven by its members, facilitated by the Cambridge Institute for Sustainability Leadership (CISL), and supported by academics in the University of Cambridge	We're an active member of the CISL ILG, striving to create an investment chain that prioritizes economic, social, and environmental sustainability.
<a href="#">Leading Harvest</a>	2020	United States	Advancing sustainable agriculture, providing assurance programs comprising standards, audit procedures, training and education, and reporting and claim offerings	Our timber and agriculture business was a founding member; in addition, our global head of agriculture, John Anderson, is current chair of the board of directors.
<a href="#">Long-term Infrastructure Investors Association (LTIIA)</a>	2017	United States	Works with a wide range of stakeholders—infrastructure investors, policymakers, and academics, among others—to enable the long-term, responsible deployment of private capital in public infrastructure projects around the world	Recep Kendircioglu, portfolio manager, head of infrastructure investments, sits on the board.
<a href="#">MIT Joint Program on the Science and Policy of Global Change</a>	2016	Global	Studying interactions among human and earth systems to provide a sound foundation of scientific knowledge	We're an active sponsor and project representative.
<a href="#">National Alliance of Forest Owners (NAFO)—United States</a>	2008	United States	National advocacy organization committed to advancing federal policies that ensure sustainable practices and strong markets of our working forests	We have representation on the board of directors, operating committee, and climate change and environment task groups.
<a href="#">Principles for Responsible Investment (PRI)</a>	2015	Global	United Nations-supported international organization that works to promote the incorporation of ESG into investment decision-making	We're a signatory and active member of various working groups, including the fixed-income advisory group, sovereign bond working group, and the listed equity integration subcommittee.
<a href="#">Programme for the Endorsement of Forest Certification (PEFC)</a>	2007	Global	Global alliance of national forest certification systems	We're actively involved on the board of directors.
<a href="#">Real Estate Roundtable Sustainability Policy Advisory Committee (SPAC)</a>	2019	United States	Seeks to educate policymakers and the public about real estate and its significance to the economy	We participate in monthly meetings and engagement on federal or state policy and regulations affecting commercial real estate.
<a href="#">REALPAC Canada ESG Committee</a>	2017	Canada	Members include publicly traded real estate companies, real estate investment trusts, private companies, pension funds, banks, and life insurance companies with investment real estate assets each in excess of \$100 million	We participate in monthly meetings and engagement on federal, provincial, or municipal policy.



Organization	Joined	Region	Focus	Manulife Investment Management's involvement
<a href="#">Responsible Investment Association (RIA) Canada</a>	2019	Canada	Promotes responsible investing and ESG integration into the investment process in Canada	We actively participate in initiatives and roundtables organized by the RIA.
<a href="#">Singapore Standards Council (SSC), Enterprise Singapore</a>	2019	Asia	Facilitates the development, promotion, and review of standards and technical references in Singapore	We're a member of the working group, providing input on the development of an ISO standard for sustainable finance.
<a href="#">Value Reporting Foundation (SASB standards)</a>	2019	Global	Engages with leading companies to encourage a market standard for ESG disclosure and to foster adoption of SASB disclosure metrics	We're an organizational member of the SASB Alliance.
<a href="#">Securities Industry and Financial Markets Association (SIFMA)</a>	2015	United States	Industry trade group representing securities firms, banks, and asset management companies that advocates on legislation, regulation, and business policy affecting retail and institutional investors, equity and fixed-income markets, and related products and services	We've engaged in the IOSCO consultation on sustainability-related disclosures for asset managers and the UK FCA climate disclosure consultation with SIFMA.
<a href="#">Sustainable Forestry Initiative (SFI)</a>	2002	North America	Collaborates with a diverse network to provide forest-based solutions to local and global sustainability challenges	We've engaged on the resources committee.
<a href="#">Taskforce on Nature-related Financial Disclosures (TNFD)</a>	2020	Global	Focused on redirecting flows of finance at scale toward nature-positive activities to allow nature and people to flourish	We were members of the Informal Working Group, developing the scope for TNFD.
<a href="#">Task Force on Climate-related Financial Disclosures (TCFD) Consortium (Japan)</a>	2019	Asia	Comprises corporate and investor members and aims to foster best practices in TCFD reporting	We're a member of the investor group, supporting companies to provide decision-useful disclosure.
<a href="#">UNEP FI Property Working Group (PWG)</a>	2019	Global	Drives innovation in responsible property investment by facilitating access to relevant information and best practices for systematically applying and integrating ESG criteria into investment and lending decisions	We attend and contribute to the quarterly working group meetings.
<a href="#">UNEP FI TCFD Pilot Project (Phase II 2021)</a>	2021	Global	Paid membership to participate in banking and investor pilot project in 2021, with objective to provide financial institutions with leading approaches for assessing climate risks and opportunities	We've participated in various modules: real estate, assessing climate tools, and disclosure of physical and transition risk. We're a member of UNEP FI Pilot on Climate Change Scenario Analysis (Phase I and Phase II).
<a href="#">World Benchmark Alliance (WBA)</a>	2018	Global	Seeks to increase the private sector's sustainability impact; creates benchmarks to incentivize and accelerate companies' efforts toward achieving the UN's SDGs	We're a supporter of the initiatives.
<a href="#">World Business Council for Sustainable Development (WBCSD)</a>	2019	Global	CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world	We're a council member and liaison delegate. Our timber and agriculture team actively participates in the WBCSD's Forest Solutions Group, Scaling Positive Agriculture, and Nature Action projects in collaboration with industry partners, focused on scaling forestry and agriculture as natural climate solutions.

## Manulife Investment Management

Case studies included in this report are intended for illustrative purposes only to demonstrate the approach of Manulife Investment Management's investment teams to integrating sustainability risk considerations into their investment decision-making processes. Each decision will vary depending on our evaluation of unique sustainability risks, factors, and opportunities.

A widespread health crisis such as a global pandemic could cause substantial market volatility, exchange-trading suspensions and closures, and affect portfolio performance. For example, the novel coronavirus disease (COVID-19) has resulted in significant disruptions to global business activity. The impact of a health crisis and other epidemics and pandemics that may arise in the future could affect the global economy in ways that cannot necessarily be foreseen at the present time. A health crisis may exacerbate other preexisting political, social, and economic risks. Any such impact could adversely affect the portfolio's performance, resulting in losses to your investment.

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Manulife Investment Management is the global brand for the global wealth and asset management segment of Manulife Financial Corporation. We draw on more than a century of financial stewardship and the full resources of our parent company to serve individuals, institutions, and retirement plan members worldwide. Headquartered in Toronto, our leading capabilities in public and private markets are strengthened by an investment footprint that spans 19 geographies. We complement these capabilities by providing access to a network of unaffiliated asset managers from around the world. We're committed to investing responsibly across our businesses. We develop innovative global frameworks for sustainable investing, collaboratively engage with companies in our securities portfolios, and maintain a high standard of stewardship where we own and operate assets, and we believe in supporting financial well-being through our workplace retirement plans. Today, plan sponsors around the world rely on our retirement plan administration and investment expertise to help their employees plan for, save for, and live a better retirement. Not all offerings are available in all jurisdictions. For additional information, please visit [manulifeim.com](https://manulifeim.com).

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