Manulife Investment Management

Second Quarter 2024

Global Climate Equity Strategy

Quarterly Market & Strategy Review

For a discussion of the risks associated with this strategy, please see the Investment Considerations page at the end of the presentation

Global Equity Market Review

Three months through June 30, 2024 (in USD)

MSCI World Index (Net) By Sector	Q2 2024 (%)	Average Weight	Contribution
Information Technology	11.48	24.34	2.67
Communication Services	8.07	7.62	0.60
Utilities	3.58	2.53	0.11
Health Care	0.59	11.83	0.08
Consumer Staples	0.34	6.53	0.05
Financials	-0.13	15.19	0.01
Energy	-1.09	4.47	-0.06
Real Estate	-3.01	2.16	-0.07
Materials	-3.29	3.86	-0.13
Industrials	-2.00	11.10	-0.21
Consumer Discretionary	-2.17	10.38	-0.25
MSCI World Index (Net)	2.8	100.00	2.8

MSCI World Index (Net) By Region	Q2 2024 (%)	Average Weight	Contribution
North America	3.80	74.13	2.79
United Kingdom	3.74	3.88	0.16
Asia Ex-Japan (Developed)	2.50	2.77	0.07
Europe Ex-Uk (Developed)	0.04	13.33	0.03
Japan	-3.87	5.89	-0.25

Source: Manulife IM, FactSet. Performance shown is in US dollar total returns.

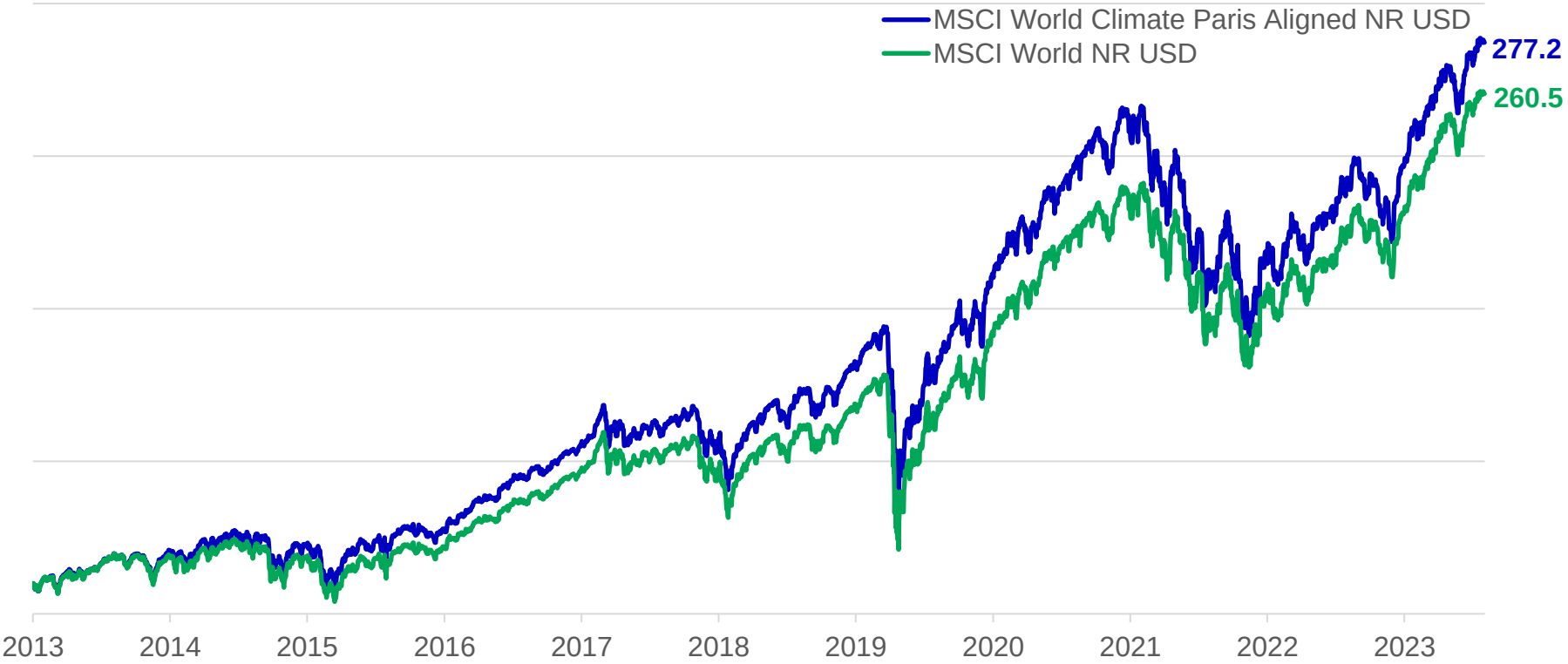
Global Equity Market Review

- Global equities finished the second quarter with positive performance, as investor sentiment remained supported by stable global growth trends and healthy corporate earnings. The United States was a notable outperformer due in part to persistent strength in mega-cap technology stocks, which was spurred in part by continued excitement about the growth potential of artificial intelligence. Conversely, Canada lagged due to its heavier tilt toward the value style. Europe performed well overall, but stocks finished well off of their mid-quarter highs following surprising election results in France and other nations. In Asia, Japan was a notable underperformer in Canadian dollar terms due to pronounced weakness in the yen. The emerging markets outpaced their developed-market peers behind strong gains for China, India, and Taiwan.
- In North American markets, US equities set fresh records as easing inflation fed investor hopes of an interest rate cut later in the year. The S&P 500 and Nasdaq Composite indexes gained 4% & 8%, respectively, fueled by enthusiasm for technology stocks linked to growth potential of the artificial intelligence market. An event that marked the occasion was shares of Nvidia powering higher while briefly making the chipmaker the most valuable listed company in the US. Communication services and utilities stocks also posted solid gains. The Federal Reserve, meanwhile, left interest rates unchanged as, with projections of only one interest rate cut in 2024 despite cooling inflation and slowing economic growth.
- In Europe, equity markets posted modest gains amid increased political unease, sings of improving economic growth and somewhat loser monetary policy. The ECB cut interest rates for the first time in almost five years, even with inflation levels above target. But while monetary policy served as a tailwind, elections within the European Union made investors more skittish as right-wing parties gained more than a quarter of the seats in the European parliament, far more than expected. The event prompted French President Emmanuel Macron to call snap elections for late June in France with a runoff in early July. In Asian Pacific markets, Japanese stocks fell under the veil of a weaker economy, with all sector declining except for financials. Real estate and consumer discretionary led losses from a sector perspective, with the yen declining nearly 6% against a strong US dollar during the quarter, flirting with 40-year lows for the currency.

Trends in Sustainable Investing

Creating a Paris-Aligned Portfolio

Is there a penalty when investing through a climate lens?

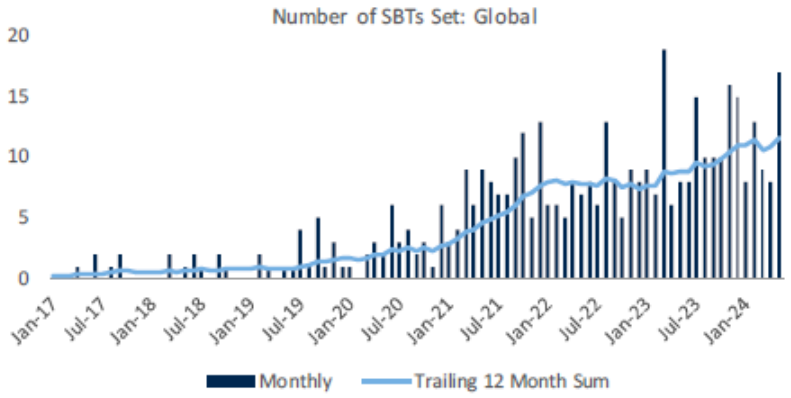


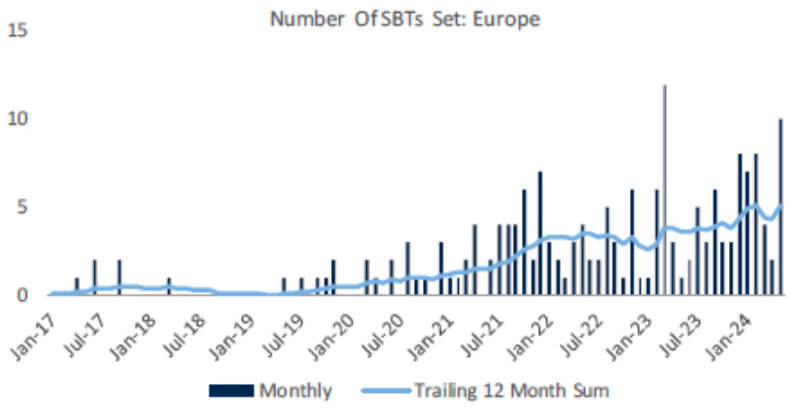
	Annualized Returns					Sharpe Ratios			Since Inception		
	YTD	1 Yr	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	SI	Beta	Alpha	TE
MSCI World Climate Paris Aligned	10.4	19.1	5.7	11.5	9.8	0.19	0.63	0.72	1.0	0.60	1.72
MSCI World	11.8	20.2	6.9	11.8	9.2	0.30	0.66	0.67	1.0	0.00	0.0

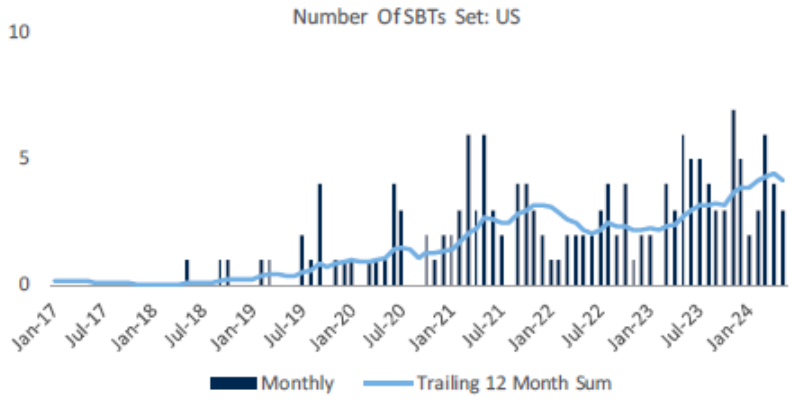
Source: Morningstar Direct, MSCI, Manulife Investment Management. In US dollars. As at June 30, 2024. The MSCI World Climate Paris Aligned Index was launched on Oct 26, 2020. The MSCI World Climate Paris Aligned Index is based on the MSCI World Index, its parent index, and includes large and midcap securities across 23 Developed Markets (DM)* countries. The index is designed to support investors seeking to reduce their exposure to transition and physical climate risks and who wish to pursue opportunities arising from the transition to a lower carbon economy while aligning with the Paris Agreement requirements. The index incorporates the TCFD recommendations and are designed to exceed the minimum standards of the EU Paris-Aligned Benchmark. Data prior to the launch date is back-tested data (i.e. calculations of how the index might have performed over that time period had the index existed). "SI" refers to "since inception" and is for the period from December 1, 2013 to June 30, 2024. It is not possible to invest directly in an index.

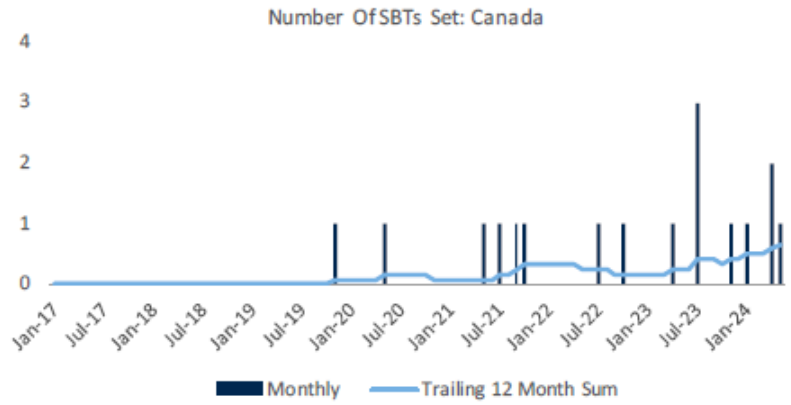
Science Based Targets (SBTs)

Record number of companies setting science-based emissions reduction targets







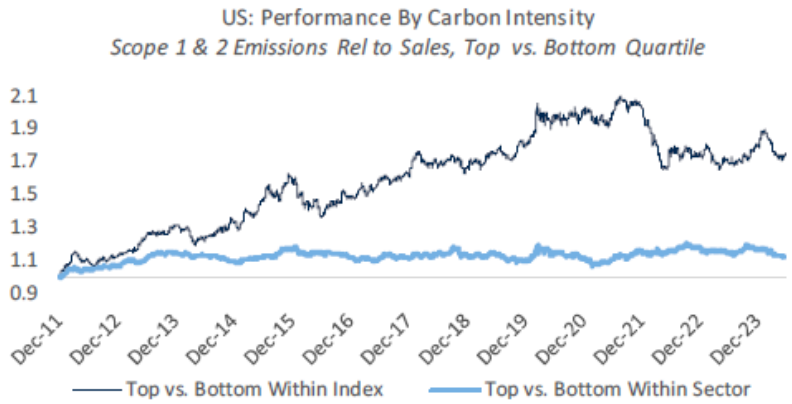


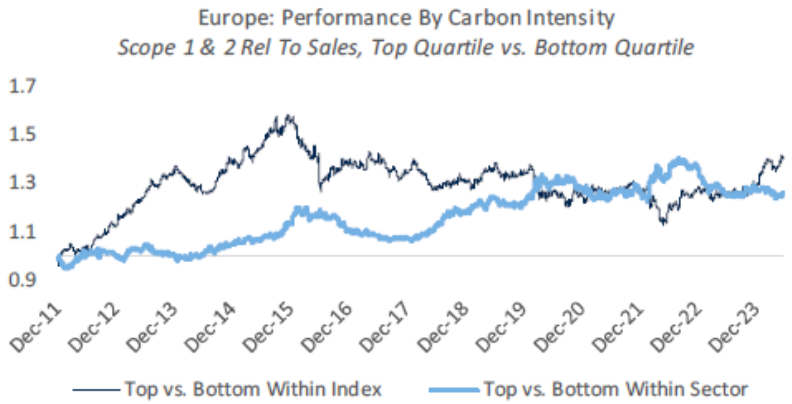
~84% of Manulife IM Global Climate's portfolio is invested in companies with SBTs

Source: RBC Sustainability Stat Pack, SBTi, updated as of May 2024. SBT weight in Manulife IM Global Climate Equity Strategy as of June 30, 2024.

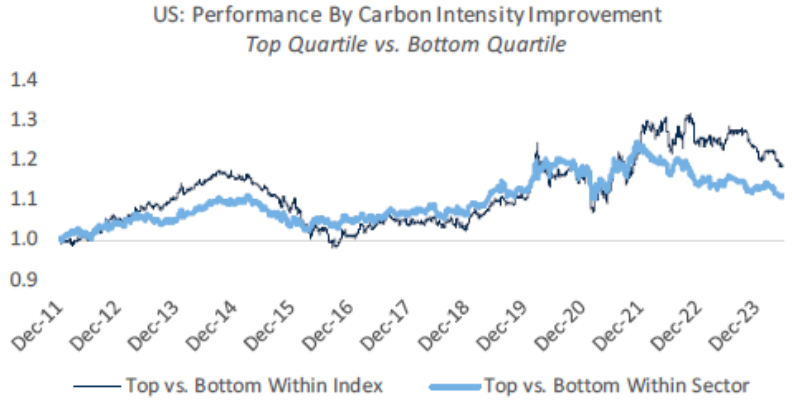
Backtesting Emissions Intensity Factors (US & Europe)

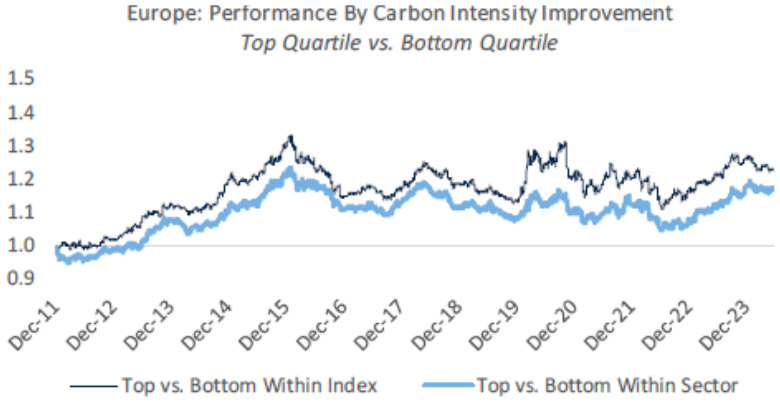
Companies improving their carbon intensity have outperformed over time





Within both the US & Europe, companies with lower emissions intensity have outperformed historically. In the case of the US, outperformance shrinks meaningfully after adjusting for sector biases.





Within both the US and Europe, we have also seen outperformance from companies that have been improving their emissions intensity. The factor has performed better within Europe recently. Performance data is as of June 17, 2024.

Source: RBC Sustainability Strategy, S&P Capital IQ / ClariFi, Trucost. The charts above illustrate the performance of companies that rank best based on current emissions intensity (top charts) and recent emissions intensity improvement (bottom charts). In all charts, the light blue lines highlight performance on a sector-neutral basis (adjusting for sector biases). Emissions intensity improvement factor excludes companies that do not disclose any data on emissions. Constituents are equal-weighted; based on total returns. (RBC Sustainability Stat Pack, June 2024).

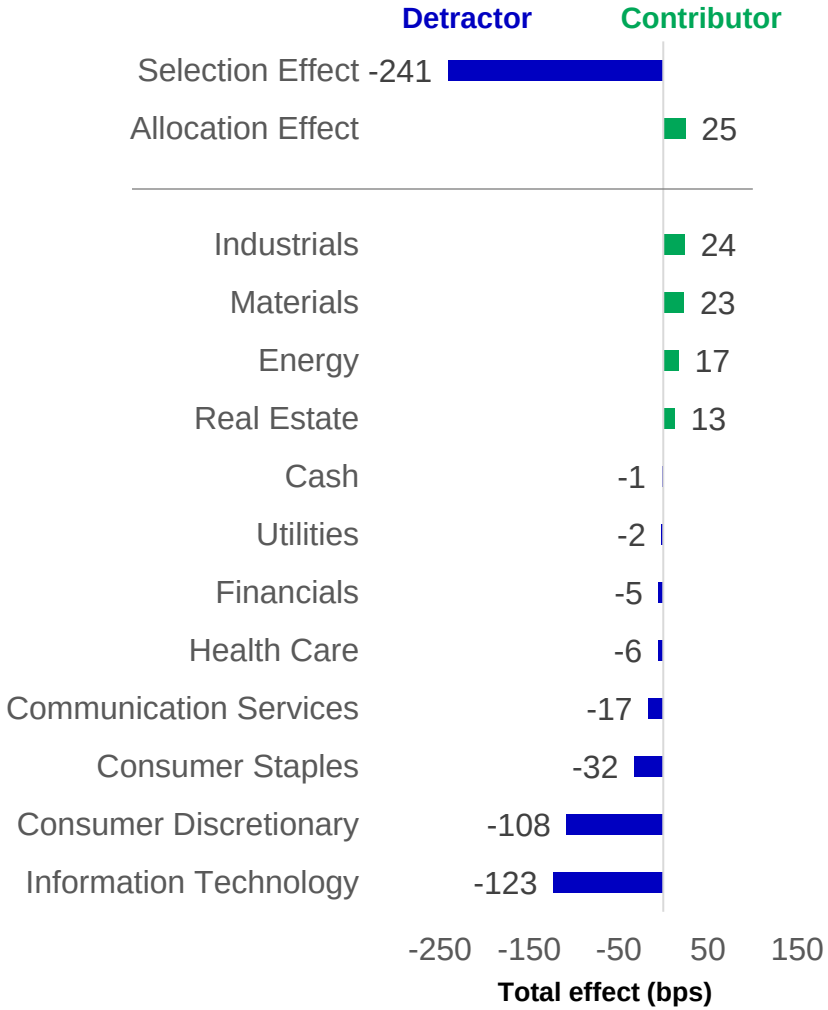
Performance & Attribution

Global Climate Equity Strategy
Q2 2024 Attribution

What Helped?

- The fund underperformed the index during the quarter owing to stock selections made in the information technology and consumers sectors, with an overweight in industrials also serving as a headwind to relative returns.
- In information technology, while investments made in NVIDIA Corporation, Apple Inc. and Microsoft Corporation made material contributions on an absolute basis, declines from investments in Salesforce Inc. and Accenture Plc detracted from relative returns during the quarter. Share prices of Accenture experienced close to a 10% decline after revenues and margins came in slightly below expectations, at the midpoint of guidance. The company also provided a more narrow full-year revenue guidance, prompting a small amount of selling in the market despite margin outlook that remained largely unchanged. Share prices of Salesforce Inc. experienced a similar correction in price, where markets honed in on current remaining performance obligations (cRPOs) which experienced a marginal miss versus expectations – this in spite of free cash flow generation and cash from operations that came in above what markets were anticipating.
- In consumer discretionary, Aptiv PLC was a detractor both overall and within the sector as the company faced a number of ongoing macro challenges (higher interest rates, labour challenges, EV sales deceleration, trade logistics) which negatively impacted the short-term outlook, with the company cutting its guidance for 2024. While revenues and operating income are expected to soften, cash flows are expected to remain healthy and benefit to the upside as some of the macro headwinds begin to fade. Share prices for Lowe's also experienced declines in the range of 10-12%. While the company has executed well relative to peers, short-term margin guidance was reduced for the coming quarter, prompting a decline in share value. NIKE Inc. was another detractor from performance late in the period after the company provided significantly reduced revenue guidance for its coming fiscal year as they focus on repositioning product portfolio, innovation, and speed to market, this on the heels of recent softer sales figures from China. Finally, McDonald's was also a small detractor as a slight earnings miss prompted by softer industry traffic in the most recent quarter drove valuations 8-9% lower over the course of the period. In consumer staples, our investment in Sysco Corporation detracted on an absolute and relative basis, where shares of Sysco drifted lower on a more difficult macro outlook despite having recently provided earnings that were in line with consensus on the back of strong gross margins.

Attribution over prevailing benchmark

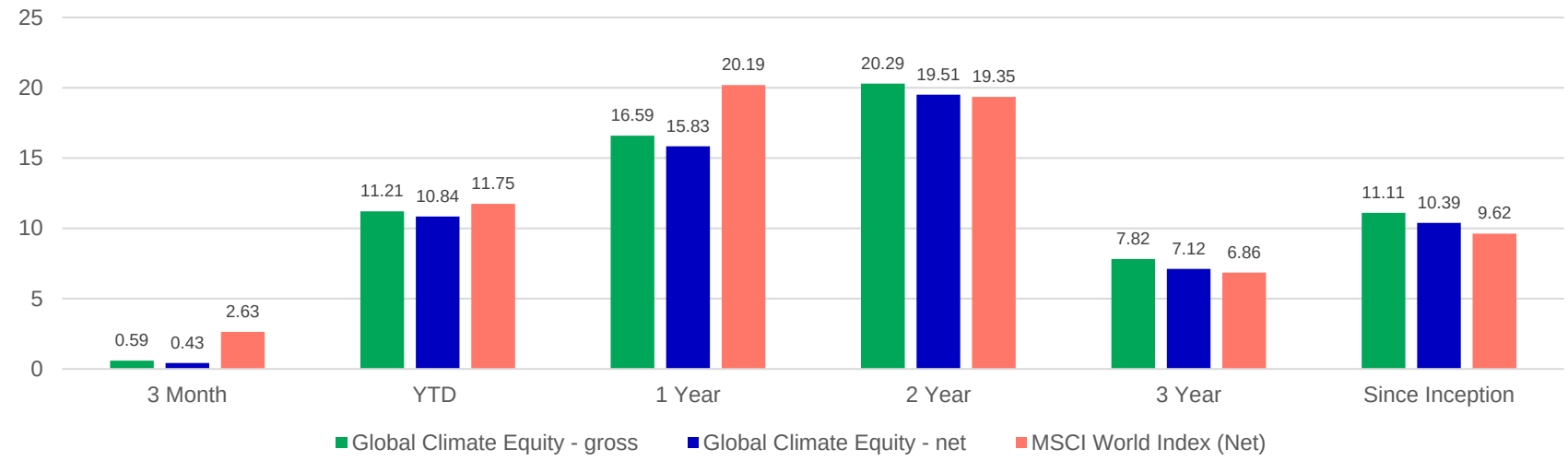


Source: Manulife Investment Management and FactSet, as of June 30, 2024.
Past performance is not indicative of future results.

Global Climate Equity Strategy

Investment results as of June 30, 2024 (in USD)

Annualized returns (%)



Calendar year returns	2021[1]	2022	2023
Global Climate Equity − gross	26.90	-18.26	23.15
Global Climate Equity − net	26.22	-18.79	22.35
MSCI World (Net) Total Return	19.97	-18.14	23.79
Excess return – gross	**6.94**	**-0.12**	**-0.64**
Excess return – net	**6.25**	**-0.65**	**-1.44**

Performance shown is for Manulife Investment Management Global Climate Equity Composite in USD. **1** Composite inception date: March 2021.

Returns greater than one year are annualized. Past performance is not indicative of future results. Performance is shown in USD. Gross performance results do not include advisory fees and other expenses an investor may incur, which when deducted will reduce returns. Net performance results reflect the application of the highes incremental rate of the standard investment advisory fee schedule to gross performance results. Changes in exchange rates may have an adverse effect. The MSCI World Index tracks the performance of publicly traded large-and mid-cap stocks of developed-market companies. It is not possible to invest directly in an index. This information is supplemental to the GIPS report included as a part of this presentation

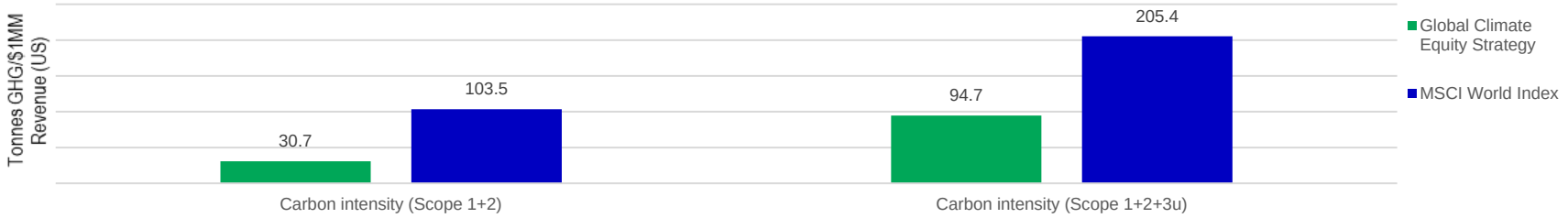
Portfolio Review

(Climate & ESG Metrics and Positioning)

Global Climate Equity Strategy
ESG characteristics (as of June 30, 2024)

ESG Characteristics	Global Climate Equity Strategy	MSCI World Index	Difference
MSCI ESG score[1]	7.9	6.9	+1.0
Companies UNGC compliant[2]	100.0%	99.9%	+0.1
Independent chair (board)*	41.8%	37.0%	+4.8
Board independence*	84.3%	80.7%	+3.6
Women on board*	36.3%	35.5%	+0.8
Climate characteristics			
Implied portfolio temperature*	~1.62ºC	~2.02ºC	-0.40ºC
Companies with CDP disclosure[3]	97.0	89.2	+7.8
Companies with SBTs (Weighted)[4]	82.7	60.5	+22.2
Companies with SBTs (Non-weighted)[4]	84.2	50.2	+34.0
Clean tech revenues*	6.3	6.0	+0.3
Climate Value-at-Risk (CVaR)*	-13.27	-11.35	-1.92

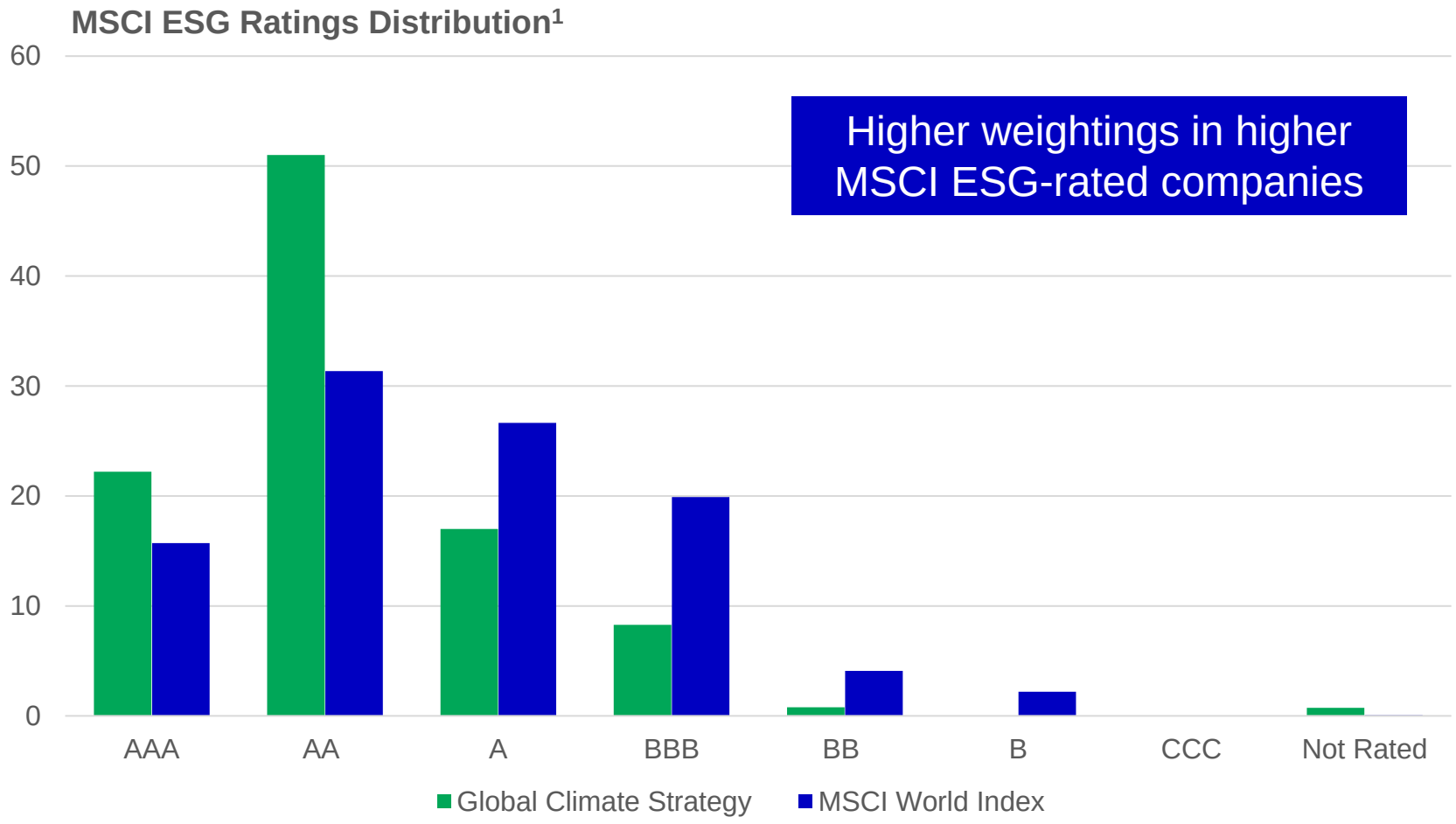
Carbon intensity[5]



Source: Manulife Investment Management, MSCI, S&P Trucost. * Please refer to the appendix for definitions. Past performance is not indicative of future results. **1** MSCI ESG ratings, source: MSCI ESG data, as of June 30, 2024. MSCI ESG scores based on 95.9% of portfolio holdings and 99.7% for the MSCI World Index. The ESG Ratings shown represent the opinions of MSCI and may differ from Manulife IM's internal portfolio management views and proprietary ESG ratings methodology. For further information regarding MSCI's ESG scoring methodology: https://www.msci.com/our-solutions/esg-investing/esg-ratings. The Portfolio and Benchmark Overall Adjusted ESG Scores (0.0 to 10.0) are calculated based on the weighted-average of each individual security's industry-adjusted rating score, where the relevant securities are within MSCI's research coverage. If only a subset of the securities in a portfolio or benchmark are in coverage, the weights are readjusted by Manulife IM to add up to 100. **2** UNGC refers to the United Nations Global Compact. **3** CDP refers to companies with carbon disclosure (part of the carbon disclosure project) contained within publicly available financial statements. **4** SBT refers to companies with Science-Based Targets for greenhouse gas emissions, with weighted and non-weighted percentages shown. **5** Carbon intensity data is as of 2020, the most current data from S&P Trucost. Carbon intensity is measured on a weighted average basis for companies held and allows investors to know how efficient the portfolio is in terms of carbon (GHG) emissions (tonnes) per unit of sales (US$1,000,000). Portfolio characteristics are subject to change at any time are for illustrative and reference purpose only and may differ for a specific account. This information does not constitute, and should no be construed as, investment advice or recommendations with respect to the securities and sectors listed. Past performance is not indicative of future results.

Global Climate Equity Strategy

ESG ratings weights



Source: Manulife Investment Management, FactSet, MSCI as of June 30, 2024. **1** The ESG Ratings represent the opinions of MSCI as of June 30, 2024, and may differ from our internal portfolio management views. MSCI ESG ratings are generated using a set of defined factors considered material or potentially material to the long-term performance of a company, rating companies on a AAA-CCC scale relative to the standards and performance of their industry peers, as defined by GICS industry groups included in the MSCI ACWI Index. A AAA-rated company is considered a relative industry leader in managing and mitigating material ESG issues, and a CCC-rated company is considered a relative industry laggard. MSCI ratings are based on its analysts' assessment on four key questions about companies: 1) What are most significant ESG risks and opportunities facing a company and its industry? 2) How exposed is the company to those key risks and/or opportunities? 3) How well is the company managing key risks and opportunities? 4) What is the overall picture for the company and how does it compare to its global industry peers? MSCI's methodology for generating ESG scores is summarized here: https://www.msci.com/our-solutions/esg-investing/esg-ratings.

Outcome Based Engagement

Where our engagement activities have gained traction

Global manufacturer of medical devices

Engaged company on product safety concerns & recalls and its lackluster climate plan, encouraging SBT adoption

Outcome:
Company announced adoption of SBT, joining UN 'Race to Zero'

(Q4 2021)

Global professional services company

Engaged with company with respect to their clean tech revenue being underreported

Outcome:
Committed to SBT adoption and to contact 3rd party reporting of their clean tech revenues

(Q4 2021)

Manufacturer of thermoplastic pipe & water management solutions

Inquired about adoption of SBT, increased CDP disclosure and increased use of recycled plastics

Outcome:
Company announced adoption of an SBT in their 2022 sustainability report **(Q2 2022)**
Began CDP reporting **(Q3 2023)**

Global designer, manufacturer & distributor of lenses, frames & sunglasses

Made several engagements with the company re: the adoption of SBT

Outcome:
Company announced adoption of an SBT **(Q1 2023)**

Began CDP reporting **(Q4 2023)**

Global designer & manufacturer of professional, medical, industrial and commercial products & services

Made several engagements with the company re: the adoption of SBT

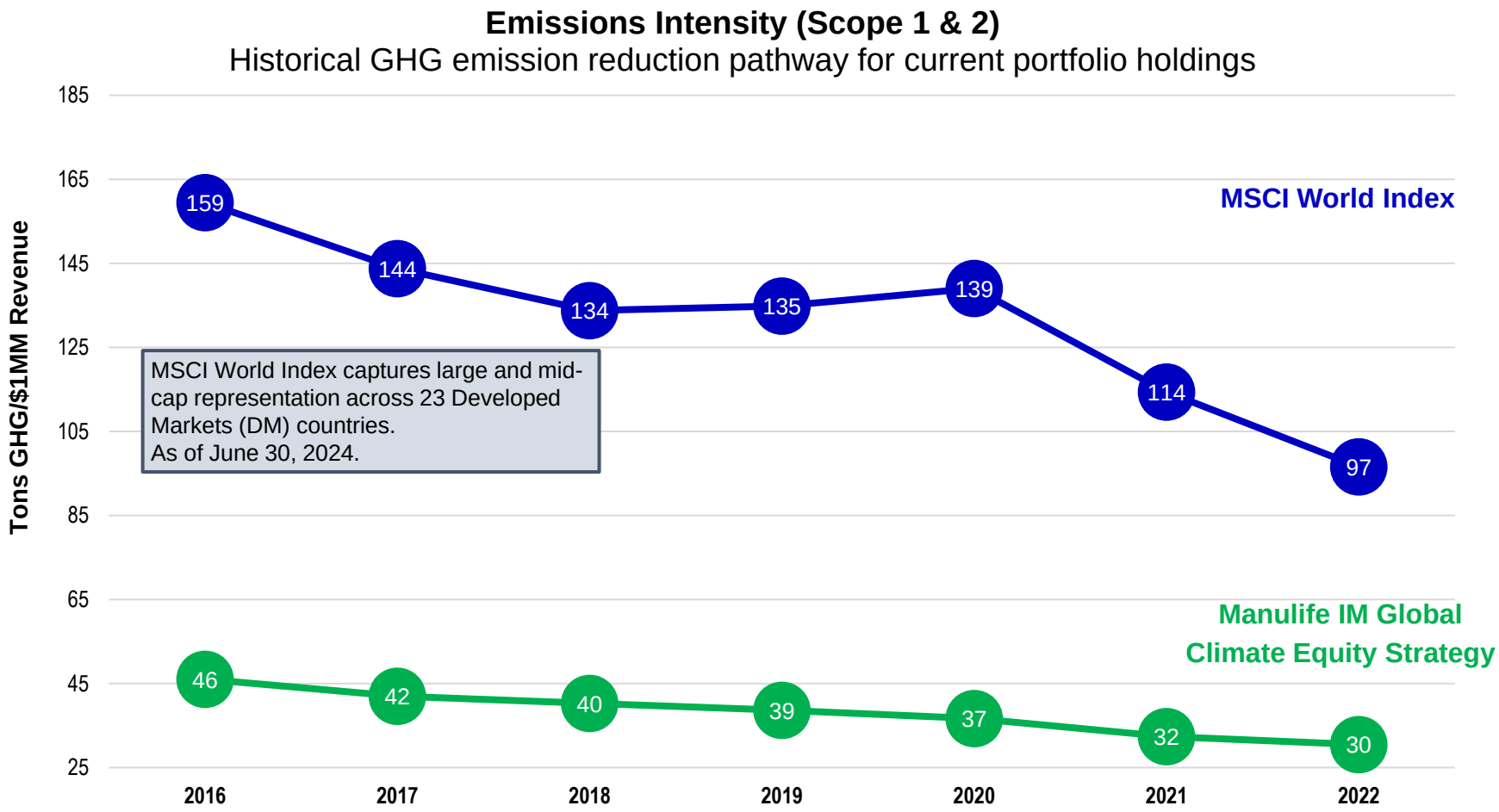
Outcome:
Company announced adoption of an SBT **(Q1 2024)**

(Q1 2024)

For illustrative purposes only. As of June 30, 2024.

Global Climate Equity Strategy

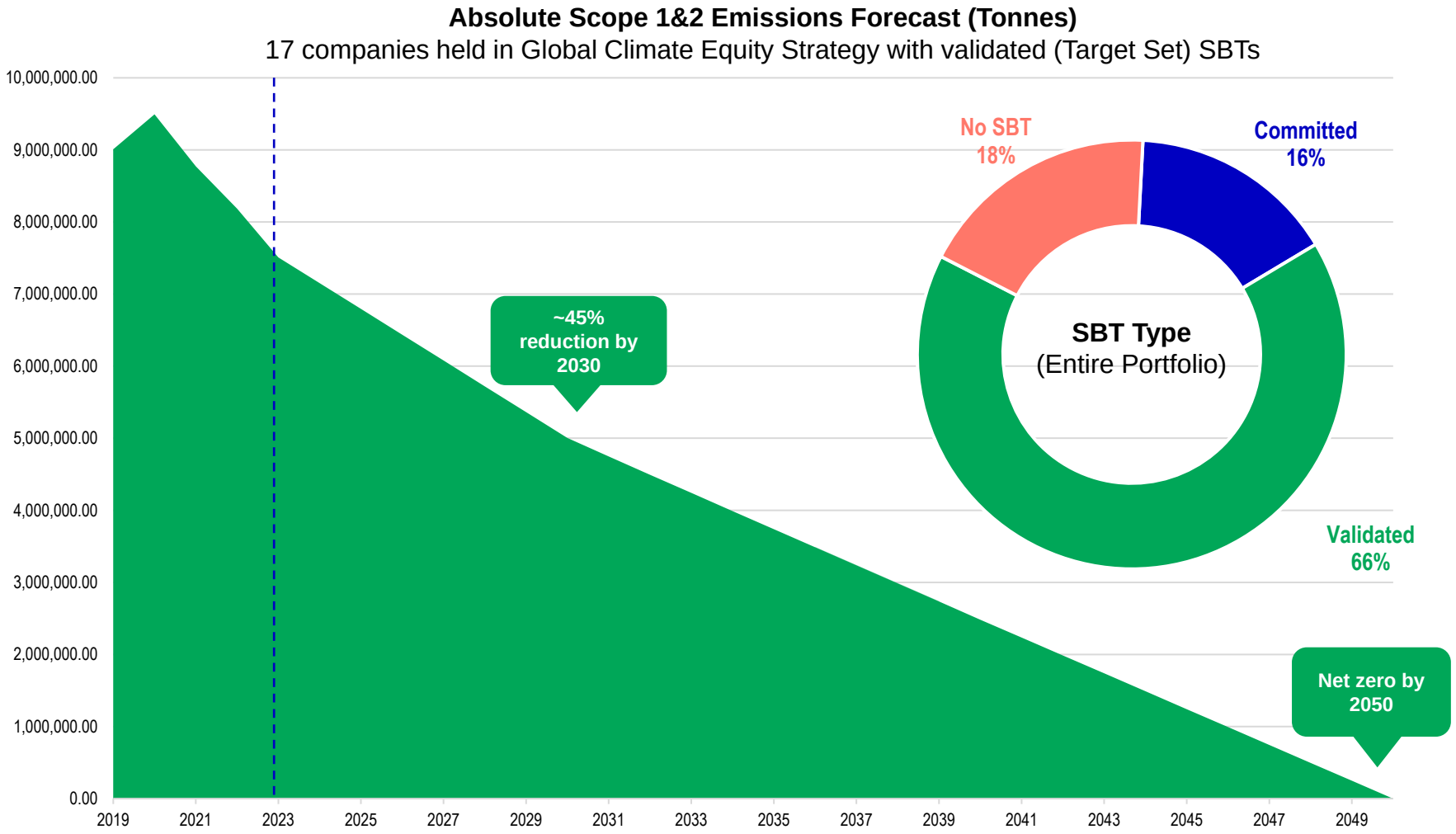
A portfolio with 1/3 the carbon intensity than the MSCI World Index



Source: S&P Global Trucost, Manulife Investment Management. For illustrative purposes. Emissions intensity data to December 31, 2022. Due to the nature of publicly available emissions disclosure across industries, data lags by at least one fiscal year. The chart above compares the historical carbon intensity of the companies currently held in the strategy's representative account, as at June 30, 2024 against the MSCI World Index based on current constituents and weights of each as of the same day. Emissions or carbon intensity is measured on a weighted average basis for companies held and allows investors to know how efficient the portfolio is in terms of carbon (GHG) emissions (tons) per unit of sales (US$1,000,000). Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy.

Science Based Targets (SBTs) – Path to net zero emissions

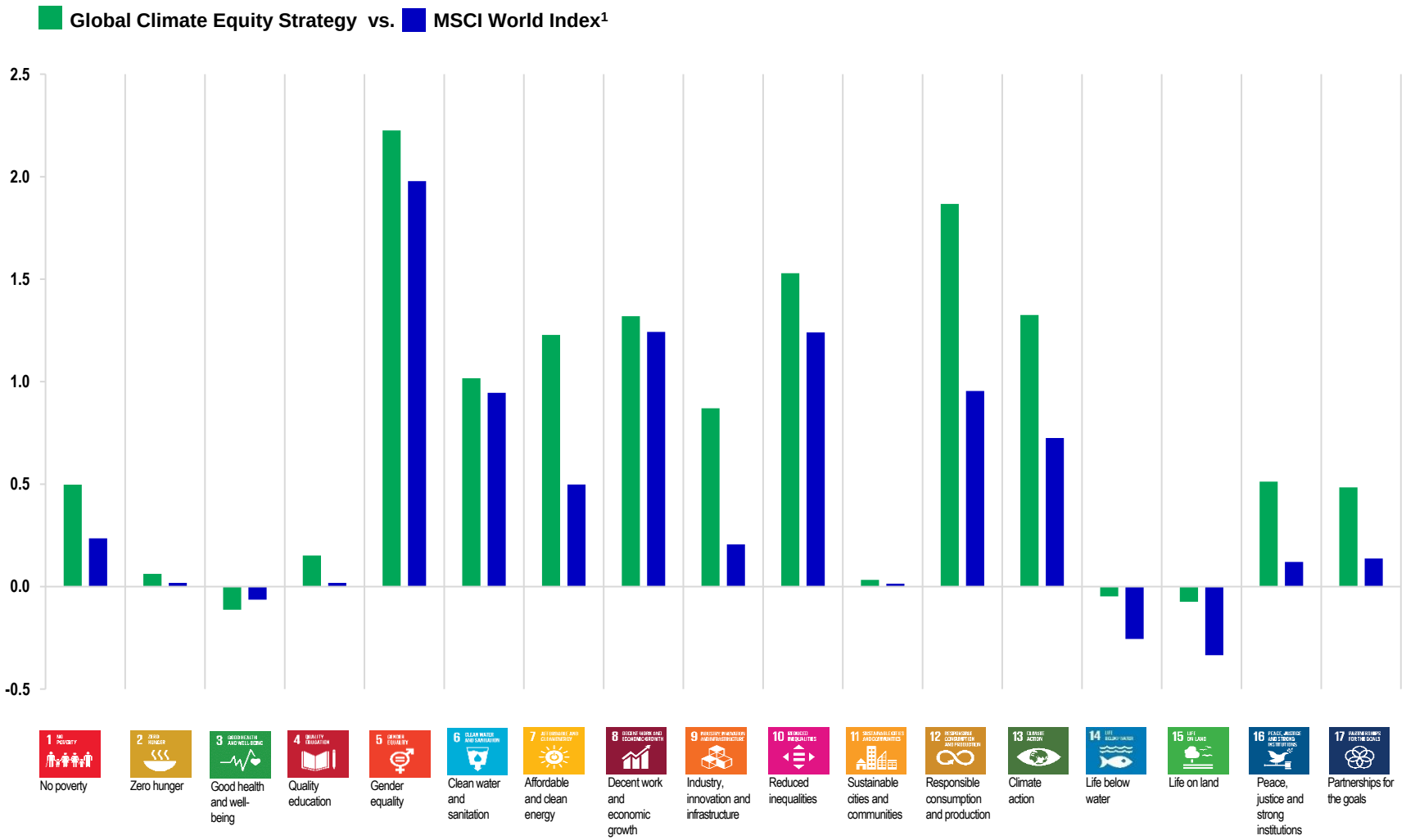
Tracking investee companies' GHG intensity path



Source: Manulife Investment Management, Science Based Targets Initiative, CDP, S&P Global Trucost. Emissions intensity data to December 31, 2022. Due to the nature of publicly available emissions disclosure across industries, data lags by one fiscal year. The bar chart shows the total Scope 1&2 emissions forecasted trajectory of the 17 companies in Global Climate Equity Strategy that have a validated Science Based Target (SBT). The pie chart shows percent of strategy where companies either have a SBT target (Target Set), have committed to SBT but have no target set as yet (Committed) or do not have a SBT. Using portfolio data as of March 31, 2024.

Global Climate Equity Strategy – Stronger SDG scoring

MSCI SDGs alignment (as of June 30, 2024)



Source: Manulife Investment Management, MSCI, as of June 30, 2024. Further details of the Manulife IM approach to sustainability are available at https://www.manulifeim.com/institutional/global/en/sustainability.
1 MSCI's methodology for generating the 17 SDG Net Alignment scores for each firm is summarized here. MSCI SDG Alignment Factsheet The portfolio/ benchmark scores comprises a weighted-average of each individual security's 17 SDG Net Alignment scores.

Global Climate Equity Strategy

Representative portfolio construction (as of June 30, 2024)

Portfolio constraints	Limit	Current
Number of holdings	30-50 (80 max)	41
Sector weight	Min 7 +/- 15%	7
Stock weight	Max 10%	2.4% (avg.)
Cash weight	Max 20%	0.73%

Sector allocation	Global Climate Equity Strategy (%)	Difference vs. MSCI World Index (%)
Industrials	18.07	7.38
Health Care	17.83	6.06
Information Technology	28.60	2.59
Consumer Discretionary	12.59	2.43
Cash	0.73	0.73
Consumer Staples	5.52	-0.80
Financials	13.87	-0.97
Real Estate	--	-2.10
Utilities	--	-2.44
Materials	--	-3.65
Energy	--	-4.27
Communication Services	2.78	-4.98

Source: Manulife Investment Management, FactSet, as of June 30, 2024. Portfolio constraints, top holdings and sector allocations.

Holdings, sector weightings, market capitalisation and portfolio characteristics are subject to change at any time and are for illustrative and reference purpose only.

Holdings, sector weightings, market capitalisation and portfolio characteristics of individual client portfolios in the program may differ, sometimes significantly, from those shown. This information does not constitute, and should not be construed as, investment advice or recommendations with respect to the securities and sectors listed. This information is supplemental to the GIPS reportincluded as a part of this material. The specific investment identified and described is not representative of all of the investments purchased, sold, or recommended for the strategy. It should not be assumed that any investment identified has or will be profitable. There can be no guarantee that similar investment opportunities will be available in the future or that the strategy will be able to exploit similar investment opportunities should they arise.

Global Climate Equity Strategy

Key Sector Positioning as of June 30, 2024

Sector Allocations (%)	Global Climate Equity	MSCI World Index	Difference	Rationale
Industrials	18.07	10.68	**7.38**	We were active in reducing our exposure to some of the more cyclical companies after valuations had become somewhat extended over the course of the last two quarters, reducing or eliminating our weightings in Schneider Electric SE, Trane Technologies plc, Wolters Kluwer NV and Veralto Corporation. While key macro indicators in North American markets continue to trend favourably, markets have perhaps discounted "too much, too soon" with respect to the possibility of interest rate cuts from the US Federal Reserve sometime in 2024. While most companies held should be able to withstand the pressures of a higher rate environment, inflationary pressure remains a concern both for top line and cash flow results, though perhaps less so than many other industries given a greater/faster capacity to pass those additional costs along to consumers. We continue to hold exposure to rails via CP Kansas City, where we view the merits of the deal with KCS as extensive, including a meaningfully increased network reach and better diversification. While cyclical, our holdings reflect a somewhat less cyclical portfolio than the benchmark, with higher relative weights in the professional & commercial services and building products industries where cash flows are often more resilient in an economic downturn.
Health Care	17.83	11.77	**6.06**	Historically a more defensive sector, we remain overweight in health care as the free cash flow yields of many of the companies held remains attractive on a relative basis, particularly for holdings in the equipment, services and supplies industries. We see value in select supply chain companies, specifically pharmaceutical wholesalers as we believe these companies will experience improving margins from accelerating drug inflation and continued recovery in prescription volumes. The broader sector scores more positively on questions of valuation, the ability to manage higher interest rates from a balance sheet perspective, and recession pressures.
Utilities	--	2.44	**-2.44**	We have been underweight the utilities sector for some time due to concerns about valuations, and more recently because of the rising rate environment. The portfolio finished with a zero-weight position in the sector as we continued to find more compelling risk return opportunities outside the utilities space.
Communication Services	2.78	7.76	**-4.98**	We reduced our weight in communication services given the outsized returns experienced – and now higher valuations – within the interactive media industry brought on in part by the AI & NVIDIA effect. We continue to maintain exposure in select media companies where cash flows are less volatile and valuations more attractive relative to indirect peers in the search and social media space.
Energy & Materials	--	7.92	**-7.92**	Zero weight in energy (structural) as a result of the strategy's goal of aligning with the Paris Agreement. Zero weight in materials given the strategy's greater focus on companies with Science-Based Targets (SBTs) and lower relative carbon intensity.

Global Climate Equity Strategy

Top 10 holdings and climate metrics (as of June 30, 2024)

Company	Country	Science based target?*	Carbon intensity*	Carbon intensity (%-ile)*	Implied temperature gauge (ºc)*	Cleantech revenues (%)*	Weight (%)
Microsoft Corporation	United States	Yes	66.7	96	1.50	22.7	7.65
McKesson Corporation	United States	Yes	41.8	10	1.50	0.0	4.25
Oracle Corporation	United States	No	59.8	91	2.13	17.7	4.20
Visa Inc. Class A	United States	Yes	25.7	22	1.50	0.0	4.14
Salesforce, Inc.	United States	Yes	43.3	70	1.50	19.0	3.88
Intertek Group plc	United Kingdom	Yes	67.4	66	1.50	0.0	3.30
Rentokil Initial plc	United Kingdom	No	145.7	81	3.60	0.0	3.24
McDonald's Corporation	United States	Yes	84.8	27	1.50	0.0	3.22
London Stock Exchange Group	United Kingdom	Yes	30.3	70	1.30	0.0	3.21
Lowe's Companies, Inc.	United States	Yes	66.7	32	2.00	0.0	3.17
Total							**40.3**

Scores as of June 30, 2024.
* Please refer to the appendix for definitions.
Source: FactSet, MSCI, S&P Trucost and SBTi (Science-Based Target Initiative). Past performance is not indicative of future results.
This information does not constitute, and should not be construed as, investment advice or recommendations with respect to the securities and sectors listed. This information is supplemental to the GIPS report included as a part of this material. The specific investment identified and described is not representative of all of the investments purchased, sold, or recommended for the strategy. It should not be assumed that any investment identified has or will be profitable. There can be no guarantee that similar investment opportunities will be available in the future or that the strategy will be able to exploit similar investment opportunities should they arise.
Holdings, ESG weightings and portfolio characteristics are subject to change at any time and are for illustrative and reference purpose only. Holdings, ESG weightings and portfolio characteristics of individual client portfolios in the program may differ, sometimes significantly, from those shown.

Important definitions

Climate leaders: The strategy seeks to invest in companies that are "Climate leaders" and which align with a net zero investment strategy. As such the portfolio advisor will consider companies that:

i. Have committed to or have verified science-based targets, as reasonably identified by the Portfolio Advisor from time-to-time;

ii. Are in the top 35% of carbon intensity performance relative to their industry group; and/or

iii. A significant portion of revenues, or the ability to scale to a significant portion based on a percentage or absolute basis, from climate solutions such as renewable energy and energy efficient technologies.

The Climate Leaders evaluation will be determined by the Portfolio Advisor using a proprietary method which aims to incorporate all relevant environmental and climate factors, considering and processing third party data together with the Portfolio Advisor's own analysis of industry and company data. The strategy shall adhere to an exclusion framework where certain companies are removed from the permissible investment universe. The strategy will limit investment in companies considered to be in violation of the Ten Principles of the United Nations Global Compact. This includes companies with products or within industries that are considered by the Portfolio Advisor to be unsustainable or associated with significant environmental or social risks. These may be updated from time to time depending on the assessment of each product or industry against the abovementioned principles, but currently include issuers deriving more than 25% of revenue from fossil fuel generation; more than 5% of revenue from alcohol, tobacco, adult entertainment, gambling operations and any revenue from controversial weapons, thermal coal mining and sales and oil & gas extraction and production.

Climate Value-at-Risk (Var): Sourced from MSCI, Climate Value-at-Risk is designed to provide a forward-looking and return-based valuation assessment to measure climate related risks and opportunities in an investment portfolio. The fully quantitative model offers deep insights into how climate change could affect company valuations.

Carbon intensity: Carbon intensity is measured on a weighted average basis for companies held and allows investors to know how efficient the portfolio is in terms of carbon(GHG) emissions (tonnes) per unit of sales (US$1,000,000).

Carbon intensity %-ile: Is the percentile rank for a company's carbon intensity within its respective industry group (GICS).

Temperature gauge: Sourced from MSCI or SBTi as applicable, the temperature gauge shows the warming trajectory (degrees ^{o}C) of a company by the year 2100 relative to pre-industrial averages and relates it to important target temperatures in global climate change regulations. The temperature gauge is sourced from MSCI for where companies do not have a SBTi.

Implied portfolio temperature (Degrees ^{o}C): The implied portfolio temperature is a portfolio weighted average calculation of how much the underlying companies' activities are expected to contribute towards climate change, delivering a warming scenario (e.g.,3°C, 2°C, 1.5^{o}C, etc.) the companies' activities are aligned with by 2100 as compared to pre-industrial levels). For companies that have committed to the Science-Based Target Initiative (SBTi) and have already set a specific temperature target with the SBTi, those temperature targets are used in the calculation. In cases where a company has committed with the SBTi but not set its target yet, 2.0^{o}C is assigned to indicate the commitment. And for companies with an SBTi of "well-below 2.0^{o}C ", their temperature in the portfolio is marked as 1.75^{o}C . In cases where a company does not have an SBTi target, the team uses the most recent calculated expected temperature increase provided by MSCI.

Cleantech revenues: Is a weighted average calculation of clean-technology revenues generated by companies held where clean-technology revenues are defined as those derived from products and services related to energy efficiency, pollution prevention, green building, alternative energy and sustainable water.

Independent chair (board): Weighted average percentage where boards of directors are chaired by an independent director.

Board independence: Weighted average percentage of issuers in the strategy that have an independent board of directors.

Women on board: Weighted average percentage of women on the board of the strategy's holdings.

Important definitions - continued

Science-based targets: What is it?

Science-based targets (SBT) is an organization that sets a pathway for companies to set ambitious climate targets. Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered "science-based" if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement – limiting global warming to 1.5˚C above pre-industrial levels.

What is the criteria?

- Scopes: The targets must cover company-wide scope 1 and scope 2 emissions, as defined by the GHG Protocol Corporate Standard. If a company's relevant scope 3 emissions are 40% or more of total scope 1, 2, and 3 emissions, a scope 3 target is required. All companies involved in the sale or distribution of natural gas and/or other fossil fuels shall set scope 3 targets for the use of sold products, irrespective of the share of these emissions compared to the total scope 1, 2, and 3 emissions of the company.
- Significance thresholds: Companies may exclude up to 5% of scope 1 and scope 2 emissions combined in the boundary of the inventory and target. Companies must set one or more emission reduction targets and/or supplier or customer engagement targets that collectively cover(s) at least two-thirds (67%) of total scope 3 emissions considering the minimum boundary of each scope 3 category in conformance with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.
- Greenhouse gases: The targets must cover all relevant GHGs as required per the GHG Protocol Corporate Standard.
- Base and target years: Targets must cover a minimum of 5 years and a maximum of 10 years from the date the target is submitted to the SBTi for validation7. The choice of base year must be no earlier than 2015.
- Level of ambition: At a minimum, near-term scope 3 targets (covering the entire value chain or individual scope 3 categories) must be aligned with methods consistent with the level of decarbonization required to keep global temperature increase well-below 2˚C compared to pre-industrial temperatures.
- Combined scope targets: Targets that combine scopes (e.g. 1+2 or 1+2+3) are permitted. When submitting combined targets, the scope 1+2 portion must be in line with at least a 1.5˚C scenario and the scope 3 portion of the target must be in line with at least a well-below 2˚C scenario.
- Absolute & intensity targets: Absolute reductions must be at least as ambitious as the minimum of the approved range of emissions scenarios consistent with the 1.5˚C goal. Intensity targets for scope 1 and scope 2 emissions are only eligible when they are modelled using an approved 1.5˚C sector pathway applicable to companies' business activities.

Source: Science Based Target Initiative, criteria version 5.0, as of July 2022. See: https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf, https://sciencebasedtargets.org/faqs.

Manulife Investment Management

(Sustainable investing on a global scale)

Key highlights

We endeavor to demonstrate our commitment through continuous efforts and tangible actions

Integration

PRI 2021 Assessment[1]

Received 4 & 5 stars (5 being highest) across actively managed listed equity, fixed income, real estate, and private credit modules. We have enhanced existing practices and implemented new initiatives since 2020 to address improvement opportunities identified for private equity and infrastructure modules, both received 3 stars.

Stewardship

UK Stewardship Code signatory

We successfully remained listed as a signatory after assessment by the Financial Reporting Council in 2023 as meeting the expectations of the latest UK Stewardship Code, which is considered as one of the world's most comprehensive codes for stewardship standards.

Collaboration

Lead roles for collaborative engagements for Climate Action 100+ and AIGCC[2]

Proud to lead collaborative engagements to address systemic risk on both a local basis and globally.
Recent examples include leading the engagement with one of the world's largest chemical firms as part of our work with the Climate Action 100+ initiative, as well as chairing Asia Investor Group on Climate Change (AIGCC)'s Physical Risks & Resilience working group and Energy Transition working group.

1 Manulife Investment Management is a signatory to the UNPRI and pays a signatory fee calculated based on AUM as reported in the PRI's 2021 Annual Reporting and Assessment Framework, published in September 2022. It is compulsory for signatories to report on their responsible investment activities annually. The PRI assesses a signatory's activities according to its assessment methodology and its output includes the PRI Assessment Report and Transparency Report from which this summary scorecard was sourced. Visit the PRI website for details and assessment methodology.

2 As of 31 December 2022. For more details, please see https://www.manulifeim.com/institutional/global/en/stewardship-report

We are committed to sustainable investing

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

Manulife Investment Management 2021 PRI summary scorecard

● Median (%) ● Our score (%)

% of our AUM	Module name	Median (%)	Our score (%)	Our score (stars)
	Investment & stewardship policy	60	**86**	★★★★
Direct modules				
10%–50%	Listed equity – active fundamental – incorporation	71	**89**	★★★★
10%–50%	Listed equity – active fundamental – voting	54	**70**	★★★★
10%–50%	Fixed income – corporate	62	**93**	★★★★★
10%–50%	Fixed income – SSA	50	**88**	★★★★
<10%	Fixed income – securitised	55	**71**	★★★★
<10%	Fixed income – private debt	67	**84**	★★★★
<10%	Real estate	69	**87**	★★★★
<10%	Infrastructure	77	**55**	★★★
<10%	Private equity	66	**42**	★★★
<10%	Listed equity – passive – voting*	57	**70**	★★★★
<10%	Listed equity – passive – incorporation*	35	**0**	★

Manulife Investment Management is a signatory to the UNPRI and pays a signatory fee calculated based on AUM as reported in the PRI's 2021 Annual Reporting and Assessment Framework, published in September 2022. It is compulsory for signatories to report on their responsible investment activities annually. The PRI assesses a signatory's activities according to its assessment methodology and its output includes the PRI Assessment Report and Transparency Report from which this summary scorecard was sourced. Visit the PRI website for details and assessment methodology.

The scoring thresholds define at which percentage boundary a grade is allocated. 1 star: do not do ESG or 0%≤25%; 2 stars: 25%≤40%; 3 stars: 40%≤65%; 4 stars: 65%≤90%; 5 stars: 90%≤100%.

Manulife Investment Management currently does not manage any passive equity strategies where the investment mandates or policies permits us to incorporate ESG considerations into investment decisions. For assets managed by our passive listed equities strategies, we are an active steward where we review and vote proxy and engage investee companies.

Manulife Investment Management
Global Climate Equity Composite

GIPS® Report

Creation Date: March 1, 2021 | Inception Date: March 1, 2021 | Reporting Currency: USD

Schedule of Calendar Year Returns and Assets

Year End	Gross of Fees Return (%)	Net of Fees Return (%)	Benchmark Return (%)	Composite Net 3-Yr Std. Dev. (%)	Benchmark 3-Yr Std. Dev. (%)	Number of Portfolios End of Period	Composite Dispersion (%)	Total Assets End of Period (Millions)	Firm Assets End of Period (Millions)
2023	23.15	22.35	23.79	N/A	N/A	<=5	N/A	151	486,485
2022	-18.26	-18.79	-18.14	N/A	N/A	<=5	N/A	66	422,291
Partial 2021	26.90	26.22	19.97	N/A	N/A	<=5	N/A	44	455,705

Schedule of Year End Returns

Date	Return	1 Year Gross (%)	5 Year Gross (%)	10 Year Gross (%)	SI Gross (%)	1 Year Net (%)	5 Year Net (%)	10 Year Net (%)	SI Net (%)
12/31/23	Composite	23.15	N/A	N/A	9.01	22.35	N/A	N/A	8.30

Date	Return	1 Year	5 Year	10 Year	SI
12/31/23	Benchmark	23.79	N/A	N/A	7.12

Firm Definition: For purposes of compliance with the Global Investment Performance Standards (GIPS®), our firm Manulife Investment Management "Manulife IM" was created on January 1, 2018, as a result of a consolidation of six regional firms that claimed compliance with GIPS®. Effective January 1, 2021, the firm includes assets managed under contract by Manulife Investment Management Private Markets (US) LLC ("Manulife IM PM US") and the unaffiliated managers SMA/Wrap business from John Hancock Investment Management LLC, a Manulife IM company. Effective January 1, 2023, the firm includes assets managed by Manulife Investment Management Timberland and Agriculture Inc ("MIMTA"). Effective June 30, 2024, the firm includes CQS, wholly owned by Manulife Investment Management (Europe) Limited acquired April 2, 2024.

Compliance Statement: Manulife claims compliance with the Global investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Manulife has been independently verified for the periods 1/1/2018 through 12/31/2023. The verification report(s) is/are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. Compliance with the GIPS® Standards for the predecessor firms were verified by a third party for the periods noted: MAM US 1/1/1993 to 12/31/2017, MAM UK 1/1/2008 to 12/31/2017, MAMJ 1/1/2006 to 12/31/2017, MAM HK 1/1/2006 to 12/31/2017, MAMS 6/5/2007 to 12/31/2017, MAML 1/1/2007 to 12/31/2017, MIM AG 1/1/2005 to 12/31/2022, MIM T 1/1/2004 to 12/31/2022 and MIMTA 1/1/2018 to 12/31/2022. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

General Disclosure: A complete list of the Firm's composite and pooled funds descriptions as well as policies regarding valuing investments, calculating performance, and preparing GIPS reports are available upon request. All returns reflect the reinvestment of dividends and other earnings. Gross performance results do not reflect the deduction of investment management fees, and are net of commissions and foreign withholding tax. Net performance results reflect the application of the highest incremental rate of the standard investment advisory fee schedule to gross performance results. Actual fees may vary depending on, among other things, the applicable fee schedule and portfolio size. Advisory fees are available upon request. Dispersion of annual returns is measured by an equal weighted standard deviation calculation of gross of fee returns. From inception to December 31, 2019 dispersion was measured by an asset weighted standard deviation calculation of gross of fee returns. Dispersion is not presented when there are five or fewer accounts in the composite for the entire year. Past performance is not a guarantee of future results. For annual periods starting January 1, 2011, the 3-year annualized ex-post standard deviation is not shown for the composite or the benchmark when 36 monthly composite returns are not available. The 3-year standard deviation for composite returns is calculated using composite net returns.

Composite Description: The Global Climate Equity strategy seeks to provide long-term capital growth by investing primarily in a diversified portfolio of global equity securities who are leaders in making positive contributions to climate change mitigation. To better reflect that this is an equity-based strategy, on April 1, 2023, the strategy was renamed the Global Climate Equity strategy from the Global Climate strategy.

Fee Schedule: This report is intended for institutional investors and the standard investment advisory fee schedule is 0.65%.

Benchmark Description: The benchmark is the MSCI World Net Return CAD. The MSCI Total Return Net World Index (Index) is designed to reflect the performance of the shares of certain companies in various developed countries. The companies making up the Index are large and medium sized companies based on the combined value of a company's readily available shares as compared to other companies.

Currency Conversion: Please note that conversion of data to Reporting Currency was completed using exchange rates provided by WM Reuters (London close).

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QATAR

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Performance information shown is generally for discretionary strategies/solutions and managed by a Manulife entity which is GIPS compliant and falls under the definition of a corresponding Manulife GIPS firm. Some investment strategies/solutions may not be included in a GIPS compliant firm under certain circumstances, such as SMA/UMA business in Canada.

Asset class risks
Principal risk factors that have an impact on the performance of our equity strategies include risks arising from economic and market events, portfolio turnover rates, governmental regulations, local, national and international political events, volatility in the commodities and equity markets, and changes in interest rates and currency values as well as environmental, social and corporate governance factors.

The principal risks associated with investing in a fixed income investment strategy include economic and market events, government regulations, geopolitical events, credit risk, interest rate risk, and risks associated with credit ratings, counterparties, foreign securities, currency exchange, hedging, derivatives and other strategic transactions, high portfolio turnover, liquidity, mortgage-backed and asset-backed securities, call or prepayment risk, and issuer stability along with environmental, social and corporate governance risk factors. The market value of fixed income securities will fluctuate in response to changes in interest rates, currency values and the credit worthiness of the issuer.

Principal risk factors that impact upon the performance of our asset allocation strategies include all the risks associated with the underlying funds and asset classes in which they are invested, in addition to overall asset allocation investment decisions. In addition, the underlying funds' performance may be lower than expected.

Information about SFDR
Unless otherwise noted, any references in this presentation to ESG or sustainability reflect the general approach of Manulife Investment Management to integrating sustainability risk considerations into our investment decision-making processes. Further details on Manulife Investment Management's general approach to sustainability are available at www.manulifeim.com/institutional /global/en/sustainability.

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ESG Integration and Engagement
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Manulife Investment Management conducts ESG engagements with issuers but does not engage on all issues, or with all issuers, in our portfolios. We also frequently conduct collaborative engagements in which we do not set the terms of engagement but lend our support in order to achieve a desired outcome. Where we own and operate physical assets, we seek to weave sustainability into our operational strategies and execution. The relevant case studies shown are illustrative of different types of engagements across our in-house investment teams, asset classes and geographies in which we operate. While we conduct outcome-based engagements to enhance long term-financial value for our clients, we recognize that our engagements may not necessarily result in outcomes which are significant or quantifiable. In addition, we acknowledge that any observed outcomes may be attributable to factors and influences independent of our engagement activities.

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. Please see our ESG policies for details.

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