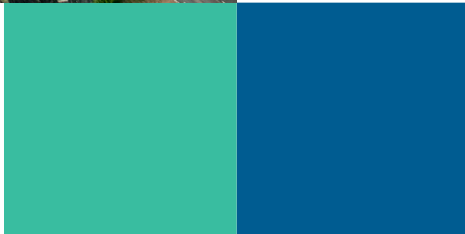
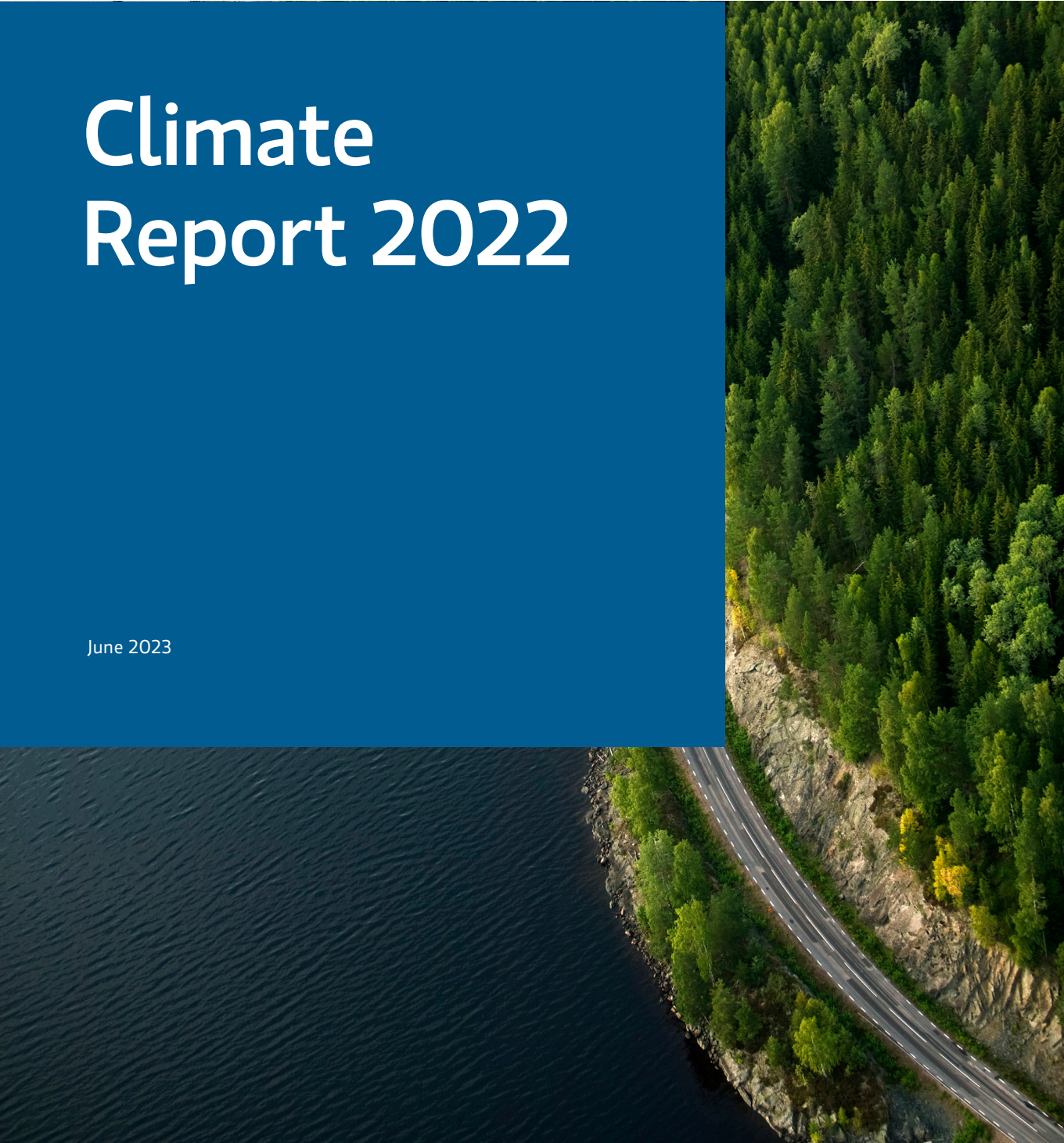


Morgan Stanley

INVESTMENT MANAGEMENT

Climate Report 2022

June 2023



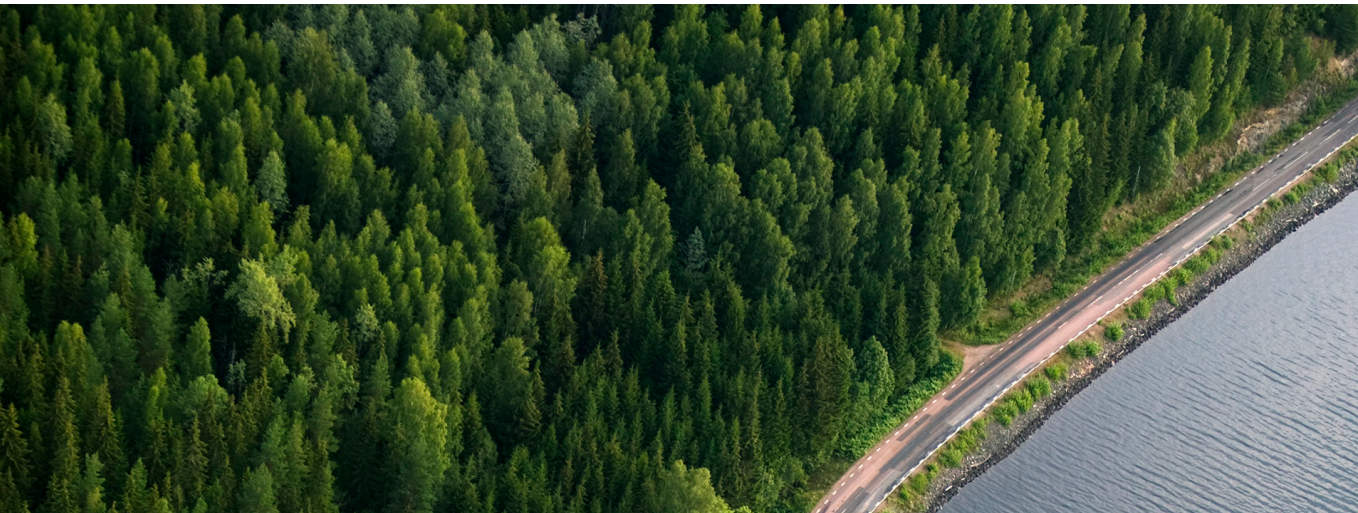


TABLE OF CONTENTS



1

Introduction



9

Strategy



30

Metrics & Targets



3

Governance



25

Risk
Management



Executive Summary

Morgan Stanley¹ is a global financial services firm that maintains significant market positions in three business segments: Institutional Securities, Wealth Management and Investment Management.

Morgan Stanley Investment Management (“MSIM”²) is the investment management division of Morgan Stanley. MSIM provides broad-based specialisation across a range of asset classes in public and private markets. Our independent investment teams leverage Morgan Stanley’s global resources to serve a diverse client base of governments, institutions, corporations, advisors and individuals worldwide. Our investment solutions include a broad range of high-conviction active strategies, alternatives, customisation strategies and Environmental, Social and Governance (“ESG”) expertise.

MSIM has been creating value for its clients for over 40 years and operates in more than 20 countries. MSIM has \$1.3 trillion in assets under management (“AUM”) as of December 31, 2022.

This Climate Report has been prepared in accordance with the Task Force on Climate-Related Financial Disclosures (“TCFD”) recommendations, and the rules and guidance set out in the Environmental, Social and Governance sourcebook of the Financial Conduct Authority’s (“FCA”) handbook.³ For the purposes of the FCA’s requirements, the reporting entity is Morgan Stanley Investment Management Limited (“MSIM Ltd”), which is a private limited company established in England and Wales, authorised by the FCA to provide investment management services to clients, (“FCA TCFD in-scope business”). MSIM Ltd is an indirect, wholly owned subsidiary of Morgan Stanley.

This report has been produced at the MSIM business segment level,⁴ since, in several instances, MSIM Ltd may leverage or be a part of MSIM’s broader processes and/or initiatives relating to investment and climate risk management. Throughout this Climate Report, we provide disclosures relating to MSIM, and where appropriate, we provide disclosures specific to MSIM Ltd. Disclosures on our portfolio management services and specific approaches adopted at product level can be requested on demand by MSIM Ltd’s clients who have a legal or regulatory requirement to receive information from July 1, 2023.

MSIM believes that ESG factors can bring investment risks and opportunities. Understanding and managing these risks and opportunities may therefore contribute

¹ Throughout this report, references to “Morgan Stanley,” “Firm,” “Firmwide” and “the group” are referring to Morgan Stanley.

² Throughout this report, references to “MSIM,” “we,” “us,” “our,” “the investment management division and/or segment” are general references to the collective investment management subsidiaries of Morgan Stanley. Certain subsidiaries may differ in their approach to ESG investing, therefore the discussion of ESG investing described herein may not be applicable to or representative of each Morgan Stanley affiliate.

³ The content and/or structure of future reports may vary, as regulations and guidance evolve.

⁴ Other legal entities included in the MSIM business segment, but out of scope for TCFD reporting, are not called out explicitly in this report.

to both risk mitigation and long-term investment returns. We seek to drive investment performance through engagement with the assets we own, to deliver long-term value and align with our objective to be responsible stewards of our clients' capital.

We manage client assets across a broad range of asset classes and strategies, with climate-related impacts manifesting differently across our product range. We therefore seek to respond to investor demand by providing clients with sustainable investing solutions aligned to their financial returns objectives and sustainability preferences, as well as supporting our investment teams to integrate material ESG factors⁵ into investment strategies and engagement practices as appropriate.

MSIM has a decentralised investment management operating model, with investment teams conducting business largely independent of each other, along with dedicated resources and unique talent pools focused on specific investment disciplines. This enables each team to develop capabilities to understand the impact of ESG factors, including climate on their funds, and to determine approaches that seek to deliver long-term value for clients. The investment teams are supported by, and operate within, the broader MSIM framework, including control functions and the centralised MSIM Sustainability team.

While this report is focused on climate-related issues, climate risks and opportunities, alongside sustainability-related issues and ESG factors are some of the many considerations taken into account in the management of our funds and managed portfolios.

Please note that this Climate Report relates to the reporting period from January 1, 2022 – December 31, 2022. MSIM's organisational structures, governance, policies and practices, as described in this report, may evolve and change over time, as we continue to enhance our approach to investing and climate risk management, as well as our control framework generally (having regard to considerations such as changing regulatory expectations, best practice and client feedback, among others). Where appropriate, we have provided disclosures relating to changes since the end of the reporting period in order to provide the most up-to-date information available.

MSIM expects climate-related risks and opportunities to impact the business across two key mediums: the investments being managed and as a corporate entity. We recognise that our largest exposure to climate-related issues is related to the investments we manage on behalf of clients, and this report primarily focuses on our portfolio management activities. Further information on how climate-related issues are expected to impact our operations can be found in [Morgan Stanley's Firm-level ESG disclosures](#).

⁵ Some investment strategies do not integrate sustainability and/or ESG factors where it is not currently feasible or appropriate to do so (e.g., certain passive or active investment strategies, certain asset allocation strategies, or where requested by clients).

The disclosures for MSIM Ltd in this report, including any third-party or group disclosures cross-referenced in it (insofar as they relate to MSIM Ltd), comply with the requirements of chapter 2 "Disclosure of climate-related financial information" of the Environmental, Social and Governance sourcebook included in the FCA's Handbook.



RUAIRI O'HEALAI

EMEA COO at Morgan Stanley Investment Management and CEO at Morgan Stanley Investment Management Ltd

Governance



MSIM has implemented robust governance systems to deliver effective management and oversight of sustainability issues including climate risk management.

Morgan Stanley Governance

Morgan Stanley is committed to considering climate change throughout business, operational and risk management activities. For example, Morgan Stanley's Global Sustainability Office (GSO) drives the Firm's sustainability strategy and partners with colleagues across the different business segments (including MSIM), as well as support services and risk and control functions, to integrate sustainability considerations, including climate-

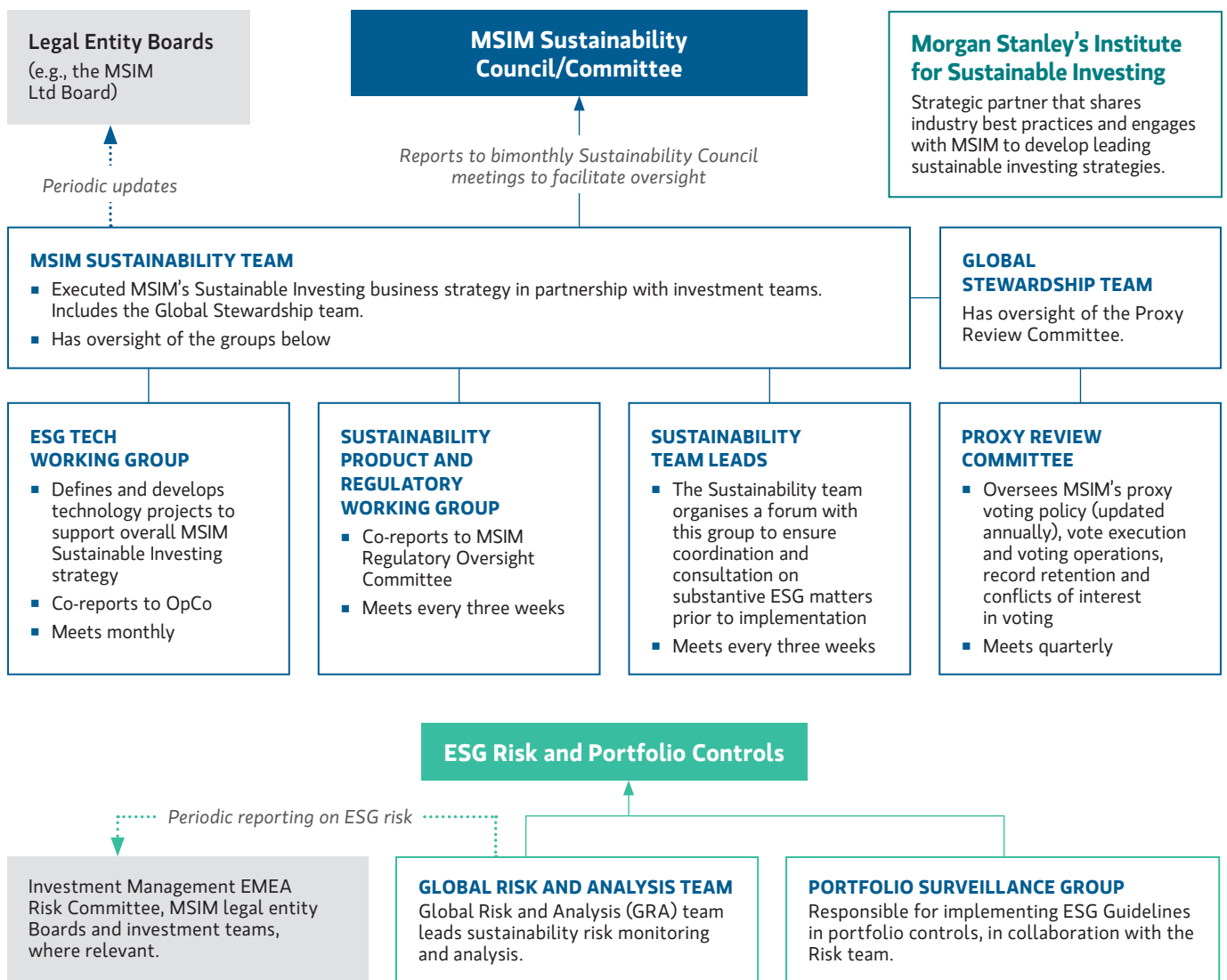
related issues, into corporate policies, business activities and operations. Further information on the Firmwide sustainability-related governance structure can be found in [Morgan Stanley's Firm-level ESG disclosures](#).

MSIM Governance

MSIM's governance approach reflects its business structure as the investment management division of a global financial services Firm, which comprises multiple legal entities in different jurisdictions, with respective boards of directors and governance structures, that leverage MSIM's processes relating to investment and climate risk management. MSIM Ltd is an appointed investment manager within the EMEA region with several committees and teams across the MSIM division supporting its board in performing its responsibility for establishing appropriate governance systems.

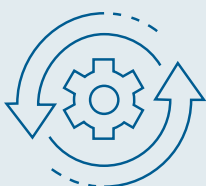
MSIM has established governance systems, risk management and controls to support its subsidiaries with effective management of sustainability issues (including climate risk management) as outlined in the Sustainability Organisational Chart below.

MSIM Sustainability Organisational Chart



MSIM ESG Governance Enhancements

We continue to develop our governance processes linked to sustainability-related issues by ensuring management roles and responsibilities are clearly defined and enhancing the formal reporting processes and insights presented to the boards of directors of various MSIM legal entities. In 2023, we have continued to enhance our three lines of defence model to update responsibilities across functions involved in supporting, controlling and overseeing ESG investing activities as well as updating our overarching ESG governance framework under the Investment Management ESG Committee.



Board Oversight

Board-level oversight at Morgan Stanley extends across the organisation, with the firm, business segments, legal entities and products having their own boards as required. Sustainability- and climate-related matters form a part of the strategy overseen by boards of directors across the Firm.

MORGAN STANLEY BOARD OVERSIGHT

At the Morgan Stanley Parent board level, Morgan Stanley board of directors (Board) committees have explicit oversight responsibilities for D&I, climate and sustainability. The Governance and Sustainability Committee, which was previously the Nominating and Governance Committee, has overseen ESG initiatives for several years. The Board Risk Committee oversees climate risks. The Compensation, Management, Development and Succession (CMDS) Committee assists the Board in its oversight of strategies, policies and practices related to human capital, including diversity and inclusion. The Audit Committee oversees the Firm's voluntary public sustainability and climate disclosures. The full Board is briefed on topics across each theme, as appropriate. Further information on the activities of the Morgan Stanley Board of Directors and board committees can be found in [Morgan Stanley's Firm-level ESG disclosures](#).

MSIM BOARD OVERSIGHT

Divisionally, each business segment at Morgan Stanley provides reporting into the Board Risk Committee through the Firm Risk Committee ("FRC"). Within MSIM, the Investment Management Risk Committee ("IMRC") is appointed by the FRC to provide oversight of MSIM's risk management of principal risks within the MSIM Risk framework including sustainable investing risks. It serves as a risk management forum for representatives across functional groups from different legal entities.

From a legal entity perspective, management company, investment manager, and fund boards across MSIM oversee management and investment teams. Day-to-day decision-making sits with MSIM investment teams and the control and oversight functions, with clear channels to enable the legal entity boards (e.g., the MSIM Ltd Board

through quarterly sustainability updates) to be informed of climate-related issues as part of their role overseeing management of sustainability matters.

Several of our products have climate-related targets or are aligned to the decarbonisation objectives of the Paris Agreement, a global commitment that seeks to curb emissions. Progress against relevant climate-related targets is reported to the fund, investment manager and management company boards, as appropriate, to enable oversight and monitoring. Centrally, teams and working groups across the MSIM Sustainability Governance Structure strive to ensure that investment teams have sufficient resources, insights and tools to provide long-term value to clients by taking into account climate-related issues.

MSIM LTD BOARD OVERSIGHT

The board of directors of MSIM Ltd (the "MSIM Ltd Board") is responsible for the governance of MSIM Ltd. The MSIM Ltd Board's reserved matters include: (i) approval of the EMEA Investment Management strategy in relation to MSIM Ltd; (ii) approval of the MSIM Ltd risk appetite and risk tolerance statements and limits; and (iii) approval of material regulatory filings or regulatory public disclosures relating to MSIM Ltd.

In carrying out its responsibilities, the MSIM Ltd Board receives quarterly updates from the MSIM Sustainability team and key stakeholders on sustainability and ESG matters, including regulatory updates, product development and strategic initiatives related to climate matters. Additionally, the MSIM Ltd Board delegates some of its responsibilities to the Morgan Stanley International Limited Risk Committee ("the MSI Risk Committee"), including the review of the MSIM Ltd Risk Appetite Statement and providing assurance on the effectiveness of the risk management framework.

In 2022, the MSIM Ltd Board held quarterly and ad hoc meetings. Sustainability-related discussions included the enhancement of governance and control processes, the continued expansion of the MSIM sustainability and climate investment solution offering within certain investment platforms and key regulatory project level updates.

Management Committees, Working Groups and Teams

The below provides an overview of the management-level committees, working groups and teams that have responsibility for overseeing and monitoring broader ESG- and climate-related issues.

GROUP	RESPONSIBILITIES	MEMBERSHIP STRUCTURE
Sustainability Council (replaced by the Investment Management ESG Committee in 2023)	Oversees and guides MSIM's sustainable investment strategies, ESG innovation, climate-related culture across staff and processes. Works to ensure business readiness for evolving client and regulatory demands on sustainability and climate-related matters.	Co-chaired by the Global Head of Sustainability for Investment Management and Chief Responsible Investment Officer of Calvert Research and Management. Consists of a group of investment team representatives and senior business leaders across various MSIM functions.
MSIM Sustainability Team	Provides a centralised support resource for investment teams to derive insights and tools on sustainable investment strategies and integrate ESG considerations into portfolio construction.	A group of sustainability professionals with experience across regulation, strategy and solutions, stewardship and data, led by the Global Head of Sustainability for Investment Management.
MSIM Sustainable Team Leads	Co-ordinate and support the sustainability-related work of the investment teams and work with portfolio managers to ensure strong ESG incorporation, as appropriate.	Many of our investment teams or asset class platforms appoint at least one dedicated Sustainable Investing/ESG specialist.
Global Stewardship Team	Works in collaboration with investment teams to coordinate stewardship and portfolio company engagement agenda, as required.	Stewardship analysts with experience across corporate governance and proxy voting, led by the Global Head of Stewardship.
Proxy Review Committee	Oversees and assesses appropriateness of the MSIM Equity Proxy Voting Policy and Procedures, including vote execution, operations, record retention and conflicts of interest in voting.	Chaired by the Director of the Proxy Voting team (part of the Global Stewardship team). Consists of investment professionals representing the different investment teams and geographic locations of MSIM.
Sustainability Product and Regulatory Working Group	Monitors and tracks global ESG legal and regulatory developments.	Chaired by the Head of Sustainability Regulation and Policy with support from the Sustainability Team.
ESG Tech Working Group	Defines and develops technology expertise and ESG data programmes to support client needs.	Technology leads led by the Head of Sustainability Data and Technology.
Sustainability Data and Technology Council	Supports business and client needs for ESG data governance and technological controls.	A group of senior cross-functional business leaders, including the Global Head of Sustainability for Investment Management and Head of Data and Analytics for Investment Management, chaired by the Head of Sustainability Data and Technology.
Investment Management Risk Committee	Provides a regular forum for different functional groups to identify and discuss key risks and make recommendations to senior managers on managing those risks.	Led by the Chief Risk Officer for MSIM and appointed by the Firm Risk Committee.
Global Risk and Analysis Team	Provides ongoing monitoring for emerging risks in the market, including sustainability and climate.	Led by the CRO for MSIM who chairs the Investment Management Risk Committee.
Portfolio Surveillance Group	Implements ESG guidelines and considerations in portfolio controls in collaboration with the risk function.	Led by the Head of Portfolio Surveillance and Registration Oversight

Morgan Stanley Committees and Functional Groups

In addition to the above noted committees and teams, which form the MSIM Sustainability Governance Structure, MSIM benefits from involvement in wider forums at the Firm level, some of which are set out below.

GROUP	RESPONSIBILITIES	MEMBERSHIP STRUCTURE
Global Sustainability Office (Firmwide)	Integrating sustainability considerations into the Firm's decision-making, across corporate policies, business activities and operations.	Led by the Firm's Chief Sustainability Officer. Partners with colleagues throughout the Firm's three business segments, as well as support services, and risk and control functions.
Firm Risk Committee (Firmwide)	Overseeing all relevant and material risks. The committee periodically reviews results of climate-related stress testing.	Co-chaired by the Firm's CEO and Chief Risk Officer. Consists of C-suite executives from across business units, and control and advisory functions.
Climate Risk Committee (Firmwide)	Oversees matters relating to the Firm's financial and non-financial exposure to climate risk.	Co-chaired by the Firm's Chief Risk Officer and Chief Sustainability Officer, and reports to the Firm Risk Committee (FRC) and the Morgan Stanley Board Risk Committee.
Environmental and Social Risk Management Group (Firmwide)	Oversees the Environmental and Social Policy Statement ("ESPS") and related policies and procedures, conducts due diligence on relevant transactions and provides internal subject matter expertise on environmental and social risk.	ESRM Group is part of the Legal and Compliance Division and led by the Global Head of ESRM who reports to the Global Conflicts Officer.

Effective governance of sustainability matters throughout the business is crucial for our long-term success and our ability to deliver value for clients, and hence appropriate input from management to support our sustainability and climate approach is important.

As noted previously, MSIM adopts a decentralised approach to investment management, with investment teams primarily responsible for assessing and monitoring the issues expected to impact the funds being managed, including climate-related issues, where relevant.

Several management-level operating committees and subcommittees across the division share responsibility for the coordination of the Investment Management business and strategy. Several Risk Committees have delegated responsibilities from legal entity boards across the MSIM division (e.g., the MSI Risk Committee from the MSIM Ltd Board as noted in the Board Oversight section above).

Material sustainability-related issues, including climate risks and opportunities, may be considered by certain investment teams alongside other risks in investment team-level processes. Further information on how investment teams integrate ESG into their decision-making, where relevant, is detailed in the Strategy section of this report.

Investment teams are responsible for assessing material sustainability-related issues, as appropriate, to the financial product. They may draw on data and other resources from the MSIM Sustainability team and may be supported by the MSIM Sustainability team in doing so. In addition, the central team has governance structures in place to provide sufficient oversight of sustainability-related issues.

Management is informed and monitors sustainability matters (including climate-related issues) on a regular basis, as set out in the MSIM Sustainability Organisational Chart above. The MSIM Risk functions (“Global Risk and Analysis” or “GRA”) lead sustainability risk monitoring and analysis across the investment management business segment to provide MSIM management with relevant and timely information on climate-related matters. As per the above governance structure, findings from this analysis are shared with investment teams and the Investment Management Risk Committee.

One aspect of MSIM management’s role, per the committees described above, is to feed into workshops and top-down sustainability risk analysis, to identify climate-related physical and transition risks that are most relevant to business activities. For example, MSIM’s Global Risk and Analysis team works closely with the Global Sustainability Office to design and develop long-term climate-related scenarios to identify and assess key climate-related risks and opportunities. More detail on climate-related risks and opportunities is included in the Risk Management section of this report.

In addition, many of our investment teams within MSIM have appointed at least one dedicated sustainable investing specialist to help ensure strong ESG incorporation, as appropriate. Other elements of the role include supporting investment staff to continuously enhance incorporation of ESG factors/features in investment processes through research, training, knowledge-sharing, engagement with investee management teams, and representing their asset class/team in client meetings, consultant meetings, and other forums and groups as necessary.

MSIM Remuneration

MSIM remains an employer of choice by offering competitive compensation programmes to our employees. A primary objective in designing compensation programmes for MSIM employees is to ensure that compensation incentives are aligned with our business strategy of driving performance and adding value for clients, shareholders and other employees.

Moreover, MSIM has a Global Incentive Compensation Discretion (“GICD”) Policy, which is reviewed at least once a year and amended, as needed, in advance of the annual incentive compensation decision-making process. The GICD Policy requires and directs compensation managers to consider only legitimate, business-related factors when exercising discretion in determining incentive compensation. Such factors include adherence to Morgan Stanley’s core values, conduct, disciplinary actions in the current performance year, risk management and risk outcomes. The GICD Policy also requires and

directs compensation managers to escalate circumstances that may warrant cancellation or clawback of previously awarded compensation for further investigation. Compensation managers are required to certify their compliance with the GICD Policy in advance of exercising discretion in determining incentive compensation, and Morgan Stanley's Human Resources (HR) coverage team works directly with compensation managers to ensure that they understand their responsibilities.

Where required by regulation, such as in the EU SFDR, the UCITS Directive or MiFID II, MSIM's local entities have adopted remuneration policies to promote sound and effective risk management of sustainability risks, including discouraging excessive risk-taking with respect to sustainability risks. Additionally, the ongoing integration of stewardship across MSIM is broadly considered in the appraisal for some staff. Further information on MSIM's stewardship approach can be found in the [MSIM UK Stewardship Code 2022 Report](#).



Strategy

MSIM evaluates the impact of sustainability-related issues, including climate risks and opportunities, as appropriate to the business and managed investments in an ongoing effort to deliver long-term value for our clients while meeting changing demands.

MSIM provides broad-based specialisation across a range of asset classes in public and private markets. Our independent investment teams leverage Morgan Stanley's global resources to serve a diverse client base of governments, institutions, corporations, advisors and individuals worldwide. Our investment solutions include a broad range of high-conviction active strategies, alternatives, customisation strategies and ESG expertise.

As noted previously, MSIM's investment teams believe that investments may face material ESG risks and opportunities, including related to climate-change.

Understanding and managing these risks and opportunities may therefore contribute to both risk mitigation and long-term investment returns for our clients. We seek to drive better investment performance through engagement with the assets we own to deliver long-term value and align with our objective to be responsible stewards of our clients' capital.

Sustainable investing continues to be a trend shaping the investment management sector and means different things to different investors. Some of our clients are increasingly demanding solutions and services to manage risks and capture opportunities associated with sustainability-related issues, including climate change. MSIM is characterised by its global reach, experience and reputation for providing customised solutions to clients. We aim to create a culture that fosters investment diversity, innovation and independent thought. This is demonstrated in our investment offerings that range across various geographies, investment styles, asset classes and approaches to sustainability. We believe this can deliver better outcomes for clients, portfolio companies and markets, as each investment team will be better placed to determine an appropriate focus on ESG to seek to deliver increased and long-term value for its investment strategies and clients.

Morgan Stanley Operations

In addition to our sustainable investment strategy within MSIM, Morgan Stanley as a Firm is also committed to reducing the emissions from its own operations. Morgan Stanley committed to achieving carbon neutrality by 2022, covering Scopes 1 and 2 emissions, as well as Scope 3 business travel and downstream leased assets

emissions. Progress towards this goal will be reported in the Morgan Stanley Group's 2022 ESG report that will be published in 2023. For more on the approach to operational sustainability, refer to [Morgan Stanley's Firm-level ESG disclosures](#).

Climate-Related Risks and Opportunities

In our ongoing strategic vision to deliver long-term value to clients, we recognise the importance of identifying, understanding and managing climate-related risks and opportunities that impact our business, both as an investment manager and a corporate entity, where appropriate. GRA conducts central risk assessments across the business, some of which are presented in this section.

Climate-related risks and opportunities are typically grouped into two categories through which they might have a material impact on any of our portfolio companies or on MSIM as a standalone entity.

TRANSITION RISKS AND OPPORTUNITIES

The financial impact associated with the consequences of transitioning to a low-carbon economy. The response to climate change will result in changes to society and the economy driven by governments, industries and consumers as society adapts to climate change and mitigates its causes. These changes present transition risks and opportunities that may be linked to policy constraints, resource restrictions, technology trends, market demand and supply shifts.

PHYSICAL RISKS

The financial impact associated with extreme weather events (acute) and long-term changes in climate patterns (chronic). Specifically, physical risks may impact investors in our funds through deterioration in valuation of investments caused by disruption to operations or destruction of properties. Mitigating risks associated with these impacts may also present opportunities for portfolio companies and MSIM as a standalone entity.

RISKS

We acknowledge that our largest exposure to climate risk is indirect and arises from the physical and transition risks affecting the companies and securities in which we invest. These risks could affect companies and securities in myriad ways, which ultimately may impact investors in our funds and MSIM through, for instance, changing portfolio valuation. Additionally, we have identified several direct climate risks which may impact MSIM as a corporate entity and investment manager over different time horizons.

Time Horizons

The GRA team monitors emerging risks in the market and expects climate-related risks and opportunities to typically impact over the following time horizons:

0-2 years: Short term

2-10 years: Medium term

10+ years: Long term

However, investment teams may use their own interpretation appropriate to their investment strategies across different asset classes on the time horizons they expect climate-related risks and opportunities to impact their products.

The Risk Management section of this report provides further information on the process for identifying, monitoring and managing climate-related risks. This section focuses on the climate-related risks and opportunities we expect to materially impact our portfolio companies and therefore our business over the above-noted time horizons.

Direct Risks for MSIM as a Corporate Entity

RISK	DESCRIPTION	HORIZON	MSIM IMPACT
Transition (Reputation)	Associated with perception of responding inadequately to climate challenges linked to our investment products and operational impact	Short, medium term	Decreased revenues as a result of clients not allocating their capital with MSIM due to reputational loss
Transition (Policy and Legal)	Associated with changes to sustainability-related legal and regulatory requirements impacting our products or other aspects of our investment business and operations	Short, medium term	The volume and scale of complex regulatory obligations could increase compliance costs and expenses
Physical (Acute and Chronic)	Associated with the impact on our global facilities due to weather events and long-term shifts in climate patterns	Long term	Increased capital expenditure, decreased revenue and increased costs due to impacts on MSIM's operations

Indirect Risks Impacting Investments Held on Behalf of Clients

Transition and physical risks affecting the companies in which we invest may have an indirect impact on MSIM through lower assets under management as a result of decreased security values.

RISK	DESCRIPTION	HORIZON	PORTFOLIO COMPANY IMPACT	MSIM IMPACT
Transition (Policy and Legal)	Associated with changes to current climate-related law and regulation impacting portfolio companies' operations	Short, medium term	Increased costs	Decreased MSIM portfolio valuation and AUM
Transition (Technology)	Associated with requirements to keep pace with tech advancements in identifying, assessing and managing climate risks	Medium term	Increased costs, decreased revenues, increased competition	Decreased MSIM portfolio valuation and AUM
Transition (Reputation)	Associated with perception of not responding appropriately to climate challenges (e.g., greenwashing)	Short, medium term	Decreased revenues	Decreased MSIM portfolio valuation and AUM
Transition (Market)	Associated with an unfavourable shift in client demand away from existing products and services as preferences change	Short, medium term	Decreased revenues	Decreased MSIM portfolio valuation and AUM
Physical (Acute)	Associated with the impact on physical operations of portfolio companies due to weather events or changes in temperature	Long term	Staff disruption, increased damage, increased expenditure, increased insurance costs	Decreased MSIM portfolio valuation and AUM
Physical (Chronic)	Associated with sustained long-term shifts in climate patterns impacting operations	Long term	Increased capital expenditure, decreased revenue, increased costs	Decreased MSIM portfolio valuation and AUM

CLIMATE-RELATED OPPORTUNITIES

The transition to a lower-carbon economy may also present opportunities for investment managers. These opportunities could manifest directly, by growing MSIM's business through new products and services. Additionally, opportunities may arise indirectly through the financial outperformance of companies and securities that manage climate risk effectively. In this section, we present some potential opportunities, based on the TCFD classifications, where relevant.

Our teams have access to use a range of tools and analytics to identify, quantify and measure climate-related opportunities as described in more detail later in this section. Not all teams will use these tools; they are used in line with the investment strategy. Below, we outline examples of some of the direct opportunities that we expect may materially impact our business, as well as some indirect opportunities we expect to impact our clients and investors in our funds over different time horizons.

Direct Opportunities for MSIM

OPPORTUNITY	DESCRIPTION	HORIZON	MSIM IMPACT
Products and Services	Developing products and sustainability services in response to emerging climate change sectors deemed to benefit from the transition	Short, medium term	Increased AUM, may also result in an improved competitive position
Market/Client Demand	Capturing changing client preferences to demand more sustainability- or climate-themed products	Short, medium term	Increased AUM, may also result in an improved competitive position and increased market share

Indirect Opportunities Impacting Investments Held on Behalf of Clients

OPPORTUNITY	DESCRIPTION	HORIZON	PORTFOLIO COMPANY IMPACT	MSIM IMPACT
Energy Efficiency	Investing in companies that are supporting energy efficiency initiatives	Short, medium term	Decreased portfolio company operating costs, potentially increasing their associated profits, which could impact asset valuation and AUM	Increased MSIM portfolio valuation and AUM
Technology	Investing in companies or sectors that might benefit from technology breakthroughs (e.g., cleaner energy sources)	Medium term	Increased portfolio company revenue, potentially leading to increased company value and increased dividends	Increased MSIM portfolio valuations and AUM
Incentives	Portfolio companies benefiting from incentives provided by governments (e.g., technologies cutting greenhouse gas emissions)	Short, medium term	Increase portfolio company revenue and potential diversification of financial assets	Increased MSIM portfolio valuations and AUM
Reputation	Investing in companies that are early movers on climate issues, or using engagement practices to encourage portfolio companies to act	Short, medium term	Increased portfolio company revenue	Increased MSIM portfolio valuations and AUM

MSIM PHYSICAL AND TRANSITION RISK AND OPPORTUNITY ASSESSMENT

An initial risk assessment has been performed by GRA in collaboration with Morgan Stanley's Global Sustainability Office across each of the different types of climate risks and time horizons in order to help facilitate the risk identification process and compare relative to MSIM's overall exposures.

This analysis is qualitative in nature and based on MSIM's exposures across a diversified portfolio of global equities, government bonds, corporate bonds, real estate and commodities. This is a separate process from the quantitative assessment that is performed by GRA⁶ and described in more detail in the Scenario Analysis section of this report.

TIME HORIZON	Physical Risks		Transition Risks			
	ACUTE	CHRONIC	POLICY AND LEGAL	TECHNOLOGY	MARKET	REPUTATION
0-2 years: Short-term	■	■	■	■	⬡	■
2-10 years: Medium-term	⬡	■	⬡	⬡	●	⬡
10+ years: Long-term	⬡	⬡	●	●	●	●

■ Low Risk or Opportunity
⬡ Medium Risk
● High Risk

⁶ The assessment is part of an independent risk process. It was not delivered nor acted on by MSIM's investment teams in 2022.

Types of Climate Risks

PHYSICAL RISKS

Acute

Acute physical risks are primarily related to severe weather events, including hurricanes, wildfires, windstorms, drought, and heat waves. In the short term, moderate rises in global temperatures may marginally increase the frequency and severity of these weather events, resulting in property damage to areas not prepared to weather events of this scope.

The frequency of significant weather events may increase over time, heightening the overall risk in the medium- and long-term time horizons.

Chronic

Chronic physical risks are related to permanent shifts in ecosystems, geographic characteristics, sea levels and biodiversity. Over the short and medium term, there may be relatively low exposure to these chronic risks, as the issues are typically long term in nature.

MSIM expects the risk level to be moderate in the long term, although it may be heightened if average global temperatures increase faster than anticipated. The real estate sector may face higher chronic risk relative to other sectors, as companies are expected to increase investment in physical infrastructure to account for the changes in geography and climate.

TRANSITION RISKS

Policy and Legal

While many governments are already setting emissions reduction targets, there remain differing views across countries regarding the best approach and timeline. As a result, coordination on impactful climate action is expected to be unlikely in the short-term, limiting the overall policy and legal risk. Sectors that rely heavily on fossil fuels, such as energy, utilities or materials, may face relatively higher risk, as they are more likely to be directly impacted by new climate policy and regulation.

However, policymakers are expected to face mounting pressure from severe weather events over time, increasing the likelihood of a more coordinated global regulation of emissions and carbon pricing. Policy and legal risk may become progressively heightened over the medium- and long-term time horizons as a result.

Technology

In the short term, new low-carbon technology is expected to remain expensive in relation to existing technologies. Until newer technologies become cost competitive,

there may be limited risk that existing technology or infrastructure is replaced.

In the medium term, new technology may become more cost competitive, creating a moderate risk that existing technology or infrastructure becomes obsolete. Companies are expected to start investing broadly in developing new low-carbon technologies.

Over the long term, technologies are expected to shift from traditional fossil fuels to low-carbon alternatives. Companies that have not invested in updating their technologies may face heightened risk from stranded assets or asset write-downs.

Market

In the short term, market risk is expected to be moderate, as increased costs in raw materials due to inflation and geopolitical risks may accelerate changes in consumer preferences.

Over time, fossil fuels are expected to become more expensive, and companies that have no viable alternative energy sources may face heightened risk as they experience asset write-downs.

Reputation

In the short term, the reputation of companies may be partially based on their progress toward emissions reduction, but the overall risk is expected to be limited. Progressively more emphasis may be placed on this progress over the medium and long-term, heightening the reputational risk to companies over these time horizons.

MSIM Assets Under Management

MSIM manages products and provides portfolio management services for a diverse range of clients across institutional and intermediary channels, with investment teams striving to help clients benefit from climate opportunities and manage climate risks, where relevant. Disclosures on our portfolio management services and specific approaches adopted at product level can be requested from July 1, 2023, by MSIM Ltd's clients who require this information to satisfy their own climate-related financial disclosure obligations under law or regulation.

MSIM's investment teams act as responsible long-term investors and consider material ESG risks and opportunities, where appropriate. In 2022, we also continued to advance our strategic aim to deliver long-term value for our clients in three main areas:

- 1. SUSTAINABLE INVESTING SOLUTIONS⁷:** Providing our clients with investment solutions that are aligned with their return objectives alongside their sustainability preferences and needs.
- 2. SUSTAINABILITY EXPERTISE IN INVESTMENT MANAGEMENT:** Considering ESG factors as appropriate for certain MSIM investment strategies, asset classes and client needs. These efforts are supported by specialist resources in sustainability regulation and policy, strategic initiatives, stewardship, and sustainability data due diligence and technology innovation.
- 3. STEWARDSHIP AND ENGAGEMENT:** Deploying shareholder rights and stakeholder guidance on behalf of clients to encourage, where relevant and appropriate, strong ESG practices with issuers, borrowers and counterparties.

There is a continued upward trend in demand from certain clients for climate-themed investment opportunities, and we continue to enlarge our sustainable investment solutions offering. MSIM offers a number of investment strategies that seek to align with the goals of the Paris Agreement. Our sustainable fund framework will provide clients with continued exposure to sustainability and climate as an investment theme.

Sustainable Investing Solutions

MSIM believes that ESG factors, including climate change, may influence risk, return and opportunity. The effective incorporation of material sustainability issues (including climate risks and opportunities) into investment team decision-making processes, alongside other risks and

opportunities, will therefore be crucial in delivering long-term value on behalf of our clients and meeting the increased demand for sustainable investing solutions.

We continue to offer our clients options to support them in achieving their return objectives and investment goals. Our investment teams offer a range of products and approaches to our clients who have sustainability requirements. These may include certain funds integrating ESG factors throughout the investment process, restrictions or minimum standard for inclusion and/or a minority allocation to ESG labelled/certified securities to those that seek to achieve attractive financial returns alongside positive environmental and/or social impact. Several investment teams adopt tilting approaches, where relevant, to shift exposures away from issuers subject to significant climate transition or physical risks and towards low-carbon leaders across industries.

In addition, with more of our clients and partners seeking to embed sustainability objectives into investment strategies, we have continued to develop products with ESG features. In 2022, we launched a number of new funds within our Morgan Stanley Investment Funds platform, which have sustainability investment objectives or are aligned to Paris Agreement objectives.

Sustainability risk is embedded into product development and product governance processes (as appropriate), and there are enhanced processes in place for ESG/ sustainability-themed products, including input, review and challenge from the MSIM Sustainability team, Legal and Compliance, as appropriate.

CASE STUDY

New Platform Supports Climate Change Mitigation

In November 2022, MSIM launched a growth-oriented private equity platform to invest in companies seeking to mitigate climate change. Through the collective investments it makes, the platform seeks to avoid or remove one gigaton of CO₂-equivalent emissions from the Earth's atmosphere from the date of investment through 2050.

The new platform focuses its investments on private companies that seek to deliver attractive financial returns alongside measurable positive environmental impacts across the mobility, power, sustainable food and agriculture, and circular economy sectors.

The platform will also seek to leverage Morgan Stanley's sustainability resources to partner with portfolio companies. This may include monitoring ESG risks, reporting Scopes 1-3 emissions, aligning companies with key trends, and pursuing earnings growth, multiple expansion and enhanced exit potential.

⁷ Some investment strategies do not integrate sustainability and/or ESG factors where it is not currently feasible or appropriate to do so (e.g., certain passive or active investment strategies, certain asset allocation strategies, or where requested by clients).

ONGOING COLLABORATION WITH EATON VANCE

As part of Morgan Stanley's strategic acquisition of Eaton Vance, MSIM acquired four core investment brands through which active, passive, rules-based and responsible investing strategies are offered:

- i. Eaton Vance Management – offering fundamental active equity, income, alternative and multi-asset strategies;
- ii. Calvert Research and Management (“Calvert”) – a global leader in responsible active equity, income, alternative and multi-asset strategies;
- iii. Parametric Portfolio Associates (“Parametric”) – systematic investment strategies and custom portfolio solutions built on a foundation of investment science; and
- iv. Atlanta Capital – actively managed, high-quality U.S. stock and bond portfolio constructed using bottom-up fundamental analysis.

The ongoing integration of Eaton Vance entities into MSIM from a business, operations and knowledge-sharing perspective enables us to continue to expand our ESG capabilities, including our suite of sustainable and climate focused products.

Sustainability Expertise in Investment Management

Due to the nature of our independent investment teams, MSIM does not have centralised investment beliefs across asset classes and strategies; rather, each of our investment teams has its own investment philosophies and strategies in managing client assets, which make up our diversified product platform. We believe in individuality and encourage diverse investment opinions, and, accordingly, our approach to identifying, assessing and managing climate risks is not homogenous across all of our investment teams and will differ from product to product.

Investment teams directly responsible for managing their assets and strategies set, follow and deliver on investment beliefs that are appropriately tailored to corresponding client interests, strategies and the capital they manage. As described above, our investment teams may use a variety of proprietary approaches and frameworks to incorporate sustainability-themed considerations (including climate considerations) into their investment processes depending on the financial product. For example, values-, norms- or sector-based exclusions are adopted at product level by some investment teams. Further information on how our investment teams manage climate risks can be found in relevant product-level disclosures.

MSIM's investment teams incorporate the assessment of material ESG risks and opportunities into investment

decision-making processes, as appropriate, and according to investment teams' particular investment approach and relevant financial product. Incorporation of such ESG risks and opportunities may occur at various stages of the investment life cycle including due diligence and research, valuation, asset selection, portfolio construction, and ongoing engagement and investment monitoring.

In doing so, MSIM's investment teams leverage ESG factors and other information and insights in a way that is best suited to the specific investment philosophy, asset class and time horizon of a given strategy or product. Specifically, our investment teams are informed by insights provided by the MSIM Sustainability team and certain investment teams have at least one dedicated Sustainable Investing/ESG research specialist.

Assessing the Impact of Climate Change on MSIM Investment Strategies

We have developed a range of tools and analytics to equip investment teams and our business segments to assess and quantify the impact of climate-related risks and opportunities across the investment portfolio. Our investment teams may use these tools, along with their independent approaches, where these are relevant, to assess climate-related risks alongside other risks impacting their portfolios.

To assess, quantify and respond to the impact of climate-related risks and opportunities, we continue to develop our sustainability data, tools and research capabilities. As noted previously, our investment teams are responsible for and employ a range of approaches to assess the materiality of climate risks and opportunities impacting portfolio companies, where relevant. Our portfolio managers and investment teams have access to active support from our centralised MSIM Sustainability team, and other working groups and teams across the Firm.

INVESTMENT TEAM LEVEL CAPABILITIES (WHERE APPLICABLE):

We continue to enhance our ESG data programmes and capabilities, enabling investment teams to quantify and assess the impact of climate-related risks and opportunities on their funds and portfolios. This allows teams to access data insights to support their climate strategies investment approaches, where relevant, and to respond to the needs of clients. Approaches adopted by investment teams to assess, respond to and report on

climate-related risks and opportunities may include, but are not limited to:

- **Material risk indicator tools** which capture the portfolio managers' company sustainability assessments and explicitly integrates material ESG factors into investment decision-making processes and portfolio construction.
- **Qualitative reviews** to assess portfolio companies' **climate resiliency** and adaptation strategies including analysis of reputation risks, potential litigation and associated exposures.
- **Engagement policies and approaches.** For example, one engagement programme was adopted by an investment team to identify holdings that have yet to release carbon targets to drive future engagement opportunities.
- **Proprietary tools** and frameworks to **measure and track the carbon footprint** and **intensity** of investments, and use of reduction targets to project portfolio metrics.
- Analysis of internal **analytics dashboard, which provides access to sustainability data, including metrics on climate risks.**
- Investment team-level scenario analysis to assess the resilience of strategies under a range of climate change scenarios.

Further information on how our investment teams incorporate climate-related risks and opportunities into certain strategies can be found in relevant product-level disclosures.

CASE STUDY

Private Markets Solutions

The UK government has committed to reduce carbon emissions at a national level by 2050 and the electrification of transportation will be important in meeting those targets. The UK and European Union are highly supportive of electric vehicle (EV) adoption and many traditional auto companies have made major commitments to developing their EV manufacturing capability. However, a lack of EV charging infrastructure has been a significant hindrance to EV adoption, with \$17bn of EV charging infrastructure estimated to be needed in Europe by 2030⁸ to meet expected demand.

To help accelerate the adoption of EVs, the Private Markets Solutions team invested in the largest owner-operated network of rapid EV chargers in the UK (at the time of investment as of June 2020). The company owns, operates, and maintains rapid EV charging units capable of fully recharging most EVs quickly. The company also secures long-term leases at locations where dwell times align with charging times, such as gas stations, highway service stations, and retail sites. The company maintains excellent availability across its portfolio, partnering with leading technology providers to install high quality chargers at key locations nationwide.

MSIM CENTRALISED SUPPORT FUNCTIONS

We recognise that the potential positive and/or negative impacts of ESG factors on the economy and our investments are rapidly evolving. Processes at the MSIM level to assess the impact of these sustainability factors include, but are not limited to:

- **Independent scenario analysis** capabilities run by MSIM GRA (further detail can be found in the Scenario Analysis section of this report).
- **Periodic assessments** conducted by MSIM GRA to assess and quantify the relative severity of different risk types within the MSIM risk inventory. The Risk

Management section describes in more detail how sustainable investing risks, including climate-related risks, are embedded into the MSIM risk management framework and therefore are assessed against other risks, as appropriate. For public market portfolios, the team conducts regular position screenings to quantify MSIM's exposure to potential risks, and it also develops market-driven downside scenarios to ensure that changing market conditions are taken into account. For private markets, ESG risks or opportunities may be raised as part of the relevant Investment Committee process and continuously evaluated in coordination with Morgan Stanley's ESRM group.

⁸ Charging Ahead: Electric Vehicle Infrastructure Demand – McKinsey & Co. As of October 2018.

- Activities of the **MSIM Sustainability team** and wider sustainable investing framework from which investment teams may derive insights.

We are committed to a culture of ongoing learning and improvement, and believe that an effective sustainability governance framework requires committed leadership and robust policies and oversight over our activities. As such, we have several processes in place to ensure that we are well positioned as a business to address climate-related risks and opportunities related to our investment management activities, including:

- Activities of the Sustainability Product and Regulatory Working Group, which monitors and tracks **global ESG legal and regulatory developments** and supports MSIM's compliance with changing ESG legal and regulatory obligations. The MSIM Ltd Board is updated on a quarterly basis of key regulatory updates through the Enterprise Risk and ESG Risk reports (e.g., updates on TCFD and restrictions in investment strategies under the Sustainable Finance Disclosure Regulation).
- **Internal assurance processes** that assess **compliance with ESG external laws and regulations** and ongoing work with various external consultants to monitor the legal and regulatory landscape and prepare road maps for disclosures, as well as continual improvement.
- **Ongoing training** programmes on sustainability themes ranging from disclosure regulations to thematic topics and client/market trends. For example, we delivered training on greenwashing risk for select MSIM employees in 2022.

MSIM Engagement Framework

As active investors and active owners, we have a duty to be good stewards of our clients' capital. We fulfil this duty by engaging with selected companies in which we invest, and by exercising our proxy voting and other rights as shareholders. These stewardship activities give us the opportunity to help guide companies in which we invest toward better ESG practices, which we believe could contribute to attractive returns for our clients over the long term.

Stewardship and engagement efforts at MSIM are led by investment teams with engagement objectives prioritised depending on asset class, geography, investment style and strategy. Our investment teams endeavour to engage in constructive dialogue with companies, which may encompass meetings and discussions on a particular issue to multi-year engagements/stewardship on a range of E,

S or G topics specific to the company or asset to seek to encourage enhancement. On the public markets side, we exercise our proxy voting and other rights as shareholders.

Although MSIM does not have centralised investment beliefs across asset classes and strategies, there are certain parallels in the chosen approach to engagement across our various investment teams, which reflect our determination to provide long-term value to our clients. Certain investment teams may work with the MSIM Global Stewardship team to use their broader industry knowledge to identify key prioritisation areas.

We believe engagement - if carried out well - is mutually beneficial as it enables companies/issuers to explain how their approach to sustainability relates to their broader business strategy and also allows investors to work closely with companies/issuers on specific ESG issues which they believe pose a downside risk to the business. To that end, when we identify material ESG-related or other issues impacting companies/issuers in which we hold significant positions, we seek to proactively engage in active dialogue with management and the results of such interactions in turn inform our investment processes.

Our investment teams are guided by a broader stewardship, sustainability, risk management and operating framework established and coordinated under the MSIM Sustainability Governance structure. On the public markets side, our investment teams who manage active investment portfolios that consider ESG factors/features apply an active approach to stewardship. We exercise our proxy voting and other rights as shareholders. We also regularly monitor and engage with companies/issuers in the normal course of their investment process and leverage the support of the Global Stewardship team, where needed. Investment teams in our public securities business selectively interact with company boards of directors when necessary and beneficial for shareholders or bondholder value. MSIM engages with companies across their capital structure, including through our debt holdings, and leverages our Fixed Income platform to engage with bond issues beyond listed companies, including sovereign states, agencies and private companies.

In our private equity business, members of the investment team may serve on the board of directors or invest with other external managers. Engagement fosters productive dialogue, focusing on sustainability risk management and value-generation opportunities.

MSIM recognises that certain environmental and social issues can cause risk to our society and wellbeing, economy and/or capital markets. We periodically identify sustainability focus areas that are one of strategic importance to the global economy and long-term stability of the capital markets. These themes touch all of our investment teams to varying degrees depending on asset class, geography, investment style and strategy. In consultation with the investment teams, we may collaboratively engage alongside peer investors with individual companies/issuers or with groups of companies/issuers in order to support meaningful action on our sustainability focus areas. In doing so, we observe the requirements of local regulations and will act in accordance with our fiduciary obligations to clients.

MSIM’s Thematic Engagement Priorities focuses on four themes, aligned with the U.N. Sustainable Development Goals (“SDGs”) (see graphic below), which are issues that may cause risk to our society and wellbeing, economy and/or capital markets. The priorities touch all of our investment teams to varying degrees depending on asset class, geography, investment style and strategy.

Additionally, we participate in industry initiatives, where relevant, for the companies we hold, and in line with our own engagement priorities for our strategies. This past year, we have targeted a selected number of new initiatives, such as the 30% Club (UK Investor Group) and World Benchmarking Alliance (“WBA”), where we believe that they add value to our investment process and are aligned with our fiduciary duties and client interests and focusing on obtaining real outcomes.

MSIM Thematic Engagement Priorities: Four Key Themes Pursued across MSIM



DECARBONIZATION & CLIMATE ACTION

Supporting the transition to a low-carbon economy in line with Paris Agreement goals

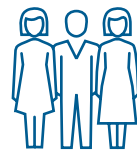
- Renewable energy and clean tech
- Energy efficiency
- Physical impact adaption
- Just transition



CIRCULAR ECONOMY & WASTE REDUCTION

Supporting business models that reduce impact on natural resources and that innovate to reduce waste generation, with a focus on plastic waste

- Recycling and reuse
- Sustainable sourcing
- Lifecycle analysis
- Water stewardship
- Biodiversity



DIVERSE & INCLUSIVE BUSINESS

Supporting business practices that create a more just and inclusive society

- Affordable access to essential services
- Investing in communities
- Racial justice
- Pay equity
- Board/employee diversity



DECENT WORK & RESILIENT JOBS

Supporting decent work across the entire value chain and making workforces resilient in the face of innovation and change

- Automation and the workforce
- Supply chain management
- Living wage
- Workforce well-being



CASE STUDY

A Responsible Energy Transition

The MSIM Emerging Markets Equity team believes that a responsible energy transition includes companies that enable the energy transition and/or companies in high-emitting sectors with viable and/or Paris Aligned decarbonization pathways. With more than 60% of global carbon emissions coming from emerging markets, the team believes it is important to help companies progress on transition pathways, rather than exclude those companies from the investment universe.

Over the course of 2022, the team engaged with a number of companies focused on responsible energy, as well as those with high carbon emissions, to analyze the viability of and promote progress on transition pathways. MSIM encourages companies to have both long- and short-term feasible targets that are integrated in business operations, with accountable oversight at the board level, and carbon analysis on which to support and measure progress. Of the companies the Emerging Markets Equity team engaged with, they found that several metals and mining companies were leading on each of these metrics. There were other companies that were improving on decarbonization with feasible targets and plans to integrate those further into the business with oversight and carbon analysis. Some were assessed as laggards in their respective industries, given the lack of interim targets or integration planning. The team has shared best practices with those companies and will continue stewardship efforts to effectuate progress toward integration of transition plans.

Morgan Stanley Operational Sustainability

Morgan Stanley takes measures to enhance the climate resilience of operations. As per the organisational structure, properties are leased by service entity subsidiaries of Morgan Stanley with legal entities, including MSIM Ltd, recharged based on usage.

Morgan Stanley committed to achieving carbon neutrality by 2022, covering Scope 1 and 2 emissions and Scope 3 business travel and downstream leased assets emissions. Progress towards this goal will be reported in the Morgan Stanley Group's 2022 ESG report, which will be published in 2023.

Further information on the Firmwide climate strategy and processes to identify and monitor associated risks can be found in [Morgan Stanley's Firm-level ESG disclosures](#).

Scenario Analysis Overview

Climate-related scenario analysis involves the use of modelling techniques to assess the potential exposure of investment portfolios to climate-related risks and opportunities based on projecting variables according to chosen future uncertain scenarios. Climate scenarios are a set of plausible futures for the operating context of the business, and are not predictions about any single "most likely" future. MSIM has scenario analysis capabilities across different layers of the business performed at

the Firm, MSIM and product level, as part of our risk management function, which is independent from the investment teams.⁹

GRA performs scenario analysis to help assess the potential impact of climate-related risks and opportunities on investments, and to identify vulnerabilities over the assessed time horizon from a risk perspective. Specifically, GRA has the capability to conduct forward-looking scenario analysis to centrally monitor climate risk of certain portfolios across different asset classes in order to measure the financial impact of climate change. Currently, and with respect to the reporting period, the strength of GRA's capabilities is in quantifying the potential impact of transition risks and opportunities on our public portfolios.

A number of short-, medium- and long-term physical risks have been identified that could impact our aggregated investment portfolio as noted previously. However, we do not currently incorporate these risks into scenario analysis processes. It is up to investment teams to choose whether and how to assess the physical risk exposure to their portfolios. Some investments may do this, while others may not depending on the financial products and the team's ESG approach. We are seeking to advance our physical risk methodologies to assess and monitor exposure. Firm Risk Management continues to work with the Global Sustainability Office to advance physical risk

⁹ For more information on the Group analysis, see the [Morgan Stanley Firm-level ESG disclosures](#). More information on the product level scenario analysis processes will be provided in the TCFD product reports, available on-demand to those entitled to receive such information.

methodologies and proprietary modelling capabilities over time to provide a consolidated view.

Results are monitored for changes over time by GRA to ensure that climate-related risks are being appropriately identified, tracked and managed.

Climate Scenario Analysis Methodology

The Firm has developed long-term climate scenario narratives focusing on several proprietary scenarios and simulated impacts on numerous macroeconomic indicators out to 2050. GRA have used three scenarios that are aligned to narratives by the Network for Greening the Financial System (“NGFS”). These scenarios have been applied to the quantitative analysis performed over

several, but not all, of MSIM products. This has been developed and delivered independently of the investment teams. The scenarios are reflected below:

These scenario outputs have been derived from a suite of models comprising an Integrated Assessment Model, which is the recommended technique by industry standard bodies, as well as macroeconomic and industrial models.

The Integrated Assessment Model is then linked to more granular models to generate macrofinancial and sector outputs across the different scenarios. These outputs include market variables, commodity prices, regional GDP, sector revenues and others. These outputs are used by GRA as inputs for quantifying the market shocks. These

Scenario Narratives

NET ZERO WORLD

Net Zero world narrative (“**orderly transition**”) – Increased international collaboration and technological advancement results in the globe being on track to limit global warming to 1.5-2 degrees.

In this scenario, global total CO₂ emissions continue to decline, hitting net-zero by 2050. Global temperature rise is limited to 1.5°C to 2.0°C through immediate climate action with global coordination across policymakers. The policy includes a global carbon tax, and a thriving sustainable finance market fuels significant investment in clean energy. Most notably, the economy benefits from new innovations in clean technology, carbon capture and energy efficiency. Sectors such as transport and power experience significant decarbonization. Real estate construction booms as buildings are renovated or replaced with more climate resilient and efficient tech. Consumers also help to accelerate the transition with higher demand for low-carbon products.

POLARISED CLIMATE PROGRESS

Polarised climate progress narrative (“**disorderly transition**”) – Global fragmentation of financial markets due to global success against net zero targets being hampered by division and ulterior motives.

In this scenario, global total CO₂ emissions are reduced gradually, but net-zero targets are not achieved by 2050. Global temperature rise is limited to 2°C to 2.5°C through fragmented climate action lacking coordination globally. Countries and businesses choose to focus on self-reliance and protectionism to mitigate risks from climate, pandemics, and geopolitical disruption. There is a significant divergence in carbon prices globally as a result. Economies are localized with GDP and population growth rates varying by region. Income gaps also continue to widen. While there are domestic investments in clean technology and infrastructure, this progress is also accompanied by green tech export restrictions. This situation further exacerbates the significant difference in clean technology and costs by region. While there are some ambitious and meaningful climate efforts, global success is ultimately hampered by division and misalignment between countries.

PRIORITIZING RECOVERY, NOT CLIMATE

Prioritising recovery (“**hothouse world**”) – Focus on growth results in a shift away from curtailing emissions with climate regulations being relaxed leading to significant physical and economic impacts due to climate change.

In this scenario, policymakers take insufficient climate action to reduce global total CO₂ emissions. Instead, they prioritize economic growth, and global temperature rise climbs to 3°C to 4°C. There are country-specific carbon prices, and low tariffs/trade barriers are in place in order to promote global commerce. There is heightened investment in technology, and money continues to flow into traditional fossil fuel exploration and production industries as well. Economic growth is high in the short term as a result, but with potentially higher costs in the medium- to long-term time horizons.

shocks are then constructed in risk management systems in order to calculate the stress Profit and Loss returns at the fund and benchmark levels.

GRA uses these scenarios and runs product-level assessments in a consistent manner for funds and portfolios across the business. Centrally, the team assesses prospective portfolio returns and compares them to industry benchmarks to identify any potential areas to investigate further.

MSIM Climate Scenario Analysis Output

The scenario narratives described above enable impacts to be simulated across a number of indicators out to 2050. However, the current focus of the GRA team is to quantify impacts over short-term time horizons that align to the relevant decision points of underlying investments. Typically, GRA looks at its exposures across asset classes, sectors and industries in order to understand how changes in the macroeconomic environment may impact them. This data is inputted into existing proprietary impact models to ascertain potential impact to the underlying securities, and the potential impact to MSIM in terms of components such as portfolio value.

To enhance our analysis of the material climate risks and opportunities linked to transitioning to a low-carbon

economy, GRA has conducted an assessment, based on holdings as at the end of the reporting period, covering products within our FCA TCFD in-scope business. We performed analysis across a number of climate-related metrics that assess portfolio companies' climate impact and readiness for transition and exposure to shocks across different sectors.

The below heatmap illustrates a summary of the sector-level outputs from this transition risk and opportunity assessment, through simulating impacts over a short-term horizon. However, the assessment does not incorporate the full spectrum of potential damage from physical risk. For example, while the heatmap highlights the projected market impact in the "prioritizing recovery, not climate" scenario, we would also expect further detrimental climate impact in this outcome, which is not reflected in the graphic.

While MSIM has a diverse portfolio with product-level exposure to most sectors, the following sectors and industries are featured in the below heatmap, as they may face heightened risks or opportunities based on the modelling of these specific climate scenarios. The outperformance or underperformance of a given sector or industry may ultimately have an impact on the valuation of assets that MSIM manages.

MSIM Sector and Industry Risks and Opportunity Heatmap

SECTOR/INDUSTRY	NET ZERO WORLD	POLARISED CLIMATE PROGRESS	PRIORITIZING RECOVERY, NOT CLIMATE	SECTOR/INDUSTRY	NET ZERO WORLD	POLARISED CLIMATE PROGRESS	PRIORITIZING RECOVERY, NOT CLIMATE
Consumer Discretionary	Medium Risk	Medium Risk	Medium Risk	Information Technology	Low Risk or Opportunity	Low Risk or Opportunity	Low Risk or Opportunity
Consumer Staples	Medium Risk	Medium Risk	Medium Risk	Real Estate	Low Risk or Opportunity	Medium Risk	High Risk
Energy	High Risk	High Risk	Medium Risk	Communication Services	Medium Risk	Medium Risk	Medium Risk
Materials	High Risk	High Risk	Medium Risk	Utilities	High Risk	High Risk	Medium Risk
Industrials	Medium Risk	Medium Risk	Medium Risk	Renewables	Low Risk or Opportunity	Low Risk or Opportunity	Low Risk or Opportunity
Healthcare	Medium Risk	Medium Risk	Medium Risk	Transportation	Low Risk or Opportunity	Low Risk or Opportunity	Medium Risk
Financials	Low Risk or Opportunity	Medium Risk	Medium Risk				

■ Low Risk or Opportunity
 ⬡ Medium Risk
 ● High Risk

	NET ZERO WORLD	POLARIZED CLIMATE PROGRESS	PRIORITIZING RECOVERY, NOT CLIMATE
IMPACT OF TRANSITION SUMMARY	In the short term, rising carbon prices may drive moderate increases in inflation and unemployment. This is expected to result in a mild economic contraction before returning to prior trends in the medium term. There may also be some dislocations across sectors in the short term, as companies adjust to changing consumer preferences and declining demand for fossil fuels. Over the long term, the global economy is expected to benefit from the new technology innovations spurring positive long-term growth.	In the short term, there is a moderate decrease in economic growth; however, the impact is more muted than in the Net Zero World scenario. Likewise, there are also some dislocations across sectors in the short term, but they are less pronounced in this scenario, as the rate of change in demand for fossil fuels is not as rapid. Over the medium term, prior trends in growth resume, and the global economy experiences some moderate benefits from climate action and technological progress.	In the short term, there is an increase in the economic growth rate, as policymakers focus only on recovery. Technology is the primary driver of the economy, and money continues to flow into this sector. Carbon prices remain relatively low, so there are fewer dislocations across sectors compared to the other scenarios. Over time, the global economy continues to outperform based on the growth-above-all approach of policymakers. As mentioned, this assessment does not incorporate the full spectrum of potential damages from physical risk.
Energy Sector	Sectors and companies that are carbon intensive but have not yet started to transition to reduce their emissions may be at heightened risk in this scenario. As such, traditional oil and gas companies may be particularly vulnerable to changing patterns in energy consumption, higher prices from carbon legislation, or losses from stranded assets.	Sectors and companies that are carbon intensive but have not yet started to transition to reduce their emissions may be at heightened risk. As such, traditional oil and gas companies may face losses from changing patterns in energy consumption, higher prices from carbon legislation, or losses from stranded assets.	The energy sector is not expected to face heightened transition risk in the "prioritizing recovery, not climate" scenario. Money will continue to be invested in the exploration and production activities of traditional oil and gas companies.
Financials Sector	The financials sector is expected to play a key role in facilitating the reduction in emissions through lending, insurance underwriting, asset management or trading activities with energy and clean tech companies. As a result, it may face relatively low transition risk, and financial services companies may in fact benefit from new opportunities from the heightened investment in climate solutions.	The financials sector may not experience as much opportunity as in the Net Zero World scenario, as overall lending activity and investment in new climate solutions is lower. However, the sector is not expected to face heightened risk in this scenario.	As policymakers continue to focus on economic growth, the financial sector is expected to face limited risk in this scenario.
Materials Sector	As carbon prices are expected to increase in the Net Zero World scenario, the materials sector may face heightened transition risk. A sizeable proportion of companies in this space continue to rely heavily on fossil fuels and may be impacted by higher costs.	The materials sector may face heightened risk in this scenario, as a sizeable proportion of companies continue to rely heavily on fossil fuels. With carbon prices expected to be higher regionally, these companies could be subject to headwinds from increased costs during the transition.	The materials sector is not expected to face heightened risk in this scenario, as companies may continue to benefit from relatively low carbon prices.

	NET ZERO WORLD	POLARIZED CLIMATE PROGRESS	PRIORITIZING RECOVERY, NOT CLIMATE
Utilities Sector	The successful path to net zero is expected to require the decarbonization of the utilities sector. Gas utility companies may struggle to adjust, as they are faced with increased operating costs from higher carbon prices. Overall, the sector is expected to face heightened risk as it transitions to lower demand for gas utilities and higher demand for electric utilities.	Efforts to decarbonise utilities may heighten risk for this sector. During the transition, companies are expected to face headwinds from lower demand for gas utilities and higher demand for electric utilities over time. Gas utility companies may also face increased operating costs due to higher carbon prices regionally.	The utilities sector is not expected to face heightened transition risk in this scenario, as the transition from gas to electric utilities may be slow-moving. Carbon prices may also continue to remain relatively low.
Information Technology Sector	The information technology sector is expected to benefit from significant investments in this space. New technological innovations may help to drive economic growth during the transition to a Net Zero World.	The information technology sector may benefit from investments in the space. New technological innovations are expected to help to drive economic growth in this scenario.	The information technology sector is expected to play a key role in driving economic growth in this scenario. New investments may continue to flow into the space with technological developments fueling higher productivity.
Real Estate Sector	In the Net Zero World scenario, a boom of construction activity is expected in order to build more climate-resilient properties and also modernize existing buildings with the newest efficient technologies. This immediate investment across the sector may help to mitigate physical climate risks over time.	In the polarized climate scenario, the real estate sector may not experience as much opportunity as in the Net Zero World scenario, as overall investment in building new green properties and modernizing existing properties is lower. However, the sector is not expected to face heightened risk either.	While real estate may benefit from the higher growth rates in this scenario over the short term, the sector is expected to face heightened physical risks from the lack of climate action in the long term.
Renewables Industry	In this scenario, significant investments are expected across the renewable energy market to support the changing global energy mix. Existing and new companies in the space may benefit from these opportunities along with the rapid development of renewable energy technology.	New investments are expected in the renewable energy market to support the changing global energy mix. Companies in the space may benefit from these opportunities along with the development of new renewable energy technology.	Although money may continue to flow into traditional oil and gas exploration and production companies, moderate investment in renewable energy is also expected in this scenario. The pace of development for new renewable energy technology will not be as fast as in the other two scenarios, but the industry may still be a driver of growth as companies focus on climate adaptation.
Transportation Industry	Transportation is expected to play a key role in the net-zero transition, as significant investment is made in electric vehicles and infrastructure as part of the decarbonization effort. While there may be some headwinds from higher carbon prices and changing consumer preferences, companies may benefit from technological innovations and the flurry of new money moving to this space.	The transportation industry may benefit from new investments in electric vehicles and infrastructure as part of the decarbonization effort. While there may be some headwinds from higher carbon prices and changing consumer preferences, companies are expected to benefit over time.	The transportation industry is not expected to experience the same benefits from new investments in electric vehicles and infrastructure as in the other two scenarios. We continue to seek to enhance our scenario analysis capabilities by aggregating portfolio impacts to provide entity level summaries, where methodologies and data allow.

Takeaways From MSIM Climate Scenario Analysis

Climate scenario analysis will continue to inform our risk measurement and management processes. We continue to seek to enhance our scenario analysis capabilities in the future by aggregating portfolio impacts to provide entity-level summaries, where methodologies and data allow.

Plans for 2023

As we continue to evolve our strategy alongside fast-moving developments in climate science, technology and regulation, we plan to:

- Explore additional scenario portfolio analysis to manage potential exposure to climate-related risks and opportunities.
- Further distribute assessment results to wider parts of the business to support teams in better understanding their climate-related risks and opportunities.
- Enhance our client engagement strategy, including dialogue with clients around risks and opportunities for existing portfolios, as well as tailoring climate-positive solutions that achieve each client's climate-aligned goals, where relevant.
- Expand EMEA ESG committee activities in supporting the development of ESG strategies and risk management frameworks/control framework.

Risk Management



Risk is an inherent part of MSIM's investment management business. Among those risks, MSIM believes that climate-related risks can be financially material to the assets we manage and ultimately to our business. To act in the best interests of our clients, MSIM seeks to implement effective risk management practices that incorporate climate-related risks, as appropriate.

Structure of Risk Management

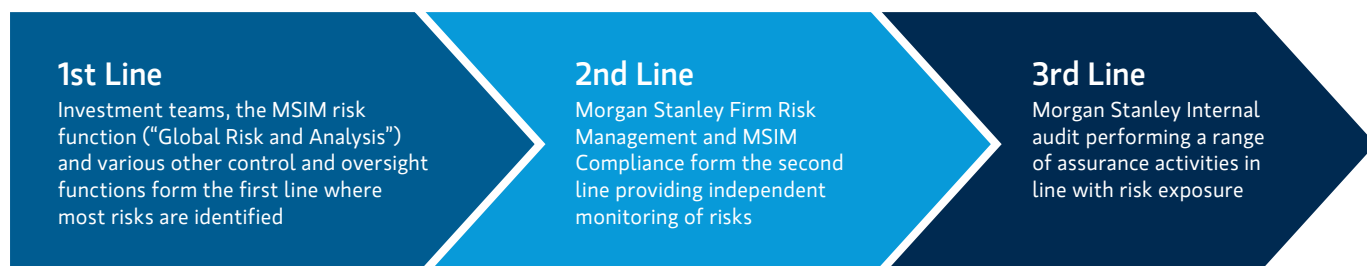
MORGAN STANLEY RISK GOVERNANCE

Firmwide risks are managed through the Enterprise Risk

Management ("ERM") framework. Risk management requires independent Firm-level oversight, accountability of Morgan Stanley's Business Units (including MSIM), and effective communication of risk matters to senior management and the boards, as appropriate. In line with other divisions at Morgan Stanley, MSIM has a Global Investment Management Risk Management Policy, and a Risk Committee that is responsible for comprehensive supervision of its risk exposures and risk processes.

MSIM THREE LINES OF DEFENCE FRAMEWORK

MSIM operates a 'three lines of defence' model for risk management as outlined in the diagram below.



Our investment teams have primary responsibility for the management of risk, including climate-related risk, where relevant, in their respective business areas. The MSIM risk function (“Global Risk and Analysis”) and various other control and oversight functions provide oversight of business activities and directly supports risk governance at MSIM. Collectively, investment teams and senior management sit in the first line of defence as the business units.

At the Morgan Stanley Firmwide level, Firm Risk Management (“FRM”) assists senior management and the Firm Risk Committee in monitoring, managing and mitigating risk through a number of control processes, covering all business segments, including Investment Management. Additionally, MSIM Compliance operates independently of the business units and together with FRM sits in the second line of defence.

The Internal Audit Department operates independently of the business units and provides an independent assessment of MSIM’s control environment and risk management processes using a risk-based methodology developed from professional auditing standards. Internal Audit sits in the third line of defence.

As described in detail in the Governance section, the boards of directors across different layers of the organisation oversee and assess sustainability-related issues including climate risks, through annual strategic updates and Risk Appetite Statements that incorporate sustainability issues, as appropriate.

Climate-related analytics and data insights are used at the investment team and MSIM business segment levels to assess and monitor climate risks, as appropriate. Climate risk is embedded into risk management processes across MSIM’s three lines of defence, and systems, controls and procedures have been implemented to identify, monitor and manage climate risks.

MSIM LTD ESG RISK REPORTING

An ESG risk update is provided on a quarterly basis to the MSIM Ltd Board by Global Risk and Analysis,

to summarise findings from the risk monitoring of sustainability objectives, including (where relevant) climate-related issues.

MSIM Risk Appetite

All MSIM legal entities produce a Risk Appetite Statement (reviewed and approved on an annual basis) that articulates the aggregate level and types of principal risk that the legal entities are willing to accept to achieve strategic objectives consistent with the business segment and wider Firm strategy, as well as applicable capital, liquidity and other requirements.

At MSIM, we continue to believe that climate change-related transition and physical risks are systemic risks. Sustainable investing risk, which includes climate change-related transition and physical risks, is one of the principal risk categories monitored under our Global Investment Management Risk Management Policy. Principal risks are formalised risk categories managed in a manner consistent with the framework established under this policy.

The risk committees across MSIM oversee, address and prioritise risks, including climate risks, taking into account the Risk Appetite Statement, as well as emerging regulatory and external events. MSIM has implemented systems, controls and procedures to identify, track and ultimately manage climate-related risks at security, portfolio and entity level. Our investment teams are the primary risk owners, and identify these risks and manage them, together with other risks, as part of their investment process.

MSIM LTD RISK APPETITE

The MSIM Ltd Risk Appetite Statement was updated in 2022 to incorporate climate risk as a driver of existing risks within the overarching risk framework. Specifically, climate risk was established as a driver of Strategic Risk from regional regulations and disclosure requirements related to sustainable investments and a driver of Reputational Risk related to an idiosyncratic event that could negatively impact MSIM Ltd’s standing to clients and employees.

Risk Management Lifecycle

MSIM's Risk Management Framework outlines the standards, guidelines, and procedures implemented by

MSIM to proactively identify, assess, monitor and manage risks on behalf of our clients and across the business in an objective, transparent and systematic manner.

MSIM Global Investment Management Risk Framework

RISK IDENTIFICATION AND ASSESSMENT

- Risks are identified, quantified and evaluated within the MSIM Risk Identification Framework
- Although most risks are identified at the business segment level by investment teams, Global Risk and Analysis maintains and monitors the risk inventory of all risks stemming from MSIM activities
- Investment teams are responsible for assessing risks impacting their respective portfolios with Global Risk and Analysis conducting materiality assessments to evaluate the relative significance of risks
- Climate is embedded within sustainable investing risk, which is defined as a principal risk

RISK MONITORING AND MANAGEMENT

- Investment teams work with other first line functions (e.g., the MSIM Sustainability Team) to mitigate and manage risks associated with their respective strategies
- MSIM Risk Management supports several key committees, including the IM Risk Committee and EMEA IM Risk Committee, to perform independent monitoring and ensure the effectiveness and consistency in approach across all risk categories

Risk Identification

Risk identification and the effective quantification and assessment of material risks are critical to the risk management framework at MSIM. On a quarterly basis, senior management, in coordination with the relevant Risk Management and Finance teams, review the established risk inventory and assess emerging risks. Within this process, sustainable investing risk is classified as a principal risk and defined as the risk stemming from climate change transition and physical risks; natural resource depletion; waste intensity; labor retention, turnover and unrest; supply chain disruption; corruption and fraud; and human rights violations.

Investment teams, along with support, control and oversight teams within the first line of defence, monitor and assess climate risks, which may materially impact investment portfolios, as appropriate. Certain investment teams have their own approaches and proprietary frameworks for identifying and assessing climate risks as appropriate to their investment styles and the asset classes they cover. Additionally, material climate-related

risks may be incorporated into team research processes and assessed alongside other material risks as appropriate to the financial product.

The MSIM Risk function ("Global Risk and Analysis") is led by the MSIM Chief Risk Officer (CRO) who chairs the Investment Management Risk Committee. This committee provides a regular forum for representatives of different functional groups to identify and discuss key risk issues and make recommendations to senior managers.

The MSIM and Firm Risk committees oversee and assess risks that are escalated from the business and control functions. The MSIM boards provide oversight and challenge on a number of market-wide and systemic risks, from a legal entity perspective, which are assessed and monitored by committees across the division. As noted previously, several Risk committees have delegated responsibilities from boards, with the MSIM Ltd Board delegating some of its responsibilities to the MSI Group Risk Committee, including the approval of the MSIM Ltd Risk Appetite Statement.

As noted previously, MSIM categorises climate change as a key systemic risk, and several workshops have been conducted with representatives across the wider Morgan Stanley business lines to identify, measure and assess future climate risks according to business activities. Our climate risk identification processes continue to evolve in line with external developments, with Global Risk and Analysis and Global Sustainable Finance (“GSF”) working in close collaboration with the Morgan Stanley Institute for Sustainable Investing, and Environmental and Social Risk Management Group to consider emerging climate risks and ensure our risk registers are updated as needed.

ESG THREE LINES OF DEFENCE ENHANCEMENT IN 2023

In early 2023, MSIM undertook work to clarify the responsibilities across functions involved in sustainability investing activities and expand the role of Firmwide functions within the second line. Within the first line, investment teams remain primarily responsible for identifying sustainability-related risks, including climate risks, supported by various functions within the first line (e.g., MSIM Sustainability Team and investment oversight). Global Risk and Analysis also have responsibility for ESG risk identification, as well as for the review and challenge over fund-level activities.

Risk Assessment

Climate change is embedded into the wider risk framework and investment teams’ existing monitoring and exposure analysis processes at MSIM, where relevant. To monitor, assess and measure climate-related risks across the assets that we manage, we continue to develop our scenario analysis capabilities in assessing our exposure to transition and physical risk over different time horizons.

Along with the investment team level processes we refer to below, for public markets portfolios, the Global Risk and Analysis team conducts top-down sustainability risk analysis to monitor and measure exposure to key risks relative to regulatory rules, prescribed risk limits and any defined benchmarks.

Risk Timeframes

Transition and physical risks can develop and materialise over different time horizons compared to traditional risk types. As described in more detail in the Strategy section, our investment teams adopt approaches to incorporating climate transition and physical risks into decision-making processes, and will have their own interpretations on the time horizons associated with these risks.

Centrally, Global Risk and Analytics assesses and monitors risks within the context of the following timeframes: 0-2 years, short term; 2-10 years, medium term; 10+ years, long term. We have defined each of the key climate-related risks detailing the time horizon against which they are being assessed in the Strategy section.

As described in the Strategy section, we conduct climate-related scenario analysis to test vulnerabilities, assess exposure to transition risks, and measure the potential financial impact. Research is performed on emerging climate-related risks and topical ESG issues to ensure that our scenarios remain appropriate.

In addition to the above-mentioned product level analysis, Global Risk and Analysis has conducted a qualitative assessment covering a subset of the investment portfolio to evaluate and identify the sectors most exposed to climate shocks, which is described in more detail in the strategy section.

A number of short-, medium- and long-term physical risks have been identified that could impact our aggregated investment portfolio, as detailed previously. However, we do not currently incorporate these risks into scenario analysis processes. We consider investment teams to be best placed to assess the physical risk exposure of their portfolios since they engage with portfolio companies regularly. We are seeking to advance our physical risk methodologies to assess and monitor exposure. Firm Risk Management continues to work with Global Sustainable Finance to advance physical risk methodologies and proprietary modelling capabilities over time to provide a consolidated view.

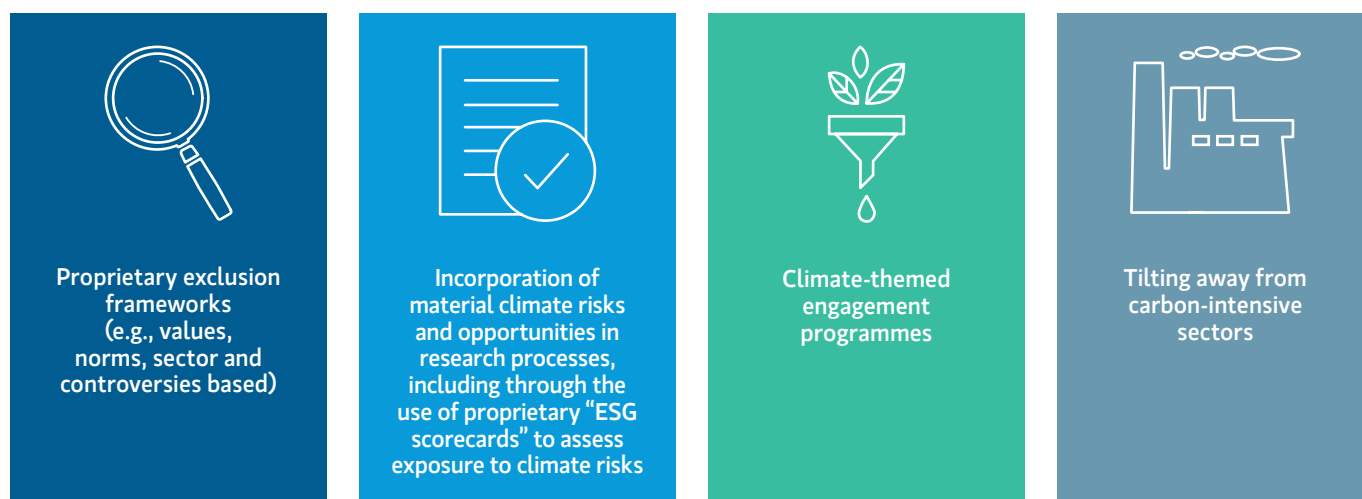
Climate Risk Management

INVESTMENT TEAM LEVEL

Climate-related risks may be considered by the investment teams and integrated into decision-making within portfolio strategies, as relevant to the financial product. Our investment teams are informed by and derive insights from wider Firm functions, such as the MSIM Sustainability team, and adopt their own risk management approaches.

To manage climate-related risks, a number of proprietary tools and screening frameworks have been developed across investment teams to support the understanding of climate-related risks and opportunities where appropriate. The scope of our strategies to integrate climate considerations is guided by mandates agreed with clients and the investment policies of our funds. Our investment teams integrate material climate considerations into decision-making, given the long-term impact on portfolio companies, where relevant.

Examples of Investment Team Climate Risk Management Approaches Adopted



Business and Control Function Oversight

Global Risk and Analysis conducts top-down sustainability investment risk analysis, including assessment of sustainability risk exposures, controversial business exposures and the potential impact of different climate change and transition risk scenarios. Where relevant, certain funds have enhanced controls and processes to monitor that they are being managed in line with the stated sustainability characteristics of the funds.

To facilitate and oversee management of climate-related risks, ESG risk updates are reported into the quarterly Investment Management EMEA Risk Committee in the same manner as other risks. This committee is attended by various functional stakeholders across investment teams and support functions, and provides guidance on the management of risks, including sustainable investing risks, where relevant.

Aggregate metrics on sustainability and climate themes are reported to the Investment Management EMEA Risk Committee by Global Risk and Analysis on MSIM entities, including MSIM Ltd. Sustainability-themed risk metrics reported on in 2022 included climate scenario analysis output, security-level screening results and portfolio-level metrics for sustainability objectives (e.g., low-carbon footprint).

In addition to the above noted formal discussions, Global Risk and Analysis may engage directly with portfolio managers across certain investment teams at MSIM on climate risks, where relevant, enabling oversight and challenge of activities. There is also ongoing dialogue between Morgan Stanley's Environmental and Social Risk Management Group, Morgan Stanley business segments, including MSIM and GSO, to address key risks and issues that may pose a reputational risk to the Firm.



Metrics and Targets

MSIM uses a selection of metrics, including climate-related metrics, and targets to deliver effective management of sustainability issues, both in relation to the assets we manage and in relation to our own operations. In this Climate Report, we provide climate-related metrics in relation to MSIM Ltd only, the TCFD reporting entity.

Metrics

MSIM ASSETS UNDER MANAGEMENT

Across MSIM, investment teams may use data to monitor and assess climate risks in the investments they manage, as appropriate. MSIM's centralized ESG Technology and Data team continues to develop internal ESG data infrastructure and analytical capabilities to facilitate climate analysis and reporting by our investment teams.

MSIM leverages data from various external vendors in order to support the investment teams' ability to monitor

climate-related metrics for their portfolios. This data is collected and stored in Morgan Stanley's centralised data repository to allow any Morgan Stanley business segment, including MSIM, to access the information for research, portfolio analysis and construction, and client and regulatory reporting.

Methodology

In accordance with the TCFD Recommendations, MSIM seeks to adhere to the Partnership for Carbon Accounting Financials ("PCAF") methodology when calculating carbon emissions metrics across all of our portfolios, wherever possible. PCAF is a common standard used in the industry and supports the comparability of climate-related metrics across the Firm. Carbon accounting methodologies, including PCAF, are continually evolving, and MSIM will consider updated guidance whenever it is issued.

METRIC	UNIT	METHODOLOGY
1 Total Financed Greenhouse Gas ("GHG") Emissions	tCO ₂ e	Σ (Current value of investment/Issuer's Enterprise Value Including Cash ("EVIC") X Issuer's Scope 1 and Scope 2 and Scope 3 GHG emissions)
2 Total Carbon Footprint	tCO ₂ e/\$MM invested	Σ (Current value of Investment/Issuer's EVIC X Issuer's Scope 1, Scope 2 and Scope 3 GHG Emissions)/ Current Portfolio Value
3 Total Weighted Average Carbon Intensity ("WACI")	tCO ₂ e/\$MM revenue	Σ (Current value of investment/Current portfolio value X Issuer's Scope 1, 2 and 3 GHG emissions/Issuer's \$MM revenue)

As noted above, Scope 3 is included in the calculation methodology for these metrics. As such, this number may not be comparable to other investment managers that are reporting on Scopes 1 and 2 only.

Investment teams track several additional metrics on individual products. MSIM has developed an internal analytics dashboard to provide investment teams with real-time access to sustainability data and insights, including in-depth metrics on climate-related risks and opportunities.

MSIM also continually seeks to improve data quality by liaising closely with different external data providers and obtaining updates to the datasets, as well as performing due diligence over the methodologies used by data providers.

Data quality is a known limitation across the industry, and we expect this to improve considerably over the coming years.

2022 MSIM Ltd Metrics

In accordance with the TCFD guidance, we are reporting these metrics to assess the exposure of MSIM Ltd's investment portfolio to the risks and opportunities linked to climate change. The below metrics account for a significant proportion of MSIM Ltd's TCFD in-scope business. As ESG vendor data coverage and methodologies improve, we expect coverage to increase over time.

Assets Under Management Metrics

As at 31 December 2022

METRIC	2022	
1 Total Financed GHG Emissions	Scope 1 GHG emissions	3,527,097
	Scope 2 GHG emissions	698,238
	Scope 3 GHG emissions	29,782,315
	Total GHG emissions	34,007,649
2 Total Carbon Footprint (Scope 1, 2 & 3)	Carbon footprint	272
3 Total WACI (Scope 1, 2 & 3)	GHG intensity of portfolio companies	816

Certain securities, such as cash, FX forwards, liquidity and hedging instruments, are determined by MSIM as not having any impact on the metrics presented in this report. Investments such as mutual funds, ETFs, securitised products and certain derivatives are excluded from the calculation of metrics, as we are currently not able to gather an adequate level of data on the underlying constituents of these investments. Such excluded investments, in aggregate, constitute a very low percentage of MSIM Ltd's overall investments, such that their exclusion does not result in a material difference to the values reported.

The calculation of the above metrics is based on available data from third-party data providers, although significant data gaps exist for certain metrics and sectors.¹⁰ Where issuer reported data was not available, our data provider utilised proxy methodologies to estimate the data. Such data might still be subject to methodological limitations and coverage gaps, and estimates may change as the data provider evolves its methodology.

¹⁰ For total carbon footprint, we only consider the market value of securities for which we have underlying GHG emissions data when calculating the current value of investments. For total WACI, we calculate as a market value weighted average of all securities for which we have underlying PAI data.

MSIM takes steps to ensure that ESG data, including TCFD metrics, adheres to the Firm's data governance and quality standards by evaluating the appropriateness and delivery of third-party data feeds. Additionally, investment teams may review data on a qualitative basis, in line with the information gathered during company engagements. Follow-up with data vendors might also be arranged to discuss data discrepancies.

For the purpose of this report, a single data source has been used, which may differ from the data source(s) used by the investment teams for their TCFD product reporting and/or other client reports. For funds and mandates investing in private markets, data is sourced directly from portfolio companies or assets, where they provide relevant reporting.

Own Operations

For MSIM Ltd operational emissions information, please refer to the MSIM Ltd annual report and financial statements.

Targets

As noted previously, MSIM consists of independent investment teams with their own strategies for managing

client assets. As a client-centric organisation, we provide products to investors and solutions to clients that are managed in line with their investment policies. In many instances, this is also dependent on our clients' own regulatory environments and preferences.

MSIM Ltd generally does not set climate-related targets outside of its products although we do track and monitor climate-related risks as outlined above.

Where investment teams seek to embed climate-related targets into their strategies or where clients embed climate-related targets into their mandates, MSIM will seek to provide our investment teams with the resources and expertise to measure, track and report on these targets and to manage assets in the best interests of our clients. Further information on climate-related targets in our products can be found in product-specific climate-related disclosures.

MSIM will also continually review the appropriateness of other sustainability-related targets, such as engagement and proxy voting practices.

IMPORTANT INFORMATION

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As part of our procedures, MSIM appointed a third party to conduct an assessment of the data collection, processing, calculation and reporting processes used to compile the TCFD metrics. The procedures included enquiries with management teams and walkthroughs of the end to end data collection and reporting systems. The findings were reported to the MSIM ESG Committee and the MSIM Limited Board. The review did not constitute an assurance engagement performed in accordance with any standards applicable to assurance and, as such, no assurance conclusion was expressed.

Individual investment vehicles may have specific ESG related goals and restrictions. Please refer to governing documents of individual vehicles to understand their binding ESG criteria.

