June 2025

2024 TCFD Report

STATE STREET GLOBAL ADVISORS

Contents

Introduction

State Street Global Advisors (“we,” “our,” “us,” or “the firm”) is the asset management business of State Street Corporation (“State Street” or “Parent”). We are the world’s fourth largest asset manager, responsible for over $4.72 trillion in assets under management (“AUM”).[1] We are a globally scaled index and systematic investment manager with strengths in index investing (institutional and ETFs), cash, and select active and multi-asset capabilities. Our active and index capabilities cover the risk/reward spectrum.

We are committed to delivering climate investing products to our clients who hire us for our climate investment expertise and reporting capabilities. We seek to address clients’ demands for climate-related investing opportunities by offering a wide range of strategies to help them meet their investment needs and objectives.

Further, our Asset Stewardship program helps us understand how companies are addressing the important risks and opportunities they face, including those associated with sustainability. We believe that managing climate-related risks and opportunities is a key element in maximizing long-term risk-adjusted returns for our clients. As a result, we have a longstanding commitment to enhancing investor-useful disclosure related to this topic. We have been engaging with companies on climate-related topics since 2011.

This is our fourth report on the TCFD recommendations, in which we disclose how we manage climate-related risks and opportunities, both in our capacity as an asset manager (i.e., risks to our clients’ investments) and as a business (i.e., emissions related to business operations and the potential business strategy implications of climate risk). While this TCFD report should be considered separate and distinct from State Street’s TCFD report, which was published as part of its Sustainability Report earlier this year, we leverage our Parent’s existing best practices and processes and, in some cases, people and committees, to help us manage certain aspects of climate risks in our business. We have some overlap with State Street in nearly all areas of this report, but it is important to note the following:

- The Risk Committee of the State Street Board has a remit to oversee the risks present in State Street’s business, including climate risk.
- Our Risk Management team is part of State Street’s Enterprise Risk Management organization, and we draw on enterprise risk processes and frameworks to aim for consistency in our approach.
- Our business continuity and disaster recovery strategies are developed and implemented in alignment with State Street.

- Our internal metrics related to our carbon footprint are included at the corporate level because we are co-located with State Street. We do not separately track Scope 1, 2, and certain categories of Scope 3 emissions at this time.

While we work closely with other parts of State Street across many activities, the asset management business faces distinct risks and opportunities that are outlined in this standalone TCFD report. In 2024, key highlights of our focus on managing climate-related risks and opportunities for clients and our business included:

As a manager of client assets

- Seeking to address clients' demands for climate-related investing opportunities by offering a wide range of strategies to help them meet their investment needs and objectives.

- Expanding our Asset Stewardship team to include regional heads for the Americas, Europe, the Middle East and Africa (EMEA), and Asia Pacific (APAC). This has enabled us to better engage with more companies and better monitor and respond to local developments. We also hired a Head of Stewardship Research to lead the development of thought leadership on oversight and disclosure of governance and sustainability-related risks and opportunities, including climate.

- Announcing our Sustainability Stewardship Service, which officially launched in 2025. Through this client-driven program, we aim to better support the view of those clients who wish to prioritize engagement with portfolio companies on sustainability topics, including climate.

- Executing proactive thematic engagements around climate-related disclosures, including holding more than 300 portfolio company engagements on climate-related matters to learn about companies' approaches to disclosure and board oversight, of which more than 100 involved in-depth discussion of climate transition plans.[2]

- Expanding our Investor Voting Choice program to provide more shareholders the ability to direct how shares held in the eligible funds and segregated accounts they own are voted. The program offers eligible investors a range of voting policies, including a sustainability-focused policy, that can be applied to the voting of shares owned by the eligible funds and segregated accounts in which they are invested; as of 31 December 2024, the program covers over 80% of the eligible index equity assets we manage.[3]

As a business

- Developing and launching new climate investment strategies and enhancing existing climate investment strategies to meet client preferences.

- Consolidating State Street Global Advisors' committee structure to improve governance efficiency and streamline processes, integrating oversight of sustainable investing and asset stewardship matters, including climate-related matters, among our committees and within the business.

- Conducting our annual State Street Global Advisors Climate Risk Workshop with the purpose of identifying key drivers of climate risks that could impact the firm's financial performance, operations, and franchise value.

Although the TCFD provides helpful guidance, methodologies for measuring climate-related risks and impacts are still in a nascent stage; therefore, our climate-related management approach will continue to evolve as best practices emerge and as data becomes more readily available and reliable. We will continue to work with relevant stakeholders to enhance our disclosures over time in line with our core principles of transparency and rigor.

Report Summary

The table below briefly summarizes our disclosures across the four TCFD pillars. Full descriptions are in the chapters that follow.

Figure 1
Summary of State Street Global Advisors Disclosures

TCFD Recommendation Pillar	Key Points
Governance Disclose the organization's governance around climate-related risks and opportunities.	
Describe the board's oversight of climate-related risks and opportunities.	State Street's Board of Directors (the "Board") provides ongoing oversight of State Street Global Advisors' near- and long-term business strategies. In 2018, the Board assumed responsibility for oversight of sustainability obligations, initiatives, and strategies; oversight was modified in 2024 to include matters related to sustainability and impact. In 2021, State Street formalized its governance over sustainability initiatives and activities by specifically including oversight responsibilities in the charters of each of the following Board committees: Examining and Audit, Human Resources, Nominating and Corporate Governance, Risk, and Technology and Operations. During this process, the Risk Committee of the Board added responsibility for the risk management components of State Street's sustainability obligations, initiatives, and activities to its mandate. Effective in 2024, each of the committee charters reference oversight of sustainability- and impact-related obligations, initiatives, and activities within their respective remit. State Street Global Advisors' Chief Executive Officer ("CEO") and Chief Risk Officer ("CRO") meet annually with the Board Risk Committee and also provide monthly reporting, including on risk management components of climate-related matters, as appropriate.
	The Nominating and Corporate Governance Committee of the State Street Board oversees corporate governance components of State Street's sustainability and impact obligations, initiatives, and activities, including matters related to climate within the Committee's scope of responsibilities. To share insights about best practices, the State Street Global Advisors Asset Stewardship team typically reports twice annually to the Nominating and Corporate Governance Committee.
Describe management's role in assessing and managing climate-related risks and opportunities.	State Street Global Advisors' governance structure consists of three senior committees, which are designed to support effective and efficient decision-making and provide oversight of its business functions: (i) the Risk Committee, (ii) the Global Product and Investment Committee, and (iii) the Global Fiduciary and Conduct Committee. These senior committees and the subcommittees underlying each apply a consistent approach to the establishment and implementation of firm-wide policies and procedures and provide broad oversight of the business functions.
	In 2024, State Street Global Advisors embarked upon an initiative to streamline its governance structure with the objective of improving efficiency and speed of decision making across the company. As part of this, the existing Global Investment, Global Product, Global Operations and Compliance, and ESG Committees were formally dissolved. The oversight responsibilities of the ESG Committee were integrated among other committees and within the business. While the firm's governance structure has been simplified, oversight of sustainable investing and asset stewardship matters remains the same. Furthermore, the firm's sustainable investing capabilities and asset stewardship program are unaffected, and the firm is committed and structured to effectively oversee those activities.
	State Street Global Advisors endorsed the TCFD framework in 2017. Additionally, our Asset Stewardship team has been engaging with companies on climate-related topics since 2011. Through our engagements with portfolio companies, we seek to understand how company boards and management teams are effectively overseeing climate-related risks and opportunities the company has deemed to be material to its business or operations. Where a company has deemed such topics as material, we assess company disclosures related to governance, strategy, risk management, and metrics and targets.

TCFD Recommendation Pillar	Key Points
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	
Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	**Risks** With regard to risks to our clients' portfolios, we have identified various climate-related risk drivers that may impact the performance of our strategies, leading to decreased asset values, higher volatility over time, and increased risk, including investment risk, liquidity risk, and counterparty risk. With respect to our business, climate-related risks may affect our ability to achieve business goals, and we may be exposed to risks associated with decision-making based on climate models. Acute weather events may also pose a risk to our physical assets.
	Opportunities We may experience increased demand for our climate investment strategies and thought leadership about climate-related data and investment solutions. Additionally, we may experience increased demand for our Sustainability Stewardship Service from clients who prioritize sustainability outcomes or for our Investor Voting Choice program, which allows eligible clients who opt in to choose the voting policy that best aligns to their views, including with respect to sustainability.
Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	As an index manager, we are long-term shareholders on behalf of our clients, and we are focused on delivering the index exposure — including climate-related for clients who wish to pursue a climate focus — to those clients. Climate change risks and opportunities may impact the management of our clients' portfolios in active strategies, as well as our risk management and Asset Stewardship program. Climate change risks and opportunities also can influence our work as a business, including increasing client demand for climate-related strategies and other offerings, and creating the potential for State Street Corporation to reduce the environmental impact of its operations.
Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Most of our index funds (and the majority of our AUM) are currently focused on strategies designed to track broad market exposure. For clients that request it, we may help our clients understand the nature of climate risk embedded in the indices in which they are invested through climate investment education and analytics. Scenario analysis is core to State Street Corporation's approach to risk management, including for assessing and managing risks from climate-related factors. Over the past several years, in line with sound risk management practices and regulatory expectations, State Street's approach to climate-risk related scenario analysis has continued to develop and evolve. For State Street Corporation's financial risks, scenario analysis results suggest that under extremely stressful assumptions, climate-related risk drivers could have non-negligible impacts on key input factors in loss modeling, and expected credit losses remained limited overall given the strong fundamental credit quality of the financial exposures. For non-financial risks, subject-matter experts ultimately determined that the risk of loss or interruption of service would be primarily driven by unanticipated gaps in business continuity planning, acknowledging that such planning must continue to evolve to take into account the changing severity or frequency of climate-driven events, should these shifts impact the sufficiency of measures currently in place. In 2023, State Street Global Advisors conducted a firmwide climate-related scenario analysis exercise across all asset classes, where data was available, to understand potential climate-related transition risk under different scenarios. The scenario analysis was performed using three scenarios developed by the Network for Greening the Financial System (NGFS). While climate scenario analysis is not predictive of the future, we see this as a valuable tool to help us understand the potential implications of possible climate pathways. Although this exercise was conducted at an entity-level, we have expanded our data capabilities to perform scenario analysis at a fund level on an ad hoc basis.
Describe how risks and opportunities are factored into relevant products or investment strategies and describe related transition impact.*	We offer a variety of capabilities for clients who wish to pursue a climate focus, including positively and negatively screening portfolios and tracking third-party sustainable indexes. Our customizable framework allows us to create client portfolios that target reductions in current and potential future carbon emissions, increase exposure to green revenues, and increase resiliency to the risks posed by climate change. We also provide both bespoke and standardized reporting to clients in certain strategies to help them understand TCFD-aligned and climate-focused risks and opportunities in their portfolios. For more information on our investment strategies, please refer to our Sustainable Investing Capabilities Statement. For investors who seek to align with the Paris Agreement and achieve net zero emissions, we have developed tools and solutions to implement sustainable investment strategies. The frameworks and guidance followed by such investors may seek to achieve net zero emissions by a combination of decarbonizing the portfolio, increasing investment in climate solutions or green technologies, and/or improving reporting and disclosure.

TCFD Recommendation Pillar	Key Points
Risk Management Disclose how the organization identifies, assesses, and manages climate-related risks.	
Describe the organization's processes for identifying and assessing climate-related risks.	**As a manager of client assets** • Engaging with portfolio companies about the climate-related risks they have identified as material to their business • Integrating available sustainability data and climate data (e.g., carbon intensity) in risk monitoring and reporting processes, as requested by clients **As a business** • Conducting an annual State Street Global Advisors Climate Risk Workshop with the purpose of identifying key drivers of climate risks that could impact the firm's financial performance, operations, and franchise value, and leveraging State Street's regulatory change management program to identify climate-related changes to the regulatory environment that may impact State Street Global Advisors • The Material Risk Identification assessment of the firm's European operating entities, State Street Global Advisors Ltd and State Street Global Advisors Europe Ltd, considers and has fully embedded climate/sustainability-related drivers, any of which, if deemed high or severe in materiality, are put forward for further analysis and controls including stress testing and scenario analysis relevant for capital planning process.
Describe the organization's processes for managing climate-related risks.	The identification, assessment, monitoring, mitigation, and reporting of risks are essential to our financial performance and successful management of our business. Accordingly, the scope of our business requires that we consider these risks as part of a comprehensive and well-integrated risk management function. These risks, if not effectively managed, can result in losses to us, as well as erosion of our capital and damage to our reputation. Our approach to risk management, including Board and senior management oversight and a system of policies, procedures, limits, risk measurement, monitoring, and internal controls, allows for an assessment of risks within a framework for evaluating opportunities for the prudent use of capital that appropriately balances risk and return. Our objective is to optimize our returns while operating at a prudent level of risk. In support of this objective, we have instituted a risk appetite framework that aligns our business strategy and financial objectives with the level of risk that we are willing to incur.
Describe engagement activity with investee companies to encourage better disclosure and practices related to climate-related risks in order to improve data availability and asset managers' ability to assess climate-related risks.*	We have held more than 1,600 climate-related engagements since 2014. Through our conversations, we aim to understand how companies are overseeing and managing climate-related risks and opportunities that are material to their businesses and incorporating them into relevant strategic and financial planning processes. In 2024, we had over 300 engagements with portfolio companies on climate-related risk management. We conduct thematic engagements that focus on a particular topic or a theme in order to enhance our understanding of an emerging area or to potentially inform our future voting positions. In 2024, we conducted thematic engagements focused on Climate- and Nature-related Risks in the Food and Agriculture Value Chain and on Climate Transition Plan Disclosures. Through these engagements, we seek to understand and assess how companies are effectively managing the climate-related risks and opportunities that are material to their business, including those presented by the transition to a lower-carbon economy. In 2022, we began conducting engagements focused on climate transition plan disclosure to discuss industry guidance and to better understand the risks and opportunities companies are facing.[4] In 2023, we focused on high emitters in the Energy, Utilities, and Materials sectors, and in 2024, we engaged companies in additional sectors, including Consumer Staples.
Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	The State Street Board Risk Committee oversees the risk management components of State Street's sustainability obligations, initiatives, and activities. In addition, oversight of sustainable investing and asset stewardship matters are integrated among State Street Global Advisors' committees and within the business. State Street Global Advisors' Risk Management team is part of State Street's Enterprise Risk Management organization, and we draw on enterprise risk processes and frameworks to aim for consistency in our approach. State Street manages climate-related risk considerations in alignment with its Enterprise Risk Management Framework, incorporating climate-related risk issues and impacts into its management of existing risk types, financial and non-financial. State Street's Climate Risk Management Program uses a variety of existing processes and tools and dedicated approaches to focus on identification, measurement, and management of climate-related risk drivers to help us understand our vulnerabilities and address them, where material.
Describe how material climate-related risks are identified, assessed, and managed for each product or investment strategy.*	Where appropriate and consistent with a fund or strategy's disclosed objectives: • Climate risks are identified and assessed throughout the product and investment strategy lifecycles through investment research and analysis, portfolio construction and management, and investment risk management. • We aim to review all investment strategies at least annually, across a range of metrics including sustainability characteristics, through our Investment Strategy Review Group. • We perform climate data due diligence and comparative analysis to identify best in class metrics, indicators, and data points to drive climate-focused solutions.

TCFD Recommendation Pillar	Key Points
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	
Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	We currently use third parties to source business- and product-related data to help assess climate-related risks and opportunities for our clients, where relevant. The metrics we leverage include carbon emissions data (absolute emissions, carbon intensity, carbon footprint, weighted average carbon intensity [WACI]), fossil fuel reserves, brown and green revenues, implied temperature rise, climate value at risk, and carbon risk ratings. We continue to evaluate the effectiveness of various metrics. Going forward, as transparency and reliability around climate data improves, we will assess and may report on additional climate metrics.
Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	Our Parent's Scope 1, Scope 2, and certain categories of Scope 3 emissions are tracked and reported as part of their TCFD disclosures. State Street Global Advisors does not report Scope 3 emissions related to its assets under management (Category 15). Many aspects of the calculation and attribution of GHG emissions disclosures are in development, and there continue to be significant practical challenges. There is an inherent timing lag in the availability of Scope 3 data, given the interdependence on Scopes 1 and 2, inconsistent Scope 3 estimation measurements, as well as wider technical issues such as "double counting" by asset owners and asset managers. Consensus around Scope 3 reporting parameters is still emerging, and further industry work should be done to determine the value and feasibility of calculating and disclosing Scope 3 GHG emissions on assets under management for the benefit of investors.
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	**As a manager of client assets** As predominantly an index manager, we are long-term shareholders on behalf of our clients, and we are focused on delivering the index exposure to those clients. For clients who seek to achieve climate-related targets, we have developed tools and solutions to implement sustainable investment strategies. Climate-related risks and opportunities are evolving and dynamic; there is no guarantee we will achieve the desired outcomes. **As a business** Because we co-locate with our Parent company, our operational targets (e.g., emissions and energy use) are available in the State Street Corporation TCFD report.
Asset managers should describe the extent to which their assets under management and products and investment strategies, where relevant, are aligned with a well below 2°C scenario, using whichever approach or metrics best suit their organizational context or capabilities.*	As noted above, as predominantly an index manager, we are long-term shareholders on behalf of our clients, and we are focused on delivering the index exposure to those clients. Where relevant to certain strategies, we provide scenario alignment analysis and TCFD-aligned carbon metrics, transition risk analysis, and physical risk analysis to clients on a regular basis. We also have the capability to provide customized reports upon request (e.g., assessments of progress against annual weighted average carbon intensity [WACI] reduction targets).
Asset managers should disclose GHG emissions for their AUM and WACI for each product or investment strategy, where data and methodologies allow. Asset managers should consider providing other carbon footprinting metrics they believe are useful for decision-making.*	As noted above, as predominantly an index manager, we are long-term shareholders on behalf of our clients, and we are focused on delivering the index exposure to those clients. Where relevant to certain strategies, we provide emissions and WACI analysis to certain clients. Also as noted above, State Street Global Advisors does not report Scope 3 emissions related to its assets under management (Category 15). In 2024, we updated our Sustainable Climate strategies to include additional forward-looking climate metrics like implied temperature rise, climate value at risk, and carbon risk ratings. These strategies are offered to clients who wish to address climate-related risks in assets that we manage for them.

* Reflects recommendations that are included in the Supplemental Guidance for Asset Managers, which incorporates updates to the guidance for the financial sector released by the TCFD in 2021.

Governance

Effective governance is central to State Street Corporation's approach to managing climate-related risks and opportunities. Our governance framework includes structured oversight at both the management and Board levels, with dedicated groups responsible for integrating climate considerations across our business.

Board and Parent Company Oversight

State Street Global Advisors sits within State Street's wider corporate governance framework, led by State Street's Board of Directors. State Street's Board of Directors takes guidance from the Corporate Governance Guidelines and the Standard of Conduct for Directors on the role of the Board and its responsibilities, functions, and conduct expectations. The Board provides ongoing oversight of State Street Global Advisors' near- and long-term business strategies. State Street's Board of Directors has several committees to assist in carrying out its responsibilities. The mandates of these committees are set out in the charters below:

- Examining and Audit Committee
- Executive Committee
- Human Resources Committee
- Nominating and Corporate Governance Committee
- Risk Committee
- Technology and Operations Committee

More information on the current State Street Board committee composition can be found here.

State Street Global Advisors' CEO and CRO annually report to the Board's Risk Committee and provide monthly reporting, including on risk management components of climate-related matters, as appropriate. Additionally, State Street Global Advisors' Asset Stewardship team typically reports twice annually on its activities, including climate-related activities, to the Board's Nominating and Corporate Governance Committee to share insights about best practices. These semi-annual updates to the Board cover ongoing stewardship efforts, corporate engagements, and proxy voting, including actions taken around sustainability and climate change-related topics.

State Street's Sustainability Governance

In 2018, the State Street Board of Directors assumed responsibility for oversight of sustainability obligations, initiatives, and strategies, which was modified in 2024 to include matters related to sustainability and impact.

In 2021, State Street formalized its governance over sustainability initiatives and activities by specifically including oversight responsibilities in the charters of each of the following Board committees: Examining and Audit, Human Resources, Nominating and Corporate Governance, Risk, and Technology and Operations. During this process, the Risk Committee of the Board added responsibility for the risk management components of State Street's sustainability obligations, initiatives, and activities to its mandate. Effective in 2024, each of the committee charters reference oversight of sustainability- and impact-related obligations, initiatives, and activities within their respective remit. The Board and its committees receive updates on climate-related developments as part of broader discussions on risk management and sustainability-related strategic priorities. Climate considerations are integrated into existing governance structures, ensuring that material risks and opportunities are assessed in the context of the firm's overall business strategy.

Governance for State Street's Climate Risk Management Program is provided by the Management Risk and Capital Committee (MRAC), which is the senior management decision-making body for risk and capital issues, and by the Risk Committee of the Board, which oversees the risk management components, including climate risk, of the company's sustainability and impact obligations, initiatives, and activities. Oversight for climate-related risks is guided by State Street's Climate Risk Policy, which sets forth our approach to managing the impact of climate-related risks on the firm, where material. This oversight is supported by a dedicated Climate Risk Working Group, which provides oversight for the development of climate risk identification, assessment, and management frameworks, as well as embedded responsibilities across other business units and risk and corporate functions.

Sustainability Committee

The Sustainability Committee, a sub-committee of the Executive Committee and co-chaired by the Chief Risk Officer and Head of Client Impact, is central to State Street's governance of sustainability-related issues. The committee's purpose is to ensure:

- Visibility of sustainability matters of enterprise-wide significance, including sustainability-related policy matters
- Timely consideration and debate on enterprise-wide issues relating to sustainability
- Board and management committee visibility of sustainability issues

The membership comprises a number of State Street's most senior leaders, and the work of the committee is supported by three sub-committees: an ESG Bond Issuance Committee, an Environmental Steering Committee, and a Health and Safety Committee. Additionally, the work of the Sustainability Committee is supported by a Sustainability Office, which provides leadership and oversight across the company's sustainability activities.

Legal Entity Reporting

State Street Global Advisors operates around the world from legal entities in North America, Europe, the Middle East, and the Asia Pacific region. We have legal entities that are structured independently and may have additional reporting and oversight responsibilities related to environmental issues, including climate change. Within our global framework, certain legal entities are responsible for overseeing applicable climate risk-related requirements and may have additional reporting and oversight responsibilities related to environmental issues, including climate change.[5]

State Street Global Advisors Management Oversight

Firm Governance Structure

State Street Global Advisors' firm governance structure consists of three senior committees which are designed to support effective and efficient decision-making and provide oversight of our business functions:

- The Risk Committee ("RC") serves as the central escalation, review, and challenge point for the firm's risk profile, material risk trends, and all matters escalated from other committees. The RC also reports and escalates issues to State Street's senior risk committees as it deems necessary and appropriate.

- The Global Product and Investment Committee ("GPIC") is responsible for the firm's investment philosophy and overseeing the investment process, investment strategies, approach to new markets and instruments, relationships with counterparties, and the creation of new products based on the firm's investment strategies. The GPIC also reports to State Street's New Business and Product Review and Approval Process Committee ("NBPRA").

- The Global Fiduciary and Conduct Committee ("GFCC") is responsible for addressing fiduciary and business conduct matters across the firm as well as oversight of the firm's collective investment funds. The GFCC also reports to State Street's Fiduciary Review Committee ("FRC").

Figure 2
Governance Structure

Global Product & Investment Committee

Responsible for the firm's investment philosophy and overseeing the investment process, investment strategies, approach to new markets and instruments, relationships with counterparties, and the creation of new products based on the firm's investment strategies.

Subcommittees

EMEA Product

Global Fiduciary & Conduct Committee

Responsible for addressing fiduciary and business conduct matters across the firm and oversight of the firm's collective investment funds.

Subcommittees

Independent Fiduciary

Risk Committee

Responsible for ensuring the alignment of strategy, risk appetite and risk management standards (corporate-wide).

Subcommittees

Liquidity & Derivatives Oversight

Trade Management Oversight

North American Valuation

EMEA Valuation

APAC Valuation

Source: State Street Global Advisors, 31 March 2025.

These three senior committees and the subcommittees underlying each apply a consistent approach to the establishment and implementation of firm-wide policies and procedures and provide broad oversight of the business functions. This governance structure is administered by an Internal Governance Oversight team, which focuses on promoting efficiency, clarity, and accountability with respect to decision rights and firmwide oversight. The guiding principles embodied within this governance structure, and by which the Internal Governance Team operates, are:

- Promote a culture of efficient and effective decision-making
- Reinforce ownership of and accountability for decision-making and management of key risks by business leaders
- Enhance accountability for adherence to policies and decision-making protocol in support of our client service objectives and leadership reputation

In 2024, we embarked upon an initiative to streamline our governance structure with the objective of improving efficiency and speed of decision making across the company. As part of this, the existing Global Investment, Global Product, Global Operations and Compliance, and ESG Senior Committees were formally dissolved. While the firm's governance structure has been simplified, oversight of sustainable investing and asset stewardship matters remain the same. Furthermore, our sustainable investing capabilities and asset stewardship strategy are unaffected, and the firm is committed and structured to effectively overseeing those activities.

Further, we periodically review our governance structure and may make adjustments from time to time. We aim to continue enhancing our internal governance approach for effective oversight of climate-related risks and opportunities related to our business.

Asset Stewardship

Our Asset Stewardship program is centered on the pursuit of long-term value for our clients' portfolios through voting at shareholder meetings and engaging with the companies in which we invest on behalf of our clients.

Our Asset Stewardship team is responsible for developing and implementing the firm's Global Proxy Voting and Engagement Policy, the implementation of third-party proxy voting guidelines where applicable, case-by-case voting items, issuer engagement activities, and research and analysis of corporate governance issues and proxy voting items. The Asset Stewardship team's activities are overseen by our Global Fiduciary and Conduct Committee ("GFCC"). The GFCC is responsible for reviewing State Street Global Advisors' stewardship strategy, engagement priorities, and the Global Proxy Voting and Engagement Policy, and for monitoring the delivery of voting objectives. Further information on our Asset Stewardship team can be found in the Risk Management section of this report and in our 2024 Asset Stewardship Report.

We expect our portfolio companies to exercise effective oversight and governance of opportunities and risks that they identify as material to their businesses and to disclose how they are overseeing such risks and opportunities to investors. This expectation reflects our principles of effective board oversight, disclosure, and shareholder protection, which are fundamental to our asset stewardship approach.

- **Effective board oversight** We believe that well-governed companies can better protect and pursue shareholder interests and withstand the challenges of an uncertain economic environment. Principally, a board acts on behalf of shareholders by protecting their interests and preserving their rights. We believe independent directors are crucial to good corporate governance and believe a sufficiently independent board is key to effectively monitoring management, maintaining appropriate governance practices, and performing oversight functions necessary to protect shareholder interests.

- **Disclosure** It is important for shareholders to receive timely and accurate reporting of a company's financial performance and strategy so that they are able to assess both the value and risk of their investment. Such information allows investors to determine whether their economic interests have been safeguarded by the board and provides insights into the quality of the board's oversight of management.

- **Shareholder protection** We believe it is in the best interest of shareholders for companies to have appropriate shareholder rights and accountability mechanisms in place. As a starting place for voting rights, it is necessary for ownership rights to reflect one vote for one share to ensure that economic interests and proxy voting power are aligned. In terms of accountability to shareholders and appropriate checks and balances, we believe there should be annual elections of the full board of directors.

Strategy

With respect to our clients, our perspective on climate-related risks is rooted in our duty to invest assets in clients' best interests and to seek value over the long term.

With respect to the management of our clients' portfolios in active strategies, we believe that incorporating sustainability factors, including climate, into our investment risk framework can have a positive impact on long-term value creation. This belief influences the design of certain investment processes. Additionally, with respect to managing our business strategy, we integrate climate considerations where we see risks and opportunities, such as to develop investment choices to meet client demand.

State Street considers climate-related risks and opportunities across two sources of risk based on common definitions established by the global network of central bankers and supervisors: Physical Risk and Transition Risk.

Physical Risks are related to the physical impacts from climate change and include:

- Acute Risks, which are primarily event-driven, such as the increased severity or frequency of weather events including wildfires, hurricanes and other storms, floods, and heat and cold waves, among others
- Chronic Risks, which are driven by longer-term shifts in climate patterns, such as changes in sea levels, sustained higher temperatures, and changing precipitation patterns, among others

Transition Risks are those associated with the pace and extent at which an organization manages and adapts to the internal and external rate of change to reduce greenhouse gas emissions and transition to renewable energy and can include:

- Changes in market sentiment, including for investors and consumers
- Reputational risk related to an organization's statements, actions, and behaviors
- Technological changes
- Policy and regulatory changes

Climate-Related Opportunities for Our Clients

We believe that the efforts of the public and private sectors to significantly reduce greenhouse gas emissions may present opportunities for our clients with climate- and low-carbon-related objectives over the short-, medium-, and long-term time horizons.

Figure 3
Potential Climate-Related Opportunities for Clients

Climate-Related Area of Opportunity	Description	Climate-Related Opportunity Driver Type
Product Choice	Clients have access to a broad range of investment solutions, as well as to the Sustainability Stewardship Service, to help them meet their climate- and low-carbon-related objectives.	Transition and Physical
Risk/Return Profile	Clients invested in climate and low-carbon investment strategies may benefit from improved risk and return performance under certain scenarios.	Transition and Physical

Range of Investment Solutions

To support clients in achieving their sustainable investing objectives, including with respect to climate, we look to innovate and develop new investment solutions. As of 31 December 2024, State Street Global Advisors managed around 180 sustainable investing funds.[6] 2024 saw continued progress in developing and innovating new investment solutions with the launch of the Global Climate Transition Equity strategy and the announcement of the new client-driven Sustainability Stewardship Service.

Climate and Low-Carbon Investment Strategies

For investors seeking to align their portfolios with their climate ambitions and/or align with climate-aware industry frameworks, we offer investment products and solutions across both equities and fixed income that are designed to meet specific climate-related objectives.

Across investment strategies with specifically disclosed climate attributes, we may consider mitigation and/or adaptation as important investing dimensions. Mitigation refers to avoiding and reducing emissions in a portfolio or among portfolio companies. Adaptation denotes a company's ability to minimize its exposure to the actual or expected physical, economic, and regulatory impacts of climate change.

Our sustainable investing solutions vary depending on the type of strategy provided to our clients, but generally fall into one of three broad categories, each of which may include a focus on climate:

1. **Negative Sustainable Investing Screen** A "Negative Sustainable Investing Screen" (also known as an exclusionary screen) is a screen incorporated into the investment strategy utilized for the management of a portfolio that results in the exclusion from the portfolio of securities of issuers that fail to satisfy certain sustainability criteria (e.g., because the issuers comprise part of a sector or industry). Negative Sustainable Investing Screens include but are not limited to State Street Global Advisors Point of View (POV) screens, norms-based screens, Socially Responsible Investing (SRI) screens, and screens provided by clients or other third-parties (including client-directed screens).

2 **Positive Sustainable Investing Screen** A "Positive Sustainable Investing Screen" is a screen incorporated into the investment strategy utilized for the management of a portfolio that intentionally includes securities of issuers identified as having positive sustainability characteristics relative to the issuer's industry or sector peers. Positive Sustainable Investing Screens target an improvement of a portfolio's sustainability profile as compared to a benchmark or stated investment guideline, measured by a sustainability score or a sustainability metric, or invest only in issuers within an industry or sector that score higher within that industry or sector than the issuer's peers.

3 **Third Party ESG/Sustainable Investing Index Investment Strategies** An index is deemed to be a "Third Party ESG/Sustainable Investing Index" if the index methodology incorporates sustainability factors or characteristics that are utilized by the third-party index provider to determine which securities and/or how much in weight are included as index constituents.

With respect to management of our clients' portfolios in active strategies, we believe sustainability factors should be considered alongside traditional investment factors when making investment decisions to develop a more complete picture of portfolio companies' future financial trajectory and business risks. We believe this practice allows issuers to more fully demonstrate their value proposition to investors and the market to appropriately value an issuer's securities. Sustainability factors could cause either a negative or positive impact on a variety of financial metrics. In addition, we recognize that some sustainability-related risks and opportunities are likely to materialize over longer-term time horizons. Finally, the degree to which these factors may drive future business results may or may not be well recognized in the market. Therefore, we believe it is important to assess these factors as part of a comprehensive assessment of the value of an investment, as applicable, depending on the investment strategy. However, unless specifically disclosed to investors in a strategy, sustainability factors are not material to the way the investment strategy is managed and are not necessarily determinative of investment selection.

Green Bond Investing

Green bonds enable capital-raising and investment for new and existing projects with potential environmental benefits, such as funds to build a solar power plant. Green bonds are part of a family of labeled bonds and are defined and qualified by a clear use-of-proceeds pledge by the borrower to allocate the funds borrowed to projects that meet specific environmental objectives, including climate change mitigation and adaptation. To ensure transparency and credibility in the green bond market, several voluntary standards have been established, including the International Capital Market Association (ICMA) Green Bond Principles (GBP) and the Climate Bonds Initiative (CBI) Green Bond Taxonomy. These standards allow investors to identify and provide funding to bond issuers based on their future intentions relating to environmental objectives, rather than on their historical record on sustainability. Green bonds generally have the same seniority, recourse, and rating as an issuer's conventional bonds. The main difference between green and conventional bonds is that the proceeds of a green bond are earmarked for climate- and environment-related projects.

State Street Global Advisors established our first US Green Bond strategy in 2012. This was subsequently followed by the launch of a Global Green Bond Index Strategy in 2015. We also manage a number of portfolios that either have an indexed green bond-only investment objective (i.e., they target 100% investment in green bonds) or a targeted allocation as part of the overall investment objectives of a mandate (i.e., strategies that target a certain percentage or multiple versus the reference benchmark).

State Street Global Advisors is a member of ICMA and the CBI and is involved in various working groups as part of an initiative to enhance global standards, transparency, and consistency in the labeled bond market.

Reporting

We produce monthly sustainability reports for certain clients' equity and fixed income investment portfolios that include, as relevant, key climate-related metrics, a summary of our proprietary sustainability-related R-Factor™ scores, and a stewardship profile with engagement data. Climate metrics include Implied Temperature Rise, Climate Value-at-Risk, and a breakout of Scopes 1, 2, and 3 data. We may also provide, as relevant, a range of additional reports to support regional regulatory requirements, including climate metrics and asset stewardship data.

Climate-Related Risks to Our Clients

We have identified certain climate-related risks as potentially impactful to our clients' portfolios, where consistent with the disclosed investment strategy, and dedicated teams are responsible for managing these risks.

Figure 4
Potential Climate-Related Risks to Clients

Risk Type	Investment Management
Description	The risk that: • The performance of our strategies differs materially from client expectations; changing regulatory or client expectations increase the possible impact of this risk
Examples of Risks Posed by Climate Change	Our climate/sustainable investing strategies might underperform benchmarks. Alternatively, there may be changes in regulatory or client expectations.
Risk Mitigants	• Regular performance reviews and processes to understand positioning against investment objectives • Engagement with industry bodies on best market practices • Engagement with clients to understand and meet expectations
Our Approach	Our Enterprise Risk Management (ERM) team has enhanced processes, where appropriate, to establish sustainability and climate risk monitoring, including climate risk identification, reporting on key climate metrics, and regular risk reviews with portfolio management teams, if relevant. Additionally, all strategies are regularly reviewed for any deviations from investment objectives, including climate and sustainability. Any significant deviations are further investigated and escalated as appropriate. We monitor and regularly review the regulatory landscape for new developments. Continuous dialogue with clients helps ensure our understanding of expectations and enables us to educate clients on any changes to our business practices, such as changes in fund names or regulatory labels.

Our Risk Teams

Together, the following teams manage investment management risk.

Investment Risk Team

The Investment Risk team is responsible for independently monitoring investment risk exposures to ensure that risk contributions are consistent with return expectations and to highlight intentional and unintentional exposures. Attention is focused on where we have risk, how much risk we have, and whether it is consistent with our views and client objectives.

Liquidity Risk Team

The Liquidity Risk Management team is responsible for independently monitoring and reporting on asset and funding redemption liquidity risk to ensure appropriate levels of liquidity across portfolios and to ensure adherence to regulatory liquidity requirements. Furthermore, periodic table-top exercises are held with the business to ensure awareness of roles and responsibilities and preparedness of the business and its operations through simulated stress events.

Counterparty Risk Team

The Counterparty Risk Management (CRM) team strives to prudently manage counterparty risk while enabling traders to achieve best execution for clients. The team's objective is to be comprehensive, capturing all elements that materially impact counterparty creditworthiness including asset quality, earnings, funding and liquidity, capitalization, and management.

Operational Risk Team

The role of the Operational Risk Management team is to assist the organization in effectively managing the risk of errors in people, processes, technology, and external events in conjunction with achieving business objectives. The team is an independent risk function with responsibility for the capability of the firm's people and processes to reliably deliver their business activities, and acts as an operational risk industry liaison, continuously tracking, monitoring, and furthering best practices.

Model Risk Team

State Street Corporation has company-wide requirements for model risk management to which our models adhere. The Model Risk Management team administers State Street's Model Risk Management framework to ensure that model risk is identified, assessed, mitigated, and monitored over time.

Factoring Climate-Related Risks and Opportunities Into Investment Strategies

State Street Global Advisors has extensive experience working with institutional investors seeking to integrate sustainability objectives into their investments. Next, we share two examples of our sustainability-focused customized separately managed accounts for institutional clients. These examples are for illustrative purposes only.

Figure 5 **Examples of Sustainability-Focused Separately Managed Accounts (SMAs)**

Indexed Equities

SMA Description	**A low-carbon tilted and sustainability-screened indexed equity solution for an Australian pension fund (domestic and global indexed equity portfolio)**
Background	An Australian pension fund approached State Street Global Advisors with a desire to better align their domestic and international equity investment strategy with climate-conscious objectives while adhering to stringent climate-related targets and tracking error limits relative to the strategic benchmark.
Solution Implementation	Our team collaborated closely with the client to develop an approach that aligned with their objectives using our proprietary data analytics and a negative screening framework, known as the Point of View (POV), to identify and exclude high carbon companies and other companies based on additional themes from the investment universe. 1. **Data analysis and scenario modeling:** Using our proprietary data and optimization models, we conducted in-depth scenario analysis to explore various trade-offs between tracking error and the desired sustainability objectives. These scenarios were crucial in helping the client make informed decisions regarding their investment strategy. 2. **Tailored allocation:** Following extensive deliberation and scenario testing, the client opted for a nuanced allocation strategy that blended an exclusion and tracking error optimization approach: • Australian Equities: targeting a 20%–25% reduction in carbon intensity with minimal tracking error of 20 basis points • MSCI World ex-Australia Equities: aiming for a relatively substantial 55% reduction in carbon intensity while maintaining a comparable performance tracking error to the strategic benchmark of 20 basis points 3. **Screening and exclusions:** To ensure a comprehensive approach to screening for controversial weapons exposures, the client desired to complement their own screen with our own insights based on State Street Global Advisors' POV list.
Outcome	Implemented in Q2 2023, the Australian pension fund successfully aligned its investment strategy with its climate goals while upholding its financial performance objectives.

Indexed Fixed Income

SMA Description	**A customized climate bond strategy with forward-looking metrics for a Nordic pension fund**
Background	An institutional investor sought to align its existing US corporate bond indexed strategy (benchmarked to the Bloomberg US Corporate Bond 1% Capped Index) with a robust sustainable investing framework that incorporated both forward- and backward-looking metrics into a customized version of the State Street Sustainable Climate Corporate Bond Strategy.
Solution Implementation	Starting in Q4 2023, we worked with the investor to run simulations in applying a climate investment framework, in addition to their core exclusion list, on an existing portfolio benchmarked to the Bloomberg US Corporate Bond Index with a 1% issuer cap. In Q1 2024, we worked to advance the framework further by incorporating forward-looking metrics. The final implementation was based on a customized version of the State Street Sustainable Climate Corporate Bond Strategy, integrating forward-looking climate-related metrics through a proprietary optimization engine. Key features of the strategy design included: 1. **Climate** • 50% Scope 1 and 2 carbon intensity reduction versus the benchmark with annual 7.6% YoY reduction in effect from 2030 • Minimize fossil fuel reserves and brown revenue • Implied temperature rise target of ≤2°C • Carbon risk rating assessment 2. **Exclusions** The screened factors included: • Controversies (Violations of UN Global Compact Principles and Severe ESG Controversies) • Business involvement (Civilian Firearms, Controversial Weapons, Thermal Coal, Arctic Oil and Gas, Oil Sands, Tobacco) 3. **Green Bonds** The strategy overweighted green bonds by two times the benchmark weight. To bring the standard indexed strategy in line with the new custom climate framework required an approximately 30% turnover over five days, bringing the current mandate in line with our upgraded climate framework, ensuring best execution, minimizing trading costs, and staying well within the 50 basis points tracking-error tolerance level.
Outcome	We were able to identify and respond to the need of the client for climate integration and could offer our improved climate framework at the appropriate time. In April 2024, the customized climate bond strategy successfully aligned the Nordic pension fund's investment approach with its sustainability framework, while also meeting its financial objectives. By incorporating forward-looking metrics and stringent screening criteria, the strategy aligned to the client's commitment to sustainable investing and desire to mitigate climate-related risks. The use of green bonds further enhanced the portfolio's exposure to assets expected to be more climate-resilient and contribute to a lower-carbon economy.

For more examples, please refer to The Climate Files.

Climate-Related Opportunities for Our Business and Strategy

Climate change opportunities and risks can influence our work as a business, including increasing demand for climate-related strategies and climate analytics, and the potential for us to reduce our operational impact.

Below is a snapshot of climate-related opportunities we have identified as potentially impactful to our business.

Figure 6
Potential Climate-Related Opportunities for Our Business and Strategy

Area of Opportunity	Description	Climate-Related Opportunity Driver Type
Demand for Products	We may experience increased demand for our climate investment strategies and funds, along with our Sustainability Stewardship Service and Investor Voting Choice program	Transition and Physical
Interest in Research & Analytics	We may experience increased interest in our proprietary research and sustainability analytics, including related to climate, from investors, financial intermediaries, and other asset owners	Transition and Physical
Minimize Operational Impact	State Street Corporation may reduce its footprint while enhancing resiliency of operations	Transition and Physical

Demand for Climate-Related Products

As investor interest in climate-related risks and opportunities evolves, State Street Global Advisors may experience increased demand for our climate investment strategies. In response, we are broadening our toolkit to provide investment strategies that help clients identify and maximize climate-related opportunities while addressing and managing climate risks in their portfolios. As investors continue to request such solutions, we aim to continue developing our product pipeline to meet market demand and to better serve clients' needs and preferences.

In 2024, we continued executing against an ambitious, multi-year strategic agenda. State Street Global Advisors had approximately $872 billion in sustainable investing assets under management (AUM), which comprise about 18% of our assets under management, as of 31 December 2024. Additionally, State Street Global Advisors has approximately $119 billion in climate-related AUM as of 31 December 2024.[8]

Our Use of Climate Analytics

We also may experience increased demand for our proprietary sustainability analytics, including those related to climate, from investors, financial intermediaries, and other asset owners. Our data and analytics can help clients assess relevant climate-related risks and opportunities to develop an approach that is aligned with their objectives. This includes performing in-depth analyses conducted primarily with third-party data and proprietary optimization models. We also continue to make investments in sustainability/climate index and data licenses in response to client demand.

Minimizing Operational Impact

At the core of the State Street climate strategy is the responsible management of its operational environmental impacts. Specifically, it is the operation of State Street's global network of 74 corporate offices, bank branches, and data centers that contributes to its direct environmental footprint. To minimize this impact, State Street is committed to allocating capital toward sustainable building design, improving energy performance of existing buildings, and investing in energy attribute certificates to complement its decarbonization efforts.

State Street has set a 1.5 degree Celsius-aligned absolute GHG reduction target for 2030 to mitigate emissions from its operations. To help reduce its own footprint, State Street also invests in energy attribute certificates to address its Scope 2 market-based emissions on an annual basis, thereby reducing its overall emissions.

For details of methodology and complete inventory of operational greenhouse gas emissions, refer to the State Street 2024 Sustainability Report.

Climate-Related Risks to Our Business and Strategy

We have identified the following climate-related risks as potentially impactful to our business.

Figure 7
Potential Climate-Related Risks to Our Business and Strategy

Risk Type	**Strategic**
Description	Risks related to: • Our ability to execute a long-term plan of action to achieve a particular goal, set of goals, or objectives, and that actions and reactions of State Street Corporation ("State Street") are not competitive in the business environment. • Our ability to maintain or grow business operations, such as achieving revenue targets / client volumes, maintaining profit margins, effectively managing expenses, or making the right business investments.
Examples of Risks Posed by Climate Change	• Inability to achieve our strategic plans due to dependency on and uncertainty of climate policy development • Inconsistency of climate commitments and misaligned strategies across business lines • Our climate / sustainable investment products may be deemed less attractive or more complex than peers' • Divergence in client demand for climate / sustainable investment products
Risk Mitigants	• Prioritization of sound risk management practices, including for climate-related risks • Engagement with industry bodies and regulators on climate policy development • Regular client engagement to understand and meet expectations
Our Approach	Sustainability risk is considered a strategic risk in our Material Risk Identification ("MRI") process, which utilizes a bottom-up approach to identify the most significant risk exposures, irrespective of their likelihood or frequency, and consider climate risk-related drivers through their impact to our broader inventory of material risks. State Street continues to engage and participate in industry organizations with respect to standards-setting, improving disclosures, and contributing to research. We actively engage with clients, maintain a pipeline for business-at-risk, and continuously monitor any feedback we receive from clients.

Risk Type	Model
Description	Model risk describes the potential for adverse consequences, including financial loss, from decisions based on incorrect or misused models. This risk may result from the failure of controls throughout the model life cycle, leading to inaccurate models or inappropriate use or interpretation of results, as well as from inherent model sensitivity due to uncertainty in the modeled environment.
Examples of Risks Posed by Climate Change	Climate models are heavily dependent on assumptions and varied methodologies followed by vendors, thus risks can arise from climate data quantification, including divergent coverage and varied data treatments.
Risk Mitigants	Robust model validation capabilities and processes can help mitigate risk related to climate models.
Our Approach	State Street's Model Risk Management (MRM) framework ensures that model risk is identified, assessed, mitigated, and monitored over time. Independent model validation is a formal, structured process, applied to all models including climate models, intended to determine whether a model has been developed and implemented consistent with its design objectives and business uses and has an ongoing monitoring plan in place.

To address these and other related risks, we have incorporated climate considerations into our business strategy and planning in the following ways (note, the list below is not exhaustive):

- **Enhancing our product offerings** We aim to continue developing our product pipeline to meet market demand by providing investment strategies and other offerings that help clients identify and maximize climate-related opportunities and achieve their sustainability objectives and investment goals.

- **Performing scenario analysis** Scenario analysis is core to State Street's approach to risk management, including for assessing and managing risks from climate-related factors. Over the past several years, in line with sound risk management practices and regulatory expectations, State Street's approach to climate-risk related scenario analysis has continued to develop and evolve. For financial risks, results suggest that under extremely stressful assumptions, climate-related risk drivers could have non-negligible impacts on key input factors in loss modeling, and expected credit losses remained limited given the strong fundamental credit quality of the financial exposures. For non-financial risks, subject-matter experts ultimately determined that the risk of loss or interruption of service would be primarily driven by unanticipated gaps in our business continuity planning, acknowledging that such planning must continue to evolve to take into account the changing severity or frequency of climate-driven events, should these shifts impact the sufficiency of measures currently in place.

  — In 2023, State Street Global Advisors conducted a firmwide climate-related scenario analysis exercise across all asset classes, where data was available, to attempt to understand potential climate-related transition risk under different scenarios. The scenario analysis was performed using three scenarios developed by the Network for Greening the Financial System (NGFS). These scenarios included orderly, disorderly, and hot house world, and we leveraged MSCI's dataset to perform this analysis. The scenarios were selected based on data availability and relevancy, as we expect transition risk of climate to likely manifest itself sooner than physical risk. Though climate scenario analysis is not predictive of the future, we see this as a tool to help us understand the implications of possible climate pathways. While we conducted the scenario analysis and assessed the resilience of our overall investment strategy as represented by our total entity book of business, where data was available, it is important to note that, as an index manager, we do not make investment decisions based on the results of this analysis. Accordingly, this is not an annually recurring exercise. We conducted this exercise at the entity-level, and we also have expanded our data capabilities to perform ad hoc scenario analyses at the fund level.

- **Meeting regulatory requirements** State Street Global Advisors monitors the regulatory environment and has put programs in place to address regulatory change and implementation, including climate-related requirements. Additionally, we have established content creation guidelines and implemented a content compliance review process for all materials, inclusive of climate-related content, to mitigate regulatory and reputational risk arising from our activity and/ or disclosure, including the risk of greenwashing. We also have a business team dedicated to advancing the firm's efforts to meet regulatory requirements and other reporting obligations related to sustainable investing and stewardship matters, including supporting the firm's sustainable investing governance framework and sustainable investing policies, procedures, and controls.

- **Protecting the resiliency of our physical infrastructure** State Street Global Advisors co-locates with State Street, and State Street's business depends upon maintaining a robust and resilient physical infrastructure across global locations that can handle the impacts of a changing climate. State Street incorporates potential climate impacts in business continuity planning and considers longer-term climate patterns in its location strategy and operational resiliency planning.

- **Reducing emissions** In 2022, State Street strengthened its science-based Scope 1 and 2 emissions reduction targets to align with a 1.5-degree scenario from its prior well below 2-degree level. As of 2024, State Street has reduced its global Scope 1 and 2 carbon footprints by 31% (relative to its 2019 base year level). These reductions are largely the result of right sizing State Street's real estate portfolio to accommodate a hybrid workforce, selecting new building locations that are more energy efficient, and realizing energy savings from prior projects. These programs include the optimization of State Street's IT hardware and installation of onsite electricity generation (e.g., solar array). To help reduce its own footprint, State Street also invests in energy attribute certificates to address its Scope 2 market-based emissions on an annual basis, thereby reducing its overall emissions.

Risk Management

A robust approach to risk management is critical to enable effective delivery of our products and services. We believe climate change may be a financial risk to our clients and to our business. Therefore, we recognize the importance of integrating climate risk into our risk management framework. State Street Global Advisors' Risk Management team is part of State Street's Enterprise Risk Management organization, and we draw on enterprise risk processes and frameworks to aim for consistency in our approach.

State Street manages climate-related risk considerations in alignment with its Enterprise Risk Management Framework, incorporating climate-related risk issues and impacts into its management of existing risk types, financial and non-financial. State Street's Climate Risk Management Program uses a variety of existing processes, tools, and dedicated approaches to focus on identification, measurement, and management of climate-related risk drivers to help us understand our vulnerabilities and address them, where material.

State Street's established process for risk identification, the Material Risk Identification (MRI) process, utilizes a bottom-up approach to identify the firm's most significant risk exposures, focused on the risks that can have a material impact on the firm.

The identification of climate-related risks is integrated into the MRI process, with climate-related risks considered as drivers for our material risks. Climate risk-related drivers can impact these risks, including financial risks such as credit risk or liquidity risk, and non-financial risks such as operational risk or compliance risk, through the two transmission channels described previously, Physical Risk and Transition Risk.

In 2023, State Street developed a methodology to quantify the likelihood and impact of climate risk-related drivers previously identified, enhancing our ability to determine the potential materiality of these drivers. Results indicate that direct impacts to State Street from climate risk-related drivers are limited, in keeping with State Street's role as a global custody bank, which is primarily focused on providing financial services for its institutional investor clients. However, given a developing regulatory environment, the potential impacts from climate risk-related drivers may be more notable for compliance and regulatory risk.

Identifying and Assessing Climate-Related Risks to Clients

State Street Global Advisors' business model informs our approach to risk identification and assessment. As a large manager of index assets, we have historically thought of risk management in indexed products in the context of tracking error to the index. While that remains true, we have also enhanced our processes, where appropriate, to establish sustainability and climate reporting on key climate metrics for certain strategies.

The Investment Risk Management team is responsible for independently monitoring investment risk exposures to ensure that risk exposure levels and contributions are consistent with portfolio-specific guidelines and return expectations. The team also highlights intentional and unintentional exposures, inclusive of climate-related risks for strategies with a climate-related objective.

Managing Climate-Related Risks to Clients

For risks in client portfolios, our investment teams are the primary risk owners responsible for evaluating environmental and climate-related risks and opportunities if relevant to the investment portfolio.

The Investment Strategy Review Group seeks to ensure continued efficacy of investment strategies, consistent with client expectations and with consistent outcomes across portfolios and through time. The Investment Strategy Review Group aims to review comprehensively all aspects of the firm's investment strategies (including majority owned affiliate strategies) with specific emphasis on risk, return, and sustainability characteristics, when relevant to the strategy, and performance evaluation. In addition, we aim to help clients manage risks through:

- **Publishing thought leadership** We publish thought leadership to help inform our portfolio companies and educate broader market participants about our perspectives on sustainability issues, including climate risks and opportunities. Sample topics are highlighted in figure 8 below.
- **Interacting with industry groups** State Street engages with regulators, policy makers, and standards-setters to enhance public disclosures.
- **Engaging in climate stewardship** Our Asset Stewardship program has conducted engagements on the topic of climate for several years. Details are provided in the next section.

Figure 8
Climate-Related Thought Leadership Example Topics

Integration of Climate in the Investment Process	• The Climate Files: Case Studies on Climate-Thematic Equity Investment Solutions • Investing in the Future • The Challenging Sustainable Investing Landscape • Achieving New Frontiers: The Role of Bonds in Sustainable Investing
General Sustainable Investing Insights (State Street Corporation)	• Corporate alignment with the EU taxonomy for sustainable activities • Navigating the green tightrope: Carbon offsets, decarbonization and risk

Asset Stewardship

At State Street Global Advisors, we take our fiduciary duties as an asset manager very seriously. One of our fiduciary obligations to our clients is to always act in their best interests, including when making investment decisions, voting proxies, and conducting other shareholder engagement activities. We focus on risks and opportunities that may impact long-term value creation for our clients. We rely on the elected representatives of the companies in which we invest — the board of directors — to oversee these firms' strategies.

Thus, our Asset Stewardship program is focused on engagement with these portfolio companies to promote robust governance, including board oversight and disclosures. Using our Global Proxy Voting and Engagement Policy as a foundation, we vote and engage with companies in a manner that we believe will most likely protect and promote the long-term economic value of client investments.

Engagement

Engagement is an important part of our Asset Stewardship program. We assess a range of risk drivers, including those relating to environmental factors, and seek to understand how companies address these risks and maintain sound governance and oversight practices. We view our engagements with portfolio companies as ongoing conversations, and the dialogue is intended to be interactive and evidence-based.

For companies that have identified climate-related risks or opportunities as material to their business, we expect the company to provide disclosure on climate-related risks and opportunities relevant to their businesses in line with applicable local regulatory requirements and any voluntary standards and frameworks adopted by the company. Additionally, where a company is among the highest emitters, we consider whether the company discloses:

- Scenario-planning on relevant risk assessment and strategic planning processes;
- The company's plans to achieve stated climate-related targets, if any, including information on timelines and expected emissions reductions; and
- Incorporation of relevant climate considerations in financial planning and/or capital allocation decisions.

In 2024, we had over 300 engagements with portfolio companies on climate-related risk management. Our engagements focus on understanding how companies are both managing climate-related risks that are material to their business and addressing climate as an opportunity. We have held more than 1,600 climate-related engagements since 2014.

Figure 9
Environmental Engagement Data

350+	300+	1,600+
Environmental Engagements in 2024	Climate-focused Engagements in 2024	Climate-focused Engagements since 2014

Source: State Street Global Advisors, 31 December 2024.

Climate Transition Plan Disclosure for Companies that have Adopted a Climate Transition Plan

We seek to understand and assess how companies are effectively managing the climate-related risks and opportunities that they have identified as material to their business, including those presented by the transition to a lower-carbon economy. In 2022, we began conducting engagements with companies that have adopted climate transition plans[9] to discuss industry guidance and to better understand the risks and opportunities companies are facing. We have continued these thematic Climate Transition Plan Disclosure engagements, conducting 117 in 2024.

Figure 10

Climate-Related Risk Management Engagement Examples

Company	**Endeavour Group Ltd.**
Geography and Sector	Australia GICS Sector: Consumer Staples
Key Topics	Climate Risk Management — Climate Transition Plan Disclosure Nature-related Risk Management
Asset Class	Equity
Key Resolutions	N/A
Background	In 2024, we engaged companies in the Consumer Staples sector as part of our thematic engagements on Climate Transition Plan Disclosure and Climate- and Nature-related Risks in the Food Value Chain. Initiated in 2024, the work focused on companies across segments of the food value chain — including the fertilizers and agricultural chemicals, agricultural products, packaged food, and food retail subindustries, among others — to better understand how companies are responding to these risks and opportunities and to identify best practices on these topics.
Activity	We engaged Endeavour Group Ltd. ("Endeavour Group") to discuss several environmental topics identified as material by the company including climate and GHG emissions, packaging and waste, and water. The company discussed its net zero ambition and related climate strategy including progress against climate-related targets and the challenges the company currently faces related to the measurement of its Scope 3 emissions footprint. In addition, we discussed the company's efforts to manage water use, to reduce plastic use, and to increase the recycled content in wine bottles. The company described the progress it has made toward its plastics-related targets and potential opportunities for further industry collaboration to reduce plastics-related risks. The company has disclosed plans to assess water usage and improve water efficiency at all of its sites in the coming years.
Outcome	We provided our views on best practices with respect to company disclosures, including our Climate Transition Plan Disclosure assessment criteria. These include disclosing interim climate-related targets to accompany its long-term net zero ambition and providing additional details on its strategy to meet its ambition. We also discussed best practices regarding water-related disclosures as the company builds out its nature-related disclosure regime.
Company	**Unilever plc**
Geography and Sector	United Kingdom GICS Sector: Consumer Staples
Key Topics	Climate Risk Management
Asset Class	Equity
Key Resolutions	N/A
Background	Our assessment criteria for companies that have adopted a climate transition plan are outlined in our Global Proxy Voting and Engagement Policy. During our engagements, we aim to understand how these companies are managing relevant climate-related transition risks and their plans to support their stated net zero ambitions and associated climate transition plans.
Activity	In Q4 2023, we engaged Unilever Plc ("Unilever") to discuss the Climate Transition Action Plan adopted by the company to support its net zero ambition and to discuss the company's approach to managing climate-related risks, which have been identified as material by the company. We aimed to better understand the company's approach to climate-related target setting and the challenges and opportunities associated with its various efforts to manage GHG emissions both in its direct operations and throughout the value chain. We also discussed best practice disclosure for assessing and managing potential social risks and opportunities related to its climate transition plan.[10]
Outcome	In Q1 2024, Unilever published an updated 2024 Climate Transition Action Plan. The company enhanced disclosure on its decarbonization strategy and shared its plan to support its 2030 Scope 3 GHG targets with nine priority action areas. Unilever disclosed the estimated emissions reductions from each action in the plan and shared progress updates on several actions related to supplier engagement, forest-risk commodities, and packaging, among others. Unilever also enhanced disclosure on planned capital investment to support the plan, such as investments in reducing the company's direct emissions and in scaling up regenerative agriculture to address emissions throughout the value chain.

Environmental Shareholder Proposals

We support proposals that we believe are aligned with long-term shareholder value. Shareholder proposals at portfolio companies are evaluated on a case-by-case basis and in accordance with the principles described in our Global Proxy Voting and Engagement Policy. When assessing shareholder proposals, we consider whether the adoption of the resolution would promote long-term shareholder value in the context of our core governance principles of effective board oversight, disclosure, and shareholder protection.

We would consider supporting a shareholder proposal if: 1) the request is focused on enhanced disclosure of the company's governance and/or risk oversight, 2) the adoption of the request would protect our clients' interests as minority shareholders; or 3) for common proposal topics for which we have developed assessment criteria, the extent to which the request satisfies those criteria.

As our climate-related stewardship efforts evolve, we remain committed to thoughtful engagement and maintaining our disciplined approach to proxy voting.

For more information about our engagement and proxy voting, please refer to our 2024 Asset Stewardship Report.

Identifying and Assessing Climate-Related Risks to Our Business

We view climate change as an intersecting risk that may pose implications to our business. In alignment with our Parent company, we view risk identification as an iterative activity that includes inputs across the three lines of defense. We recognize sustainability risk, including climate, as a transversal risk in our Material Risk Identification process — which utilizes a bottom-up approach to identify our most significant risk exposures, irrespective of their likelihood or frequency — and consider climate risk-related drivers through their impact to our broader inventory of material risks.

In June 2024, we conducted a third iteration of our annual State Street Global Advisors Climate Risk Workshop with the purpose of identifying key drivers of climate risks that could impact the firm's financial performance, operations, and franchise value. The workshop included participation from various teams across State Street Global Advisors and featured discussions on topics including the firm's strategy, the evolving regulatory landscape, and industry best practices related to climate and sustainability risk. Subsequently, the risk team updated the climate risk drivers mapping to the existing risk taxonomy.

To better identify and assess climate-related risks to our business, we performed a scenario analysis in 2023. In line with industry best practices, we leveraged three Network for Greening the Financial System (NGFS) scenarios, given the increasing adoption by global regulators and the granularity of data provided across a range of plausible scenarios. These scenarios are orderly, disorderly, and hot house world, and we leveraged MSCI's dataset to perform the analysis. We believe this analysis, although not predictive, is helpful for us to better understand the implications of different climate possibilities. While we conducted the scenario analysis and assessed the resilience of our overall investment strategy as represented by our total entity book of business, where data was available, it is important to note that we do not make investment decisions based on the results of this analysis.

Managing Climate-Related Risks to Our Business

State Street Global Advisors' risk function aligns with State Street Corporation's risk function in its approach to identifying, assessing, and monitoring risk. As such, we leverage the three lines of defense model to manage material risks, which may include climate-related risks, to the organization. Responsibility for risk oversight is allocated to ensure decisions are made at an appropriate level and are subject to robust and effective review and challenge.

Embedded in our risk management are the governance committees that oversee and manage our risks. Our committees and teams across the three lines of defense play important roles in identifying and managing our climate risks.

Governance

The Risk Committee of the State Street Board has responsibility for the material risk management components of State Street's sustainability obligations, initiatives, and activities.

Within State Street Global Advisors, oversight of sustainable investing and asset stewardship matters are integrated among the firm's committees and within the business.

The teams comprising our second line of defense — Risk and Compliance — establish and monitor adherence to the risk and control framework and create an additional layer of independence.

Risk Management, Compliance, and Audit

Risk Management Framework

In the normal course of State Street's business activities, it is exposed to a variety of risks, some inherent in the financial services industry, and others that are specific to State Street's business activities. The State Street risk management framework focuses on material risks. Many of these risks, as well as certain factors underlying each of them, could affect State Street's businesses and its consolidated financial statements, and are discussed in detail under "Risk Factors" in State Street's Form 10-K.

The identification, assessment, monitoring, mitigation, and reporting of risks are essential to State Street's financial performance and successful management of its businesses. Accordingly, the scope of State Street's business requires that it consider these risks as part of a comprehensive and well-integrated risk management function. These risks, if not effectively managed, can result in losses to State Street as well as erosion of its capital and damage to its reputation. State Street's approach to risk management, including Board and senior management oversight and a system of policies, procedures, limits, risk measurement, monitoring, and internal controls, allows for an assessment of risks within a framework for evaluating opportunities for the prudent use of capital that appropriately balances risk and return. State Street's objective is to optimize its returns while operating at a prudent level of risk. In support of this objective, State Street has instituted a risk appetite framework that aligns its business strategy and financial objectives with the level of risk that State Street is willing to incur.

Compliance Programs

State Street Global Advisors' Compliance team is part of State Street's Compliance organization, and we draw on enterprise programs and frameworks to aim for consistency in our approach. To address compliance risk[11] and the evolving regulatory landscape, the State Street Compliance Risk Management Policy and supporting framework ("Compliance Program") sets forth enterprise-wide standards for identifying, assessing, monitoring, and reporting on compliance risk.

The State Street Compliance Program applies a risk-based approach to ensure both management and control function resources are directed to those risks, regulations, and regulators that represent the greatest exposure and therefore require the greatest level of engagement. State Street's regulatory change management programs are designed to identify changes to the regulatory environment that impact State Street's legal entities, the products and services they provide, and the operations they conduct. Management and control functions work in concert to ensure that relevance and applicability to State Street are understood and that internal processes, procedures, and controls are designed to address changes in the external regulatory environment.

Corporate Audit

The third line of defense team — Corporate Audit — provides the Board and management with independent and objective assessments of the design and operating effectiveness of State Street's system of internal controls. Corporate Audit's assessments include internal controls over the Parent Company's financial and regulatory reporting, compliance with laws and regulations, compliance with significant corporate policies, and the effective management of risks faced by State Street in executing on its strategic and tactical operating plans. Corporate Audit applies a systematic, disciplined approach to evaluate and recommend improvements to the design and operating effectiveness of State Street's global risk management, internal control, and governance processes.

Climate Change Risks to Our Physical Assets and Operations

Physical climate risk, especially acute weather events, may impact both our physical assets and the services we provide to our clients around the world. We are committed to mitigating the effects to clients from any service interruptions, including those related to climate change.

To understand our operational vulnerabilities to climate factors, State Street, including State Street Global Advisors, regularly evaluates the exposure of our operations to changes in the physical environment. This includes assessing the frequency and severity of major weather events that may impact our operations, induce damage, disrupt our supply chain, or potentially hinder our ability to provide products or services.

We also assess the longer-term risks of climate change on our operational resiliency by mapping our key locations, infrastructure, and third parties against the critical services we provide for clients.

Our business continuity and disaster recovery programs are key to ensuring that we can absorb disruptions should they occur. These programs set standards that require recovery strategies to be put in place and regularly tested. These standards, by way of example, include consideration of attributes of the locations of our global workforce and related public infrastructure, and climate and geopolitical factors that could impact their work.

This continuous threat assessment and mitigating actions, coupled with regular incident and crisis management testing and exercises, help to ensure that operational resilience is continuously improved, responsive to changing inherent risks, and embedded as a key tenet of our daily operations. For more information, please refer to the State Street 2024 Sustainability Report.

Metrics and Targets

Metrics and targets play a critical role in assessing climate-related risks for some of our clients. We see climate metrics as useful inputs for understanding and disclosing climate-related risks, including in the TCFD-aligned reporting we provide to certain clients.

Assessing Climate-Related Risks and Opportunities for Clients

When requested by clients, we use a range of climate metrics across data providers in different applications as a part of our client reporting. These metrics include industry standards, such as carbon emissions data (absolute emissions, carbon intensity, carbon footprint, WACI), fossil fuel reserves, brown and green revenues, implied temperature rise, climate value at risk, and carbon risk ratings. We continue to evaluate the effectiveness of various metrics. Going forward, as transparency and reliability around climate data improves, we will assess and may report on additional climate metrics. The table below provides an overview of various climate metrics and how they can be associated with climate-related transition and physical risks and opportunities.

Figure 11 **Climate Data Toolbox for Quantitative Strategies**

Direction	Metric	Purpose	TCFD*		
			Transition Risk	Physical Risk	Opportunities
Backward Looking	**GHG Intensity** CO_2e Emissions per $M Revenues	A measure that considers a company's carbon emissions in relation to its output.	✓		
	Fossil Fuel Reserves Embedded CO_2e Emissions per EVIC	Connecting a company's operations to the risks of stranded assets and associated potential write offs.	✓		
	Brown Revenues % Revenues from Fossil Fuel-Related Activities	Exposure to activities associated with the extraction and direct use of fossil fuel sources, as well as supporting activities.	✓		
	Green Revenues % Revenues from Low-Carbon Tech	Exposure to global companies engaged in the transition to a green economy.			✓
	Green Bonds Verified by Climate Bonds Initiative	Investment in verified green bonds.			✓
Foward Looking (New)	**Climate Beta** Sensitivity to Brown-Green Portfolio	A capital market-based metric measuring sensitivity to climate risks and opportunities.	✓	✓	✓
	Implied Temperature Rise °C Implied Temperature in 2050	Provides an indication of how companies and investment portfolios align to global climate targets.	✓		
	Climate VaR % Financial Value at Risk	A bottom-up measure designed to provide a forward-looking and return-based valuation assessment to measure climate-related risks and opportunities.	✓	✓	✓
	Carbon Risk Rating Score on Climate Preparedness	A bottom-up measure assessing climate risks and opportunities including their carbon footprint, and the management of their industry-specific carbon risks.	✓		✓

Source: MSCI, ISS, TCFD and State Street Global Advisors. Chart for illustrative purposes.
* Based on the TCFD's climate-related risks, opportunities, and financial impact in the TCFD's Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures, 2017.

Sample Analysis

As an example of analytics that we can offer our clients, below is a selection of climate-related data points that may help clients assess climate-related risks and opportunities.

In this analysis, we provide figures for commonly used listed equity indices like the MSCI All Country World Index, the MSCI World Index, and the MSCI Emerging Markets Index. For ease of comparison, we assume that $1 billion is invested in each as of 31 December 2024. In the following sections, we provide analysis covering (i) carbon emissions metrics, (ii) Implied Temperature Rise (ITR), and (iii) Climate Value-at-Risk (CVaR). These analyses describe portfolios using different lenses:

- Carbon emissions-related analytics may be used by investors to understand the current emissions exposure of their portfolios.
- Investors may use the ITR[12] statistics to obtain an indication of the potential trajectory of future emissions associated with their portfolio.
- CVaR may be used by investors to understand quantitative risk and return implications under different future climate scenarios and key climate-related risk and opportunity pillars.

Additionally, some investors may also use these analytics — or others which are not presented here — to make investment decisions based on potential risk and return considerations.

Carbon Emission Metrics and Implied Temperature Rise

One lens we can provide to clients is information about the current emissions exposure of their portfolios.

Figure 12
Carbon Emissions and Implied Temperature Rise

Data Point	Units	MSCI ACWI	MSCI World	MSCI EM
Financed Emissions (Scope 1+2)	Tonnes of CO_2-eq	41,713.3	33,403.2	117,525.3
Financed Emissions (Scope 3)	Tonnes of CO_2-eq	286,178.0	269,324.3	439,931.6
Financed Emissions Intensity (Scope 1+2)	Tonnes of CO_2-eq per million $ invested	41.7	33.4	117.5
Financed Emissions Intensity (Scope 3)	Tonnes of CO_2-eq per million $ invested	286.2	269.3	439.9
Wtd. Avg. Carbon Intensity (Scope 1+2)	Tonnes of CO_2-eq per million $ revenues	113.9	92.4	310.3
Wtd. Avg. Carbon Intensity (Scope 3)	Tonnes of CO_2-eq per million $ revenues	686.7	662.3	910.0
Implied Temperature Rise	Degrees Celsius	2.5	2.5	2.9

Source: State Street Global Advisors, MSCI, Factset, 31 December 2024. Financed emissions are attributed using enterprise value including cash, as recommended by the PCAF Standard.

Climate Value-at-Risk

We can also provide clients with portfolio-level data related to climate scenario analysis, making use of scenarios developed by the Network for Greening the Financial System (NGFS) and company-level CVaR data provided by MSCI based on selected NGFS scenarios.

The NGFS scenarios were developed to provide a common starting point for analyzing climate risks to the economy and financial system. It is important to note that the NGFS scenarios are not forecasts; instead, they aim to explore the bookends of plausible futures (neither the most probable, nor the most desirable) for financial risk assessment.

To reflect the uncertainty inherent to modelling climate-related macroeconomic and financial risks, the NGFS scenarios use different models and explore a wide range of scenarios across regions and sectors. Scenarios differ markedly in their physical and transition impacts, with significant uncertainty in the size of the estimates and variation across regions.

The six NGFS scenarios cover the following dimensions:

- **Orderly** scenarios assume climate policies are introduced early and become gradually more stringent. Both physical and transition risks are relatively subdued.

- **Disorderly** scenarios explore higher transition risk due to policies being delayed or divergent across countries and sectors. For example, carbon prices are typically higher for a given temperature outcome.

- **Hot house world** scenarios assume that some climate policies are implemented in some jurisdictions, but global efforts are insufficient to halt significant global warming. The scenarios result in severe physical risk including irreversible impacts like sea-level rise.

See the NGFS Scenario Portal for more details on NGFS climate scenarios.

Below, we focus on the following three scenarios to cover different temperature outcomes and policy implementations, utilizing outputs based on the REMIND-MAgPIE model:[13] The selection of three particular scenarios is purely for illustrative purposes; it is possible to choose any other NGFS scenarios for this purpose as well.

- **Orderly transition scenario** Net Zero 2050 (1.5°C). This scenario limits global warming to 1.5°C through stringent climate policies and innovation, reaching global net zero CO_2 emissions around 2050. Some jurisdictions such as the US, EU, UK, Canada, Australia, and Japan reach net zero for all GHGs.

- **Disorderly transition scenario** Delayed transition (2°C). Delayed transition assumes annual emissions do not decrease until 2030. Strong policies are needed to limit warming to below 2°C. Negative emissions are limited.

- **Hot house world scenario** Nationally Determined Contributions (NDCs, 3°C). The NDC scenario includes all nationally pledged targets even if not yet backed up by implemented effective policies.

These scenarios are based on complex modelling of the Earth's physical and socioeconomic systems, and it is considered challenging to convert these into quantitative return implications for portfolios. For this purpose, we utilize MSCI's proprietary CVaR dataset that converts these climate scenarios into company-level impacts at a 15-year time horizon (expressed as a percentage of a company's market value). It should be noted that MSCI CVaR data is based on several assumptions made by MSCI. Scenario analysis methodologies continue to evolve, and data presented here is subject to change in the future. As described above, climate scenario analysis is provided to highlight potential climate risks and their underlying drivers; however, there is considerable uncertainty related to these estimates, and specific risks vary under different scenarios.

Based on the MSCI CVaR dataset, we provide quantitative examples of three key pillars: *policy risks*, which generally correlate to transition risks, *technology opportunities*, which generally correlate to transition opportunities, and *physical risks*. It should be noted that while the figures presented here cover several pillars of potential climate-related risks, this may not represent a complete picture of all such risks.

The figures in the below table represent each index's CVaR under three different NGFS scenarios and three underlying CVaR pillars, all expressed as a % of index value.

Figure 13
Scenario Analysis

Scenario	Metrics: CVaR	MSCI ACWI	MSCI World	MSCI EM
1.5°C NGFS Orderly	Policy Risk	-7.9%	-7.4%	-12.1%
	Technology Opportunities	1.0	1.0	1.1
	Physical Risk	-0.8	-0.7	-1.6
2° C NGFS Disorderly	Policy Risk	-3.4	-3.2	-5.3
	Technology Opportunities	0.3	0.3	0.3
	Physical Risk	-1.1	-1.0	-2.5
3°C NGFS NDC	Policy Risk	-1.6	-1.6	-2.0
	Technology Opportunities	0.2	0.2	0.2
	Physical Risk	-1.5	-1.3	-3.3

Source: State Street Global Advisors, MSCI, Factset, 31 December 2024.

Metrics and Targets Related to Our Business

Scope 1, 2, and 3 Emissions Disclosures

Our Parent's Scope 1, Scope 2, and certain categories of Scope 3 emissions are tracked and reported as part of their TCFD disclosures. State Street Global Advisors does not report Scope 3 emissions related to its assets under management (Category 15). Many aspects of the calculation and attribution of GHG emissions disclosures are in development, and there continue to be significant practical challenges. There is an inherent timing lag in the availability of Scope 3 data, given the interdependence on Scopes 1 and 2, inconsistent Scope 3 estimation measurements, as well as wider technical issues such as "double counting" by asset owners and asset managers. Consensus around Scope 3 reporting parameters is still emerging, and further industry work should be done to determine the value and feasibility of calculating and disclosing Scope 3 GHG emissions for the benefit of investors and for the usefulness of investment decision making.

Sustainability-Related Business Indicators

The below figure provides select business indicators across sustainable investing and asset stewardship. These indicators represent some areas the firm monitors to view how we are serving clients with climate-related investment goals, as well as how we are managing climate-related risks and opportunities through our asset stewardship program.

Figure 14
Select 2024 Business Indicators

Sustainable Investing AUM[14] ($B)	Approx. $872
Number of Sustainable Investing Funds[15]	Approx. 180
Climate-related AUM[16] ($B)	Approx. $119
Number of Environmental Shareholder Proposals Voted in 2024[17]	Approx. 200
Number of Environmental Engagements in 2024	350+
Number of Climate-focused Engagements in 2024	300+

Source: State Street Global Advisors, 31 December 2024.

Appendix: State Street Global Advisors UK Domiciled Legal Entity TCFD Disclosures

State Street Global Advisors Limited ("SSGAL"), Managed Pension Funds Limited ("MPFL"), and State Street Unit Trust Management Limited ("SSUTML") (together, the "State Street Global Advisors UK Entities") each place reliance on the climate-related financial disclosures contained in the State Street Global Advisors group-level TCFD report, which applies in respect of the activities of State Street Global Advisors globally.

State Street Global Advisors Limited A limited liability company organized under the laws of England and Wales; authorized and regulated by the Financial Conduct Authority ("FCA").

Managed Pension Funds Limited A limited liability company organized under the laws of England and Wales; authorized by the Prudential Regulation Authority ("PRA") and regulated by the FCA and the PRA.

State Street Unit Trust Management Limited A limited liability company organized under the laws of England and Wales; authorized and regulated by the FCA.

The disclosures made in the State Street Global Advisors group level TCFD report and this Appendix are provided by the above State Street Global Advisors UK Entities pursuant to the reporting requirements set out in Chapter 2 of the FCA ESG sourcebook.

Governance Arrangements The Boards of the State Street Global Advisors UK Entities each place reliance on the SSGA EMEA governance framework to oversee risk and facilitate effective oversight of their respective business functions.

This governance framework includes the UK Senior Management Committee ("UK SMC"), which includes senior employees from SSGA's business and corporate support teams, that manage and oversee the business conducted by SSGA in the UK.

The UK SMC is, in turn, supported directly by the European Risk Committee and the following SSGA committee architecture:

Figure 15
Governance Arrangements

Committee	Responsibility
Global Fiduciary and Conduct Committee	Responsible for addressing fiduciary and business conduct matters across SSGA and oversight of SSGA's collective investment funds
Global Risk Committee	Responsible for ensuring the alignment of strategy, risk appetite, and risk management standards
Global Product and Investment Committee (including the SSGA EMEA Product Committee)	Responsible for SSGA's investment philosophy and overseeing the investment process, investment strategies, approach to new markets and instruments, relationships with counterparties, and the creation of new products based on SSGA's investment strategies

The Boards of the SSGA UK Entities delegate to the UK Remuneration Committee to oversee remuneration arrangements and to the SSGA EMEA Capital and Liquidity Steering Committee to oversee capital and liquidity matters.

SSGAL also refers to the State Street UK Country Committee ("UK Country Committee") which provides oversight of activities for all businesses operating in the UK, with a particular focus on transversal risks and issues, such as IT resiliency, corporate continuity, and country-level HR matters.

MPFL and SSUTML Working Groups

In addition to being supported by the committees referred to above, the MPFL Board and SSUTML Board have established, respectively, the MPFL and SSUTML joint Working Group to oversee day to day management activities of MPFL and SSUTML. The Working Groups are composed of the CEO of MPFL and SSUTML (as applicable) together with other senior individuals representing the major business lines and relevant professional service functions.

Alex Castle
CEO of State Street Global Advisors Limited

Rebecca Bridger
CEO of Managed Pension Funds Limited and State Street Unit Trust Management Limited

Endnotes

1 This figure is presented as of 31 December 2024 and includes ETF AUM of $1,577.74 billion USD of which approximately $82.19 billion USD in gold assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated. Please note all AUM is unaudited.

2 We do not require companies to adopt net zero ambitions or join relevant industry initiatives. For companies that have adopted a net zero ambition and/or climate transition plan or are in the process of developing a climate transition plan and request our feedback, we may discuss our disclosure criteria and provide guidance accordingly.

3 "Eligible funds" or "eligible index equity assets" include all fund and client accounts managed by State Street Global Advisors that employ an equity index strategy and which have granted, or are able to grant, proxy voting authority to State Street Global Advisors.

4 See note 2.

5 For more information about the legal entities for which TCFD reporting is a regulatory requirement, please refer to the appendix.

6 State Street Global Advisors identifies sustainable investing funds as those that utilize an investment strategy that falls into one of the following three categories, which are not mutually exclusive: Negative Sustainable Investing Screen, Positive Sustainable Investing Screen, Third-Party ESG/Sustainable Investing Index Investment Strategies. The methodology used by State Street Global Advisors to identify sustainable investing accounts may differ from the methodology used under certain classification and disclosure regulatory regimes.

7 Estimated and unaudited State Street Global Advisors sustainable investing assets under management as of 31 December 2024, are approximately $872 billion as calculated by State Street Global Advisors for Sustainable Investing Accounts. State Street Global Advisors defines a "Sustainable Investing Account" as a client account (i.e., fund or separately managed account managed by State Street Global Advisors) that utilizes an investment strategy that falls into one of the following three categories, which are not mutually exclusive:

1. Negative Sustainable Investing Screen, as defined below

2. Positive Sustainable Investing Screen, as defined below

3. Third-Party ESG/Sustainable Investing Index Investment Strategies, as defined below

1. Negative Sustainable Investing Screen: A "Negative Sustainable Investing Screen" (also known as an exclusionary screen) is a screen incorporated into the investment strategy utilized for the management of a portfolio that results in the exclusion from the portfolio of securities of issuers that fail to satisfy certain sustainability criteria (e.g., because the issuers compromise part of a certain sector or industry). Negative Sustainable Investing Screens include but are not limited to State Street Global Advisors Point of View (POV) screens, norms-based screens, Socially Responsible Investing (SRI) screens, and screens provided by other third parties (including client-directed screens). Where a client's investment agreement and/or investment guidelines specify, or the client otherwise communicates to State Street Global Advisors that the application of a negative screen is to satisfy a purpose other than sustainable investing (e.g., diversification), such screens do not qualify as a Negative Sustainable Investing Screen. Note: There are several ways in which a company can be considered to be involved in a particular product or service, and a screening methodology, along with coverage limitations, may result in a negatively screened portfolio having some exposure to the screened criteria.

2. Positive Sustainable Investing Screen: A "Positive Sustainable Investing Screen" is a screen incorporated into the investment strategy utilized for the management of a portfolio that intentionally includes securities of issuers identified as having positive sustainability characteristics relative to the issuer's industry or sector peers. Positive Sustainable Investing Screens target an improvement of a portfolio's sustainability profile as compared to a benchmark or stated investment guideline, measured by a sustainability score or a sustainability metric, or invest only in issuers within an industry or sector that score higher within that industry or sector than the issuer's peers.

3. Third-Party ESG/Sustainable Investing Index Investment Strategies: An index-tracking client account qualifies as a Sustainable Investing Account if it tracks a Third-Party ESG/Sustainable Investing Index. An index is deemed to be a "Third-Party ESG/Sustainable Investing Index" if the index methodology incorporates ESG/sustainability factors or characteristics that are utilized by the third-party index provider to determine which securities and/or how much in weight are included as index constituents. A client account that uses a Third-Party ESG/Sustainable Investing Index as a reference benchmark for performance or reporting purposes, but does not seek to track such index as an investment strategy, does not qualify as a Sustainable Investing Account unless it meets at least one of the first two prongs of the definition of "Sustainable Investing Account" set forth above.

The methodology used by State Street Global Advisors to identify sustainable investing AUM may differ from the methodology used under certain classification and disclosure regulatory regimes. State Street Global Advisors makes no representation that an account identified as a "Sustainable Investing Account" satisfies all Sustainable Investing categories under the State Street Global Advisors Sustainable Investing Account Identification Policy. A Sustainable Investing Account may satisfy only one of the three categories described above, and within that category it may incorporate a single sustainability factor or exposure. State Street Global Advisors' Sustainable Investing AUM may include AUM of client accounts for which a negative screen is applied at the request of the client for regulatory or other purposes, which may not be disclosed to State Street Global Advisors, that State Street Global Advisors believes results in the exclusion from the client's portfolio of securities based on sustainability criteria.

8 Estimated and unaudited State Street Global Advisors Climate-Related Assets Under Management as of 31 December 2024 are $119 billion. State Street Global Advisors' "Climate-Related Assets Under Management" includes Sustainable Investing Accounts (defined below) that meet the following criteria, which are not mutually exclusive:

1. Positive Sustainable Investing Screens that target an improvement of a portfolio's Climate Profile.

2. Third-Party ESG/Sustainable Investing Index Investment Strategies if the index methodology incorporates a Positive Sustainable Investing Screen that targets an improvement of a portfolio's Climate Profile.

"Climate Profiles" include but are not limited to climate change, climate transition (including EU CTB indices), Paris Agreement alignment (including EU PAB indices), carbon emissions reduction and carbon reserve reduction.

SSGA defines a "Sustainable Investing Account" according to the criteria in note 7.

The methodology used by SSGA to identify Sustainable Investing AUM and Climate-Related Themes may differ from the methodology used under certain classification and disclosure regulatory regimes. SSGA makes no representation that an account identified as a "Sustainable Investing Account" or "Climate-Related" satisfies all Sustainable Investing categories or incorporates all Climate Profiles under the SSGA Sustainable Investing Account Identification Policy. A Sustainable Investing Account may satisfy only one of the three categories described above, and a Climate-Related Account may incorporate a single Climate-Related factor or exposure. Climate-Related AUM may include exposure to fossil fuels.

9 See note 2.

10 Social risks and opportunities refer to the potential impacts on stakeholders, such as a company's workforce, customers, communities, or supply chains related to the company's climate transition plan, which may give rise to risks or opportunities related to human capital management, human rights, and economic development, among others.

11 Compliance risk is defined as the risk of legal or regulatory sanctions, material financial loss, or loss to reputation resulting from failure to comply with regulatory obligations (i.e., applicable final rules, laws, statutes and regulations, formal regulatory guidance, and self-regulatory organization standards that regulate State Street's legal entities, financial services activities and functions that support those activities).

12 As per MSCI, a portfolio's Implied Temperature Rise (ITR) measures, in aggregate, a portfolio's temperature alignment (in degrees Celsius) to keeping the world's temperature rise to 2°C by 2100. The calculation uses an aggregated budget approach that compares the sum of financed projected carbon emissions against the sum of financed carbon emission budgets for the underlying portfolio holdings. This provides an estimation of the total carbon budget under/overshoot of the portfolio. The total portfolio carbon emission over/undershoot is then converted to a degree of temperature rise using the science-based ratio approach of Transient Climate Response to Cumulative Carbon Emissions (TCRE). For example, an ITR of 2.5°C assigned to a given portfolio would indicate that the portfolio is exceeding its fair share of the global carbon budget, and that if everyone exceeded their fair shares by a similar proportion, we would end up in a world with 2.5°C of warming.

13 The Regional Model of Investment and Development (REMIND)-Model of Agricultural Production and its Impacts on the Environment (MAgPIE) is an integrated assessment model built by the Potsdam Institut for Klimafolgenforschung (PIK) for the purpose of climate modeling.

14 See note 7.

15 See note 6.

16 See note 8.

17 Source: State Street Global Advisors, as of 31 December 2024. Includes environmental shareholder proposals per ISS' proposal code categorization between 1 January 2024 – 31 December 2024.

About State Street Global Advisors

For over four decades, State Street Global Advisors has served the world's governments, institutions, and financial advisors. With a rigorous, risk-aware approach built on research, analysis, and market-tested experience, and as pioneers in index and ETF investing, we are always inventing new ways to invest. As a result, we have become the world's fourth-largest asset manager* with US $4.72 trillion† under our care.

* Pensions & Investments Research Center, as of December 31, 2023.
†This figure is presented as of December 31, 2024 and includes ETF AUM of $1,577.74 billion USD of which approximately $82.19 billion USD in gold assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated. Please note all AUM is unaudited.

ssga.com

Marketing communication

State Street Global Advisors Worldwide Entities

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