Research Report
ESG

Q2 2022

TCFD Report

STATE STREET GLOBAL ADVISORS

Contents

Executive Statement

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In my January letter to the boards of portfolio companies, I outlined our 2022 proxy voting agenda. I emphasized that climate change is disrupting economies worldwide and threatening corporate resiliency. As such, climate change is one of our top stewardship priorities and likely will be for the foreseeable future. Since my January letter, our focus on climate change and its potential effect on long-term value creation has only grown, as regulators move to make reporting about the financial impacts of climate change a regular part of corporate financial reporting.

The economic and resiliency impacts of climate change on companies drives our analysis of financial risks to our clients' portfolios. Physical changes in the climate are observable and measurable, as are the repercussions of those changes across supply chains and economies. Likewise, public policies to reduce greenhouse gas ("GHG") emissions, stimulate markets for low-carbon offerings, and create transparency in emissions reporting are evident globally and appear to be accelerating. Technologies for decarbonizing our economy are already driving value creation and value destruction, and they will continue to do so.

As a fiduciary and as a long-term investor, we take note of factors that drive our clients' risk-adjusted returns in meaningful ways. That is why we are reporting on our climate-related risks, opportunities, and management. This reporting benefits our clients, our own people, and the investment industry as a whole, as well as meeting the expectation we have set for our portfolio companies.

This report explains how we are going about climate-change risk analysis and management through corporate engagement and our net zero commitment. Supporting the companies in which we invest to develop credible transition plans, and regularly disclosing our own progress on our net zero commitment, are perhaps our greatest opportunities to effect meaningful change.

We have increased our stewardship efforts on climate change and expanded the agenda to include encouraging the portfolio companies we invest in on behalf of our clients to set corporate-emission reduction goals and report their progress in a way that investors can assess on comparable terms (see our Disclosure Expectations for Effective Climate Transition Plans).

We are still in the early phases of our own net zero journey, but it is increasingly apparent that our net zero commitment is consistent with our clients' expectations and forms a solid foundation for corporate engagement.

While we still have work to do, we are proud of the progress we have made and the steps we are taking to increase attention to climate change in many areas of our business. Attentiveness to climate change is a true test of what is possible when regulators, governments, asset managers, corporate entities, and employees work constructively toward a common goal: significantly reducing our global GHG emissions. No company or person can respond to climate change alone.

Introduction

State Street Global Advisors ("Global Advisors," "we," "our," "us," or "the firm") is the asset management subsidiary of State Street Corporation ("State Street," "Parent"). We are one of the world's largest asset managers, responsible for over $4.14 trillion assets under management ("AUM") and the third-largest provider of exchange-traded funds globally.[1] We partner with many of the world's largest, most sophisticated investors and financial intermediaries to help them preserve and create value through a rigorous, research-driven investment process, spanning both indexing and active disciplines.

To better serve our clients, last year we took the important step of joining the Net Zero Asset Managers initiative ("NZAM"), making a pledge to reach net zero portfolio emissions by 2050. Upon making this commitment, our Chief Executive Officer, Cyrus Taraporevala, stated:

> **"Climate change poses one of the most serious risks to long-term investors and we are pleased to join this important initiative. We are especially keen to leverage our position as one of the world's largest asset managers to raise awareness of the systemic risks associated with climate change, and to help all stakeholders navigate the difficult choices we face as we effectively manage the transition risks. The goal of net-zero-carbon emissions by 2050 is consistent with our commitment to drive long-term value on behalf of our clients."**

Climate change is a systemic risk that is likely to have overwhelming impacts on our economy and society if not managed properly. Net zero commitments like ours are one important step in managing long-term investment risk from climate change for our clients.

Another important step is disclosing the governance and management of these risks. As we have called on all companies in major indices in the US, Canada, UK, Europe, and Australia to align with the climate-related disclosures requested by the Task Force on Climate-Related Financial Disclosures ("TCFD"), we recognize the need to do the same.

This is our first report on our progress in incorporating the TCFD recommendations. While this TCFD report should be considered separate and distinct from State Street's TCFD report, which was published earlier this year, we do leverage our Parent company's existing best practices and processes and, in some cases, people and committees, to help us manage our own climate risk.

1 This figure is presented as of 31 December 2021 and includes approximately $61.43 billion of 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.

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 our business, and this year that remit was expanded to explicitly include climate risk;
- Our risk management team is part of the 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; and
- 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 and 2 emissions at this time.

While we work closely with State Street across our organization, the asset management business faces distinct risks and opportunities that require a standalone TCFD report. In disclosing our progress on identifying climate-related risks and opportunities, our track record shows that we have made significant strides in incorporating climate into our business and strategy. In 2021, our key progress included:

- Committing to the Net Zero Asset Managers Initiative and preparing to set interim targets in 2022;
- Developing and launching new climate investment strategies and other sustainable investment opportunities;
- Participating in targeted engagement campaigns around our expectations for climate-related disclosures;
- Holding over 900 portfolio company engagements since 2014 on climate-related matters to improve integration and disclosures;
- Integrating climate risk management into our enterprise risk management framework and investment risk management (where appropriate); and
- Lowering our carbon footprint and improving the resiliency of our physical assets and operations, as part of State Street Corporation's efforts.

At the same time, we recognize that we have work to do on our own management of climate risk and helping others more effectively disclose theirs. We recognize there are constraints, given that net zero methodologies are still being developed, and therefore we will continue to work with companies, industry associations, policymakers, and other stakeholders to help companies analyze climate change risks. Although the TCFD provides guidance, the challenge of developing and implementing emerging best practices remains. We expect to participate in shaping solutions through constructive action with other investors and industry groups to promote consistent and valuable disclosures over time. We are excited to publish our inaugural report and demonstrate our commitment to transparently managing climate-related risks and opportunities.

Figure 1 **Summary of Our Progress Across the Four TCFD Pillars**

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 Global Advisors' near- and long-term business strategy. In 2018, the Board took on responsibility for oversight of material ESG issues, including climate change. This oversight role continues to evolve and now includes oversight of the Company's ESG obligations, initiatives, and strategies. In 2021, State Street further emphasized the importance of climate risk by adding responsibility for the risk management component of State Street's obligations, initiatives, and activities to the Board Risk Committee's charter.
	The Global Advisors Chief Executive Officer ("CEO") and Global Advisors Chief Risk Officer ("CRO") report annually to the Board Risk Committee, including on climate-related matters.
	The Nominating and Corporate Governance Committee of the State Street Board is responsible for the oversight of additional corporate governance components of our ESG obligations, initiatives, and activities, including matters related to climate. As part of this oversight, the Global Advisors Asset Stewardship team reports at least twice annually on their activities to the Nominating and Corporate Governance Committee.
Describe management's role in assessing and managing climate-related risks and opportunities	The Global Advisors Executive Management Group ("EMG") is the consultative body responsible for strategic planning, business-goal and financial tracking, overall firm governance, and talent management.
	The Global Advisors Risk Committee is responsible for ensuring the alignment of strategy, risk appetite, and risk management standards. The Global Advisors Risk Committee reports to the EMG and receives updates from all other Global Advisors Committees on material risks.
	The Global Advisors ESG Committee, established in early 2022, is responsible for overseeing our ESG, climate, and other environmental-related activity. The Global Advisors ESG Committee reports to the EMG no less than annually on any material matters that could pose strategic risk to our business, and to the Global Advisors Risk Committee, where appropriate, on material risks.
	Since 2014, our Asset Stewardship team has considered climate change to be a core theme of our stewardship activities. Through corporate engagement and proxy voting, the Asset Stewardship team provides the "voice and vote" that are central to our fiduciary responsibility to maximize long-term shareholder value.
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:** Climate change acts as a systemic risk that may lead to decreased asset values and higher volatility over time. Our initial, qualitative risk assessment highlights investment, operational, product, and business risk as most impactful. Acute weather events may also pose a risk to our physical assets.
	Opportunities: We may experience increased demand for climate investment strategies and funds related to our thematic and exclusionary investment strategies. We may also experience increased demand for our proprietary ESG analytics, including climate, from investors, portfolio companies, financial intermediaries, and other asset owners. For Global Advisors' Asset Stewardship team, climate change will remain a core campaign until we are confident that portfolio companies are effectively addressing this issue. Our approach will continue to develop as we align our engagement with companies to our net zero targets.
Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	Climate change risks and opportunities can influence our product development, sales and marketing, risk management, and Asset Stewardship programs, as well as investment in additional data, tools, and employees to support delivery of these services.
Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Many of our index funds (and the majority of our AUM) are currently focused on strategies designed to track broad market exposure. We are working to help our clients understand the nature of climate risk embedded in the indexes.
Describe how risks and opportunities are factored into relevant products or investment strategies and describe related transition impact*	We offer investment strategies, including thematic funds and screened portfolios, with a climate focus. We also provide both bespoke and standardized reporting to clients to help them understand TCFD-aligned and climate-focused risks and opportunities in their portfolios. For more information on our investment strategies and Asset Stewardship, please refer to our ESG Investment Statement.

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	We view climate change as a cross-cutting risk that may have financial and business implications. Our activities to identify and assess climate risks include: • Conducting our Material Risk Identification process that is specific to the asset management business; • Engaging with portfolio companies that are either in high-emitting sectors or are not disclosing climate-related risks and opportunities through our Asset Stewardship team; and • Integrating available ESG data and climate data (e.g., carbon intensity) in the risk monitoring and reporting processes.
Describe the organization's processes for managing climate-related risks	We employ the Three Lines of Defense model in executing our risk management framework to drive strong risk accountability, identification, monitoring, and reporting activities. The business units, which own and manage the risks inherent in their business, are considered the first line of defense; Enterprise Risk Management and other support functions provide the second line of defense; and Corporate Audit, which assesses the effectiveness of the first two lines of defense, is the third line of defense.
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*	Since 2014, we have held over 900 portfolio company engagements on their climate-related disclosure and practices. In 2021, we held 254 engagements with companies across industries around their climate practices. This year, we will launch a targeted engagement campaign with the most significant emitters in our portfolio to discuss their transition plans and related climate disclosures. Additionally, we will engage with index providers and debt issuers in the future to understand their short and long term net zero plans and how these will impact investments in index funds.
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 has integrated climate into its remit and oversight, and each committee of the Board has taken on responsibility for climate related matters that fall within their respective remits (e.g., Examining and Audit Committee of the State Street Board oversees climate risk disclosure in our publicly filed documents). We have also established a Global Advisors ESG Committee which is responsible for ESG and climate oversight and reports to the EMG and the Global Advisors Risk Committee, where appropriate, on material risks. Our risk management team evaluates material ESG risks, including climate risk, during its regular risk reviews with portfolio managers to provide oversight of portfolio managers' consideration of these risks in their investment processes. This helps to ensure that such risks are understood, captured and intentional.
Describe how material climate-related risks are identified, assessed, and managed for each product or investment strategy*	Material climate risks are identified and assessed throughout our product and investment strategy lifecycles, where appropriate, through investment research and analysis, portfolio construction and management, compliance, investment risk management, and stewardship. We are: • Performing review and challenge on ESG and climate matters, where appropriate, as part of Investment Committee and Product Committee reviews; • Building out a robust approach to ESG risk management across investment strategies and teams; and • Performing comprehensive climate data due diligence and comparative analysis to identify best in class metrics, indicators, and data points to drive our 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. The metrics we leverage include fossil fuel reserves, brown and green revenues, carbon intensity, carbon footprint, implied temperature rise, scope 1 and 2 carbon emissions, adaptation results, and weighted average carbon intensity (“WACI”) emissions data. This year, we are working with multiple providers to identify additional relevant metrics that can be used to further assess climate-related risks and opportunities.
Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks	Our Scope 1 and 2 emissions are measured and published as part of the State Street Corporation TCFD report.
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	Because we co-locate with our parent company, our operational targets (e.g., emissions, energy use) are available in the State Street Corporation TCFD report. As part of Global Advisors’ NZAM commitment, we support investing aligned with net zero emissions by 2050 or sooner. We have published our net zero interim targets and have adopted the Paris Aligned Investment Initiative (“PAII”) Net Zero Investment Framework, which provides a common set of recommended actions and metrics to align investor portfolios to net zero emissions by 2050. Refer to the Appendix for a description of our Net Zero interim targets.
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*	We provide scenario alignment analysis and TCFD-aligned carbon metrics, transition risk analysis, and physical risk analysis to our clients on a regular basis. We also have the capability to provide customized reporting upon request (e.g., assessments of progress against annual Weighted Average Carbon Intensity 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*	We currently provide emissions and WACI analysis to clients upon request and are in the process of developing the reporting mechanisms to disclose GHG emissions more comprehensively.

* 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

State Street Global Advisors is committed to engaging in effective corporate governance in order to fulfill our responsibilities to our clients, investors, and other key stakeholders. We have established a strong governance structure that actively considers climate and other environmental factors. Our governance approach is driven by direct management responsibility with oversight from our Parent's Board of Directors.

Board and Parent Company Oversight

State Street Global Advisors sits within State Street Corporation's ("State Street's") wider corporate governance framework, led by State Street's Board of Directors ("the Board"). The Board's mandate covers oversight of ESG obligations, initiatives, and strategies, and the charters of each of the Board's principal committees explicitly reference the committee's oversight responsibilities with respect to ESG matters, including climate.

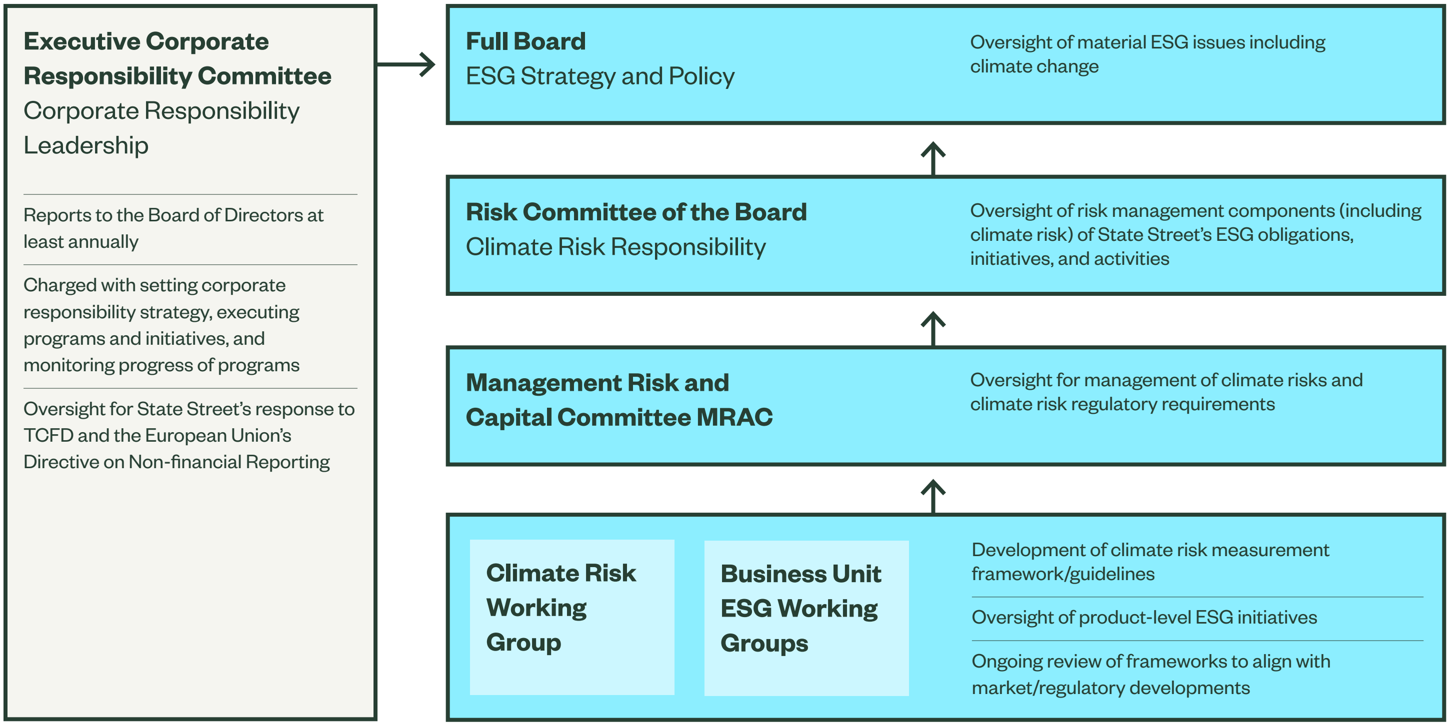
In 2022, the Board's Risk Committee added responsibility for the risk management components (including climate risk) of State Street's ESG obligations, initiatives, and activities. The Global Advisors Chief Executive Officer ("CEO") and Global Advisors Chief Risk Officer ("CRO") annually report to the Board Risk Committee, including on ESG-related matters.

Additionally, as part of the Board's oversight of Global Advisors' investment strategy, the Asset Stewardship team reports at least twice annually on its activities, including climate-related activity, to the Board's Nominating and Corporate Governance Committee. 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.

Further, State Street's overall corporate responsibility and ESG efforts are overseen by the Executive Corporate Responsibility Committee ("ECRC"), which reports to the Board at least once per year. On March 31, 2021, Rick Lacaille was appointed to serve as State Street's Global Head of ESG to lead and coordinate ESG efforts across State Street. Rick also serves as the chair of the ECRC, working to ensure a well-coordinated approach to ESG policies, products, initiatives, and thought leadership across the firm, including Global Advisors.

Within State Street, climate risk management efforts are overseen by the Management Risk and Capital Committee ("MRAC"), which is the senior oversight and decision-making body for financial risk and capital and liquidity management, and which oversees State Street's management of climate risks and climate risk regulatory requirements. A dedicated Climate Risk Working Group provides oversight for the risk identification process, risk assessment, and scenario analysis.

Figure 2
Climate Risk Governance Structure



Source: State Street.

Legal Entity Reporting

Global Advisors operates across the world with legal entities in North America, Europe, and Asia. We have material 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, our material legal entities are responsible for satisfying climate risk-related requirements. Global Advisors' ESG and Asset Stewardship teams are working with our legal entity boards to address compliance with any additional environment- and climate-related reporting requirements as global and local disclosure regulations evolve.

Global Advisors Management Oversight

In order to appropriately assess and manage environment- and climate-related risks and opportunities, Global Advisors' management is responsible for integrating those risks and opportunities into our strategy, decision making, and business processes.

In 2021, the Global Advisors Executive Management Group ("EMG") engaged in strategic planning related to our material priorities, including ESG, and laid out a multi-year plan to invest in our ESG capabilities, including those centered on climate. These investments include further building out our ESG teams (across investments and distribution) and developing supporting capabilities (e.g., data, marketing, and reporting). Additionally, these investments include adding ESG dedicated sales personnel, acquiring key ESG/Climate index licenses, and building our product range. Through these strategic investments, Global Advisors is working to extend our position as a recognized global ESG and climate leader with integrated investment capabilities and thought leadership.

Figure 3
Governance Structure

Executive Management Group (EMG)

Consultative body responsible for strategic planning, business goal and financial tracking, overall firm governance and talent management.

Reporting

Risk Committee

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

Subcommittees
- EMEA Risk
- Liquidity
- Model Risk

Escalation of Material Risk Breaches

Reporting

Environmental, Social & Governance (ESG) Committee

Responsible for overseeing the firm's ESG and proxy voting framework and philosophy.

Global Investment Committee

Responsible for the firm's investment philosophy and processes, investment strategies, approach to new markets and instruments and relationships with counterparties.

Subcommittees
- Technical
- Trade Management Oversight
- Investment Strategy Review
- Securities Lending

Global Product Committee

Responsible for the creation of products based on the firm's investment strategies.

Subcommittees
- North America Product
- EMEA Product
- APAC Product
- Sub-Advisory Oversight

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
- EMEA Fiduciary
- APAC Fiduciary
- Independent Fiduciary
- Class Action Litigation
- Sales Practices

Global Operations & Compliance Committee

Responsible for the firm's operating infrastructure compliance functions.

Subcommittees
- North American Valuation
  - Alternatives Valuation
- EMEA Valuation
- APAC Valuation
- Global Operational Risk
- Business Technology Investment

Source: State Street Global Advisors. As of January 2022.

On a quarterly basis, executives monitor progress progress against our ESG strategy, including climate-related risks and opportunities. Management also monitors progress on climate-related metrics and targets by partnering with multiple climate-related data providers to source data that can offer insights into climate risks for client portfolios.

Executive Management Group

State Street Global Advisors' firm governance structure is designed to support effective and efficient decision-making and provide oversight of its business functions. The structure consists of an Executive Management Group ("EMG") which comprises the firm's most senior leadership serving as a consultative body for the benefit of the firm's President and Chief Executive Officer. The EMG is responsible for overall firm governance and oversees the activities of Global Advisors' six senior committees:

- Risk Committee
- ESG Committee
- Global Investment Committee
- Global Product Committee
- Global Fiduciary and Conduct Committee
- Global Operations and Compliance Committee

Global Advisors Risk Committee

The Global Advisors Risk Committee is responsible for ensuring the alignment of strategy, risk appetite, and risk management standards. It meets at least eight times annually and more often as appropriate to address matters brought before it. If the ESG Committee (or other senior committee) notes any material risk matters, the Committee will escalate the matter to the Global Advisors Risk Committee.

Global Advisors ESG Committee

In early 2022, we formally established an ESG Committee to further centralize the governance of Global Advisors' ESG strategy, including climate, into the firm's investment processes, sustainable investment strategies, and asset stewardship priorities. The committee presently meets bi-monthly and is chaired by Karen Wong, who joined Global Advisors in June 2021 as the Global Head of ESG and Sustainable Investing. The primary responsibilities of the ESG Committee are to:

- Oversee the firm's on-going commitments to ESG and sustainable investing, related business practices, and public policy matters relevant to the firm, both with respect to the firm itself and to the firm in its capacity as an asset manager;

- Oversee the Asset Stewardship team's proxy voting and issuer engagements on behalf of all the firm's discretionary portfolios, and review and approve the Global Proxy Voting and Engagement Principles, and the Proxy Voting Guidelines for select markets; and

- Review ESG risks and opportunities as related to business strategy, risk management policies, and business plans, as well as monitor implementation and performance of such strategies and policies.

Other senior committees may oversee matters related to ESG, climate, and/or sustainability, where appropriate to their remits.

Asset Stewardship Oversight

Our Asset Stewardship team is centralized under our Global Head of ESG and Sustainable Investing, who oversees its activity and reports to our Global Chief Investment Officer. The Asset Stewardship team operates at the intersection of corporate governance, sustainability, climate risk, and other environmental and social risks, and we examine these matters through a fiduciary lens. Identifying and systematically incorporating material ESG issues, including climate-related risks, is integral to our role as fiduciaries of our clients' capital. Consistent with our fiduciary duty, the Asset Stewardship team seeks to address climate risks by:

- Prioritizing climate change as a core tenet of our stewardship activities since 2014; in 2020, we became a signatory to Climate Action 100+, a global initiative led by investors to foster the clean energy transition by engaging those companies and sectors that have the highest greenhouse gas emissions;
- Engaging with companies to understand their approaches to mitigating and managing the physical and transitional impacts of climate change; and
- Engaging in proxy voting by:
  - — Publishing guidance that outlines our expectations with respect to climate-related disclosure and our approach to voting on common climate-related proposals;
  - — Voting on climate-change proposals in accordance with our Proxy Voting Guidelines;
  - — Considering taking voting action against directors for unaddressed concerns pertaining to climate change;
  - — Engaging with the proponents of shareholder proposals to gain additional perspective on climate risks, and engaging with companies to better understand how boards are managing such issues.

As noted above, the ESG Committee oversees the Asset Stewardship team's proxy voting and issuer engagements, and also reviews and approves guidelines related to the team's work.

Further information on our Asset Stewardship and ESG teams can be found in the Risk Management section of this report or in our 2021 Stewardship Report.

Enhancing Oversight

As we strengthen our ESG strategy, we aim to continue enhancing our internal governance approach, through which the Board and senior leaders are informed of and oversee our climate-related risks and opportunities.

Strategy

Our perspective on climate change is rooted in our fiduciary duty to invest assets in the best interests of our clients, and to preserve and create value for our clients over the long term.

Whether driven by regulation or value creation, many of our clients are asking how we intend to invest their assets to adapt to a low-carbon economy. In response, we are broadening our toolkit to help our clients position their portfolios for the future with leading-edge investment strategies and analytics that help them identify and mitigate the climate risks present in their portfolios.

Our premise is that the energy transition is underway, and climate change is a systemic risk that will affect the economy and potentially affect risk-adjusted returns for investors in global capital markets. Specifically, our premise is supported by:

- Physical changes in the climate that are observable and have repercussions across supply chains and economies;
- Accelerating public policies that are designed to reduce GHG emissions, stimulate market-readiness for low-carbon offerings, and create transparency regarding the emissions of all manner of organizations; and
- Scaling and accelerating technology developments of low- and no-carbon solutions across industries that represent substantial opportunities for investment.

This section discusses the potential impacts of climate-related opportunities and risks on our business and strategy, where such information is material, particularly within our investment strategies.

Short-, Medium-, and Long-Term Opportunities

Pairing the efforts of the public and private sectors to significantly reduce greenhouse gas emissions with sound investment practices and robust analytics presents opportunities to generate returns while aligning with existing investor risk appetite. To meet this opportunity, we are offering investors a suite of ESG and climate strategies that meet specific objectives; we are also continuing to build out our product pipeline.

Climate Stewardship

Across our product lineup, we have incorporated climate change into our existing asset stewardship policies and expectations. Given our size and long investment horizon, our aggregate portfolio broadly reflects the market, and our perspective is that of a "universal owner" of assets. This means that we are uniquely positioned to engage with companies across all sectors and regions of the real economy on their transition to net zero. To date, we have held more than 900 engagments with companies on climate change and have called on companies in major indices in the US, Canada, UK, Europe, and Australia to align with the TCFD recommendations. For further information on our asset stewardship strategy, please see the Risk Management section of this report.

Thematics: Climate and Low-Carbon Investment Strategies

Across both equities and fixed income, our thematic investing capabilities enable our clients to align their portfolios with the transition to a low-carbon economy and efforts to limit global warming to less than 2°C. For investors seeking to align portfolios with the Paris Agreement goals, our strategies include specific climate-related investment products that are designed to meet carbon or climate benchmarks and net zero targets while also seeking to achieve financial objectives. Our products include sustainable climate equity strategies, sustainable climate bond strategies, a low-carbon equity framework, and a low-carbon bond index framework.

Across all of our investment strategies with climate attributes, we consider both mitigation and 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 position itself to take affirmative advantage of the climate transition.

In developing our actively managed climate equity strategies, we look to identify companies whose opportunities to adapt to the transition are greatest. In seeking firms that are well-positioned to succeed in a climate transition, our portfolio managers seek to identify potential re-ratings, valuation dislocations, and stranded assets as they work to out-perform the benchmark's returns.

As part of our thematic investing, our indexed strategies have historically been better at capturing mitigation approaches (because index funds have broad market exposures). Nonetheless, our climate index strategies are evolving to incorporate more forward-looking indices, such as those tracking the EU Paris Aligned Benchmarks ("PABs"), which include decarbonization targets and consider corporate target setting. These more forward-looking measures are being combined with traditional index technology, such as tracking error minimization by optimization, to leverage the trading efficiencies from our index portfolio management platform.

We are continuing to build out additional climate investment strategies that meet the large investor demand for sustainable investing. For further information on our sustainable investing strategy, please see Chapter 3 of our 2021 Stewardship Report.

Exclusionary Climate Screening

Exclusionary screening can be applied to portfolios or indexes as a standalone climate approach, or in combination with other styles, such as thematic investing. Negative screening excludes specific business sectors or activities, or specific companies or countries, based on ESG factors, including climate. We have leveraged our exclusionary climate screening process to develop strategies that align with investors' goals and/or investment beliefs.

Green Bond Investing

We have been an active investor in green bond issuances globally since April 2015. We believe green bonds are one of the most effective financial vehicles available for companies and countries to finance their transition to a more climate-friendly and sustainable infrastructure. Such transition is necessary for companies to meet the goals and objectives of the Paris Agreement. We are also a close partner with the Climate Bonds Initiative, with whom we are coordinating research on this important topic.

Our Use of Climate Analytics

Following a robust research and due diligence examination, we partner with a number of best-in-class data providers that can offer valuable climate insights into client portfolios. To support our clients in their assessment of risks embedded in their portfolios, we have developed an ESG and climate analytical platform, which gives us the capabilities to assess and monitor progress on carbon-emission metrics such as carbon intensity and reserves, greenhouse gas emissions, fossil fuel reserves, green and brown activities, as well as ESG portfolio analytics that include ESG scores, controversies, and business involvement. This data and analysis enable us to provide valuable insights to our clients about their investment portfolios in these risk areas.

Moving Forward

Going forward, we are further integrating climate into our existing business processes and strategy. For instance, we will consider developing more climate-focused investment products. This approach will treat climate consistently with other investment management risks at GA.

We also intend to develop and facilitate training and resource upskilling across our business, which will provide our clients with a better understanding of our climate-focused investment strategies, as well as the potential to achieve risk-adjusted returns while aligning with client risk tolerances.

Short-, Medium-, and Long-Term Risk Impacts and Resilience

As an asset manager, we have a fiduciary duty to our clients and are responsible for managing assets with an aim to meet an investment objective within specified risk parameters. We are exploring the use of climate scenario analysis to help evaluate the climate-related investment risks faced by our clients.

Our current scenario analysis spans short-, medium-, and long-term time horizons and is supported by ISS, and we have made our own interpretations as to how these scenario analysis results may impact our business. Our scenario analysis leverages the International Energy Agency Sustainable Development Scenario ("SDS"), which is a normative scenario in which the world meets the Paris goals with a 50% probability of limiting the temperature rise to less than 1.65°C. The ISS scenario analysis leverages the scenario and a carbon budget approach, which takes overall emissions consistent with the level of decarbonization allocated by the industrial sector. The output of this scenario analysis includes results for 2030 and 2050 that show the relationship for a portfolio between that budget and the forecast emissions by key industrial sectors and overall.

As we build out our scenario analysis capability, for example, we applied the SDS scenario to understand how climate investment strategies would compare with broader indices. In a comparison between one such representative climate strategy and the benchmark without any climate objective ("benchmark"), we found:

- The strategy had 85.7% lower Scope 1 and 2 CO_2 emissions and relative carbon footprint compared to the benchmark MSCI World Index;
- The strategy had a potential temperature increase of 1.6°C (using the ISS analysis) compared to the benchmark, which had a potential temperature increase of 2.8°C; and
- The strategy exceeds its SDS budget in 2049 and is 21.19% above it in 2050. The benchmark, in contrast, is never below its SDS budget and overshoots it by 369.32% in 2050.

We intend to test these interpretations through climate risk identification workshops, where the output will inform a more robust scenario analysis. We then intend to perform additional scenario analysis to assess financial risk in the following ways:

- For index strategies, help our clients understand the nature of climate risk embedded in the indexes by measuring existing emissions and other relevant metrics;
- For our thematic and exclusion strategies, assess the impact of climate on projected investment returns; and
- For active strategies:
  - Identify higher-risk sectors and assess the concentration of portfolio companies in high-risk sectors;
  - Identify companies and sectors that are more dependent on physical assets, and then assess if those companies may be also exposed to additional risks posed by physical acute or chronic events; and
  - Measure potential changes in market value of portfolio companies.

Additional guidance on how we plan to treat and identify climate risk across different time horizons can be seen in the Risk Management section of this report.

Climate Impact on Business and Strategy

Beyond our investment integration, data analytics, and scenario analysis, we are continuing to integrate climate into our business and strategy. We have incorporated climate change into our business strategy and planning in the following ways:

- Committing to the Net Zero Asset Managers initiative. As part of Global Advisors' commitment to mitigating the effects of climate change, we set interim targets for 2030. We describe our targets on our website, and a discussion of these targets is included in our Metrics & Targets section of this report;

- Protecting the resiliency of State Street's physical infrastructure. 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 the company's location strategy and operational resiliency planning. We co-locate with State Street; more information can be found in State Street's TCFD report, in the "Climate Change Risks to Our Physical Assets" section;

- Transitioning to a low-carbon economy. In 2017, State Street publicly committed to science-based reduction targets for its operating carbon emissions. In 2020, State Street surpassed its 2025 target of a 30 percent reduction, and set a new goal of a 27.5 percent reduction by 2030 as measured against the 2019 baseline year. This 2030 goal is in line with the Science Based Targets Initiative's "well-below 2°C" methodology. While State Street has exceeded its target reduction for 2021, as conditions revert from the current work-from-home and hybrid environment to higher office occupancy, this new target remains appropriate; and

- Partnering with industry organizations to support information-sharing and the development of industry standards around climate-related matters such as disclosures. We recognize the importance of collective action (where such activities are permitted by law) to expand global ESG awareness and adoption. We seek to be active signatories of ESG organizations where applicable. Please find below various ESG organizations and initiatives in which we participate.

Examples of Climate- and ESG-Related Partnerships:

- Climate Action 100+
- Climate Bonds Initiative
- Institutional Investors Group on Climate Change (IIGCC)
- Net Zero Asset Managers Initiative
- One Planet Summit
- Task Force on Climate-Related Financial Disclosures (TCFD)
- UN Principles for Responsible Investment (UN PRI)

Note: The above list is not exhaustive. Source: State Street Global Advisors.

Closing Thoughts

Moving forward, we intend to continue our focus on climate change by way of our long-term business strategy. At Global Advisors, this means we will:

- Continue engaging directly with portfolio companies on climate related topics, including environmental and climate change risks and climate resilience, through our Asset Stewardship program;
- Continue engaging with regulators and policy makers to increase adoption of disclosure norms and energy transition policies;
- Identify opportunities to shift our capital allocations to meet Paris Aligned targets, where appropriate, while encouraging clients to consider climate-focused funds;
- Further build out our differentiated investment strategies and products that aim to be Paris Aligned and low carbon oriented to meet market demand; and
- Improve our resource efficiency and other operations that have helped minimize our internal footprint.

Risk Management

A robust approach to risk management is critical to enable effective delivery of our products and services. We see that climate change is a risk driver and recognize the importance of comprehensive integration of climate risk into our risk management framework. Across this section, we disclose our current practices and the areas where we intend to focus our efforts going forward, including our Asset Stewardship team's company engagement and our climate risk management process.

Identifying and Assessing Climate-related Risks

Our business model and strategy inform 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 still stands true, we have also enhanced our processes to establish ESG and climate risk monitoring, including climate risk identification, and are looking to expand engagement with investment teams on climate exposures in risk reviews.

We view climate change as an intersecting risk that may pose business implications. In alignment with our parent company, we view risk identification as an iterative activity that includes inputs across the three lines of defense and business units. We include climate risk as a strategic risk in our Material Risk Identification ("MRI") 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.

While we have made progress identifying and assessing climate-related risks in concert with our parent company, we are in the process of enhancing the existing MRI process. Going forward, we plan to:

- Enhance our climate risk identification and assessment capabilities by covering portfolio exposure analytics, sensitivity analysis, and scenario analysis capabilities;
- Conduct Climate Risk Identification workshops with senior management to further identify material climate risk drivers and map those to our existing risk taxonomy, similar to the results summarized in State Street's TCFD report; and
- Update relevant policies and procedures to further incorporate climate-related requirements into our risk management function.

Together, these plans represent a significant step forward in our ability to identify and assess climate-related risks.

Managing Climate Risks

Global Advisors' risk function is closely aligned with State Street Corporation's in how we identify, assess, and monitor risk. 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. As such, we leverage the three lines of defense model to manage material risks, including climate-related risks, to the organization.

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

Committees

Our ESG Committee is composed of stakeholders across the First and Second Lines of Defense. The Committee is responsible for reviewing ESG risks and opportunities as related to climate and environmental business strategy, risk management policies, and business plans, as well as monitoring implementation and performance of such strategies and policies. The ESG Committee is one of Global Advisors' senior-most Committees that escalates risks directly to the State Street Global Advisors Risk Committee.

Additionally, the Risk Committee of the State Street Board has responsibility for the material risk management components (including climate risk) of State Street's ESG obligations, initiatives, and activities.

Roles and Responsibilities

For risks in client portfolios, our investment teams are the primary risk owners, or First Line of Defense, responsible for evaluating the material environment- and climate-related risks and opportunities for a sector or company. Our investment teams have a fiduciary responsibility to invest assets in the best interests of our clients. We aim to identify and assess material environment- and climate-related risks and incorporate such risks into our risk management framework where appropriate.

We do not take a one-size-fits-all approach to ESG and climate investing. Our approach varies between asset classes to reflect the ESG integration philosophies of each team and the specific nuances of each investment strategy. Specific approaches to ESG and climate investing by investment area are summarized here.

The Second Line — Risk and Compliance — teams establish and monitor adherence to the risk and control framework and create an additional layer of independence. The risk management team also evaluates material ESG risks, including climate risk, during its regular risk reviews with portfolio managers to provide oversight of portfolio managers' consideration of these risks in their investment processes. This helps to ensure that such risks are understood, captured, and intentional.

The Third Line — Audit team — provides final assurance that the First and Second Lines of Defense are designed and operating effectively in carrying out these responsibilities.

Climate Change Risks to Our Physical Assets

Physical climate risk, especially acute weather events, is likely to increase in the years ahead. This may impact both our physical assets and the services we provide to our clients around the world.

State Street Corporation, including Global Advisors, regularly evaluates the physical risks of climate change to inform our plans to address potential operational vulnerabilities related to climate or environmental factors. This includes assessing the frequency and severity of acute weather events that may impact our operations, induce damage, disrupt our supply chain, or potentially hinder our ability to provide products or services.

We are committed to mitigating the effects to clients from any service interruptions, including those related to climate change, in addition to taking responsibility for mitigating our own climate impacts.

For more information please refer to State Street Corporation's TCFD report.

Climate Risk Management Examples

Across the lines of defense, our Risk Management teams have worked with our Investment teams to further develop our climate risk management capabilities. Examples of how we manage climate risks include:

- Utilize proxy voting and engagement, through our Asset Stewardship team, with portfolio companies to better understand the approach our portfolio companies take to identify, disclose, and manage climate-related risks;

- Embed climate considerations into investment decisions in portfolios with a climate objective and other climate-related product;

- Perform review and challenge, where appropriate, on climate items as part of Investment Committee and Product Committee reviews;

- Advocate for a robust approach to ESG risk management, including climate risk management, across investment strategies and teams; and

- Develop business continuity plans in the case of disruptions caused by acute weather events.

Moving forward, we aim to incorporate material climate related risks into our enterprise-level risk monitoring process and metrics.

Engaging with Portfolio Companies

Our risk management activities include focusing on leveraging company engagement to drive better outcomes for our clients. Our Asset Stewardship team is committed to using our voice and our vote to enhance the long-term sustainability of our portfolio companies. Through engagements, proxy voting, and thought leadership, we take an outcome-oriented approach to managing material ESG risks to our investments. We believe that companies that successfully integrate ESG into their business strategies and have effective independent board oversight are better positioned to generate value for our clients over the long term.

Thought Leadership

We publish thought leadership to inform our investee companies and educate broader market participants about our perspectives on ESG issues, including climate change. Over the past few years, our climate-related thought leadership has covered a variety of topics, including our perspectives on effective board climate risk oversight, disclosure trends in carbon-intensive sectors, and insights from engagement campaigns on climate and environmental focus areas.

We publish guidance to communicate to our portfolio companies how we expect them to disclose and manage climate risks and opportunities. Our Guidance on Climate-related Disclosures serves as a key input to inform our engagement and voting efforts, and outlines the topics we may address during engagement. We update our guidance as needed in response to market and industry trends, disclosure quality, and evolving reporting standards.

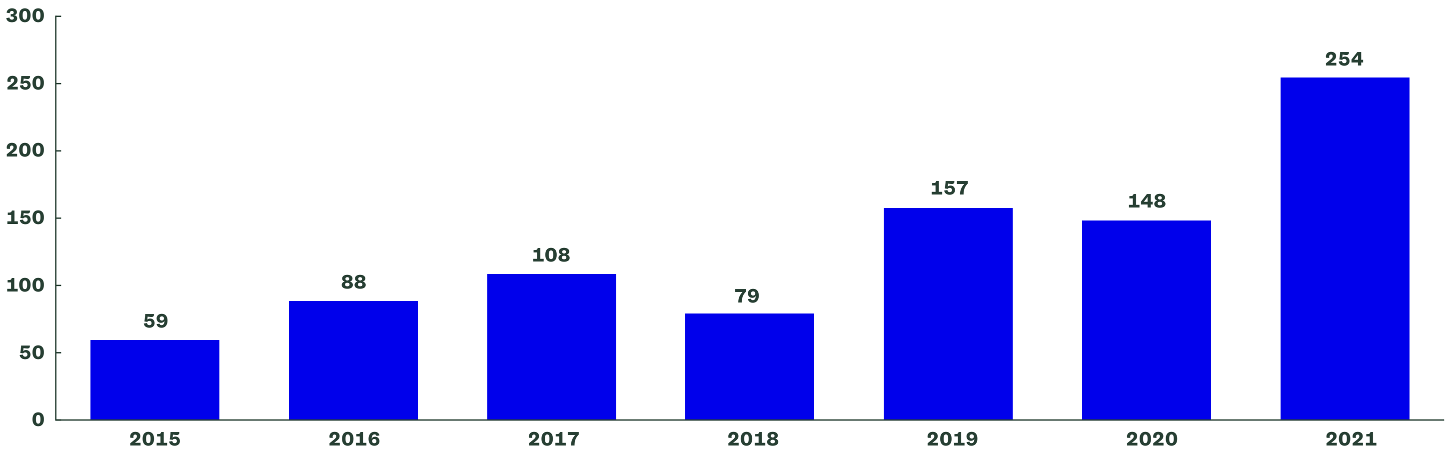
Company Engagement

Having laid out expectations around climate-related disclosure, we identify companies for proactive engagement. This screening process considers a number of factors including the size of absolute and relative holdings, companies identified as lagging market and industry standards on climate change practices and disclosures.

Once we have selected a company for engagement, we actively seek direct dialogue with the board and management. In framing these discussions, we leverage the four pillars of the TCFD framework: governance, strategy, risk management, and metrics and targets. We base our engagement on a long-term, multi-year approach to stewardship, that includes working with companies to encourage adoption and disclosure of strong climate practices.

Since 2014, we have used our engagements with companies to understand their approaches to mitigating and managing the physical and transitional impacts of climate change. To date, we have held more than 900 engagements with companies across multiple industries on climate-related issues. Further, in 2021, we held 254 engagements with companies across multiple industries to understand their approaches to climate change, which is almost double our climate-related engagements compared to 2020.

Figure 4
Annual Climate-Related Engagements



Source: Climate Stewardship.

Climate-related Shareholder Proposals

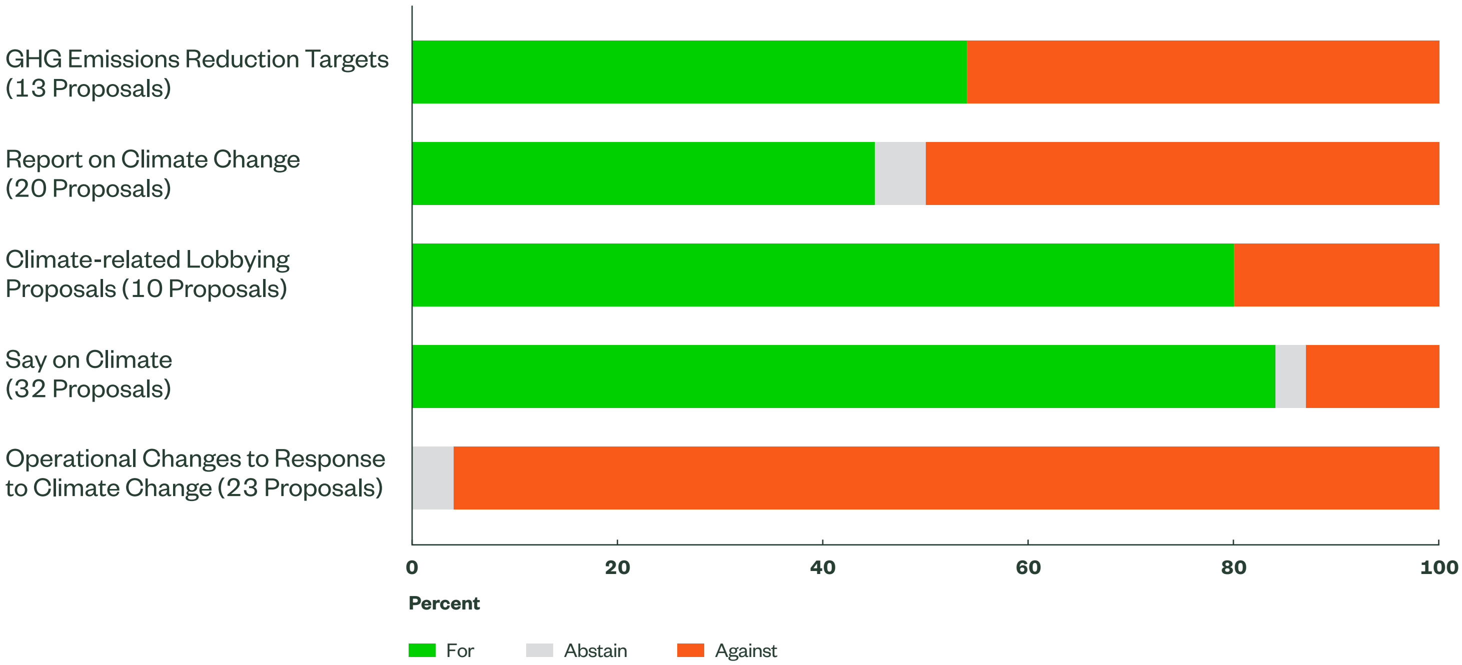
As is typical across ESG issues, we first approach companies through engagements using our climate-related disclosure expectations outlined above and focusing on companies and industries with the greatest risk and opportunity. If we encounter laggards that are not making sufficient progress regarding climate-related disclosure, we will consider taking action using our votes as our main tool to escalate issues to company boards.

In 2021, there were 105 climate-related shareholder proposals submitted at our portfolio companies, which was a significant increase compared to previous years. In line with our views on proxy voting, we supported around half of the 105 climate-related shareholder proposals. More specifically, we supported:

- 87% of the "Say on Climate" proposals, which focus on non-binding resolutions from companies to provide emissions disclosures, transition plan, and an approval/disapproval vote where shareholders deem appropriate;
- 80% of the climate-related lobbying proposals, which focus on how lobbying activities, including through membership in trade associations, align with the goals of the Paris Agreement;
- 54% of the GHG emissions reductions target proposals, which includes interim targets and alignment with temperature goals;
- 50% of the proposals asking companies to provide additional disclosure and reporting on climate change; and
- 4% of proposals that required companies to make specific operational changes.

Overall, we were generally not supportive of resolutions such as transitioning to renewable energy within a defined timeframe or phasing out a project, business, or product because we found the actions requested by many of these shareholder proposals to be overly prescriptive.

Figure 5
FY 2021 Climate Change Proxy Voting Track Record By Proposal Type



Source: State Street Global Advisors. As of 31 December 2021. * Includes both shareholder and management "Say on Climate" proposals.

Future Efforts

Moving forward, we are further developing our approach to climate-related voting and engagement to encourage and hold companies accountable on managing climate-related risks and opportunities. Starting in the 2022 proxy season, we have announced that we will take voting action against companies in the S&P 500, S&P/TSX Composite, FTSE 350, STOXX 600, and ASX 100 indices if companies fail to provide sufficient disclosure in accordance with the TCFD framework, including:

- Board oversight of climate-related risks and opportunities
- Total Scope 1 and Scope 2 GHG emissions
- Targets for reducing GHG emissions

We view this policy as a natural escalation of our previously-stated expectations and history of proxy voting and engagement on the TCFD framework. We expect to continue to expand this policy in the coming years.

As a complement to the voting policy mentioned above, we will launch an engagement campaign on climate transition plan disclosure targeting significant emitters in carbon-intensive sectors. Starting in 2023, we will hold directors accountable if companies fail to show adequate progress on meeting our climate transition disclosure expectations. Through our engagements, we will aim to better understand climate transition plans and strategies, and gain insight on each company's unique set of climate-related risks and strategic opportunities presented by the transition.

To better understand how these engagements and our proxy voting lead to successful outcomes, please refer to our 2021 Stewardship Report.

Climate Risk Integration

As we have laid out above, there are several ways through which we are mitigating potential impacts of climate change on our business. Our focus has been on the following four risk types where we believe climate risk may have a material impact.

Investment Risk

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. Furthermore, it is the team's responsibility to highlight intentional and unintentional exposures, inclusive of climate-related risks; initial reporting leveraging climate data is in place, and the team is in the process of developing an associated framework and risk processes. Attention is focused on where we have risk, how much risk we have, and whether it is consistent with our views and client objectives. In addition, the team provides portfolio level risk reporting to investment managers to help ensure that they are taking appropriate climate-related risks in their portfolios.

Product Risk

In order to manage risk around products, including potential divergence from client expectations or investment objective, the Product teams frequently engage with the Asset Stewardship, Distribution, and Investment teams, as well as our clients, to explore our client climate preferences and needs.

Business Risk

As investor, industry, and regulatory expectations intensify, we face increasing demand for disclosure about our products and climate-related processes. To help meet those expectations, we have appointed a Global Head of ESG and sustainable Investing to build out the ESG team and strengthen our ESG/climate governance structure.

Operational Risk

Operational Risk is defined as the risk of loss resulting from inadequate or failed internal processes and systems, human failure, or external events. Operational risk is inherent in all of the activities that State Street conducts: i.e., in the services and products delivered to clients, the technology and processes used to support them and the staff, and in ensuring their effective operation. State Street's Operational Risk Framework provides an integrated set of processes and tools that assist in the identification, management, and monitoring of operational risk and accounts for the impacts of climate event risk, such as acute physical impacts, that may affect our operational risk and resiliency.

Metrics and Targets

Metrics and targets play a critical role in measuring our progress towards reaching net zero by 2050 and managing our climate and environmental risks. It is important not only for our own operations, but also for our portfolio companies. We see climate metrics as useful inputs for integrating climate change, including in the TCFD-aligned reporting we provide to clients.

As part of our NZAM commitment we have set interim emissions reductions targets, which were published earlier this year. We intend to use our net zero metrics and targets on emissions intensity associated with our AUM while continuing to also track industry standard metrics. As data and methodologies improve, we will revise and enhance the metrics we use to monitor and manage our climate change risks and opportunities.

Scope 1 and 2 Emissions Disclosure: Our parent's scope 1 and scope 2 emissions are tracked and reported as part of their TCFD disclosures.

Metrics for Assessing Climate Risks and Opportunities

We use a range of climate metrics across data providers in different applications as a part of our client reporting on some investment strategies. These metrics include industry standards, such as fossil fuel reserves, brown and green revenues, carbon intensity, carbon footprint, implied temperature rise, scope 1 and 2 carbon emissions, adaptation results, and WACI emissions data. In addition to providing our clients with metrics to help them understand their own climate-related investment risks, 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 forward-looking climate metrics.

Our climate metric suite forms a foundation for integrating climate change into our asset stewardship, portfolio management, and investment risk management processes. Some metrics such as carbon intensity and carbon footprint have robust coverage and more well-defined methodologies. However, other metrics lack transparency, and the methodologies require additional validation before we can further integrate into our business. For instance, we have looked extensively at various climate VaR providers, and are currently comparing the various approaches and evaluating which tool would be more robust and effective.

In addition to our goal of integrating climate-related metrics, we also are considering additional environmental metrics.

Targets For Assessing Climate Risks and Opportunities

We owe our clients the fiduciary duty to maximize financial returns. To be effective in fulfilling that fiduciary duty, we should take into consideration systemic risks that may impact financial outcomes. Climate change is such a risk. It is apparent that the risks posed by climate change and the opportunities associated with efforts to reduce emissions are critical to our mission to invest responsibly. Thus, we made the decision to join the NZAM initiative last year and as part of that commitment we have set initial interim targets.

Setting interim targets is the first step in our journey to fulfilling our net zero commitment. We currently include a proportion of our AUM in our interim target commitment and we are looking to increase until we reach 100%. Our target-setting approach is intended to drive credibility, accountability and transparency. We consider:

1. **Client Investment Objectives and Preferences** First, we include those portfolios with an explicit decarbonization objective. For the remaining portfolios with more traditional investment objectives, we analyze the types of underlying clients and where they are based. Based on internal assessment and understanding of our client goals in relation to net zero, we include assets from clients who have adopted net zero targets or similar climate commitments or may be reasonably expected to do so.

2. **Asset Classes** We currently only consider portfolios invested in equities and corporate fixed income because better established methodologies and more robust climate data exist in these two asset classes to achieve net zero.

3. **Business Model** We note that the majority of our assets are invested in index tracking strategies, most of which are managed with a tight tracking error budget. Included in our interim targets are those index portfolios (i) benchmarked to a net zero index such as Paris Aligned Benchmarks (“PAB”), (ii) allowed a sufficient tracking error budget with a decarbonization objective, or (iii) reasonably expected to adopt a net zero objective by 2030.

Given our business model, our aggregate portfolio broadly reflects the market, and our perspective is that of a “universal owner” of assets. This means that real economy carbon emissions reductions, across all sectors and all regions, are critical for our ability to meet our net zero goals by 2050. Our strategy for increasing the proportion of assets to be managed in line with net zero is tailored to the key levers we have to further the transition to a low carbon economy. Our key levers include (i) engagement with market participants — portfolio companies, clients, policy-makers, and index vendors; and (ii) capital reallocation.

As part of our market engagement, we encourage investee companies to adopt decarbonization goals and/or energy transition plans, advocate policy-makers to promote climate-related disclosures, and work with index vendors to offer net-zero-aligned indices. Our stewardship efforts are focused on driving broad climate action in the market across sectors as well as more targeted action for companies with the most significant emissions. In addition, we aim to develop more low carbon and climate-aligned investment solutions, products, and analytics for our clients.

As we work to increase our in-scope assets to 100% over time, we intend to actively engage with clients to encourage them to adopt net zero goals and consider strategies that are aligned with net zero. In addition, we will look to expand coverage to other asset classes (e.g., sovereign bonds, cash) where we have material AUM, as clear methodologies develop in the industry.

Closing Thoughts

Going forward, we will continue to expand on our target and metric disclosures as we progress on our net zero commitment and further integrate climate metrics into our business and strategy.

Appendix: Net Zero Asset Managers Initiative Interim Targets

State Street Global Advisors is a signatory to the Net Zero Asset Managers initiative. The chart below provides additional information about our AUM to be managed in line with net zero by 2030 and the targets that we have established for our in-scope assets.

<table>
<tr><td>AUM / Proportion of AUM in Scope</td><td>

$582.7 billion / 14.1% of total AUM (as of 12/31/2021)

This proportion (14.1%) is the first step in our journey towards our net zero commitment and is based on the following considerations. Our approach is intended to drive credibility, accountability and transparency.

1 **Client Investment Objectives and Preferences** First, we include those portfolios with an explicit decarbonization objective. For the remaining portfolios with more traditional investment objectives, we analyze the types of underlying clients and where they are based. Based on internal assessment and understanding of our client goals in relation to net zero, we include assets from clients who have adopted net zero targets or similar climate commitments, or may be reasonably expected to do so.

2 **Asset Classes** We currently only consider portfolios invested in equities and corporate fixed income because better established methodologies and more robust climate data exist in these two asset classes to achieve net zero. As of December 31, 2021, these asset classes represent 68.5% of our total AUM, and are eligible for inclusion in scope and target-setting. Of these assets, about 20.5% are included in our interim targets, which represents 14.1% ($582.7 billion as of December 31, 2021) as a proportion of our total AUM.

3 **Business Model** We note that the majority of our assets are invested in index tracking strategies (78.2% of our AUM as of December 31, 2021), most of which are managed with a tight tracking error budget. Included in our interim targets are those index portfolios (i) benchmarked to a net zero index such as PAB, (ii) allowed a sufficient tracking error budget with a decarbonization objective, or (iii) reasonably expected to adopt a net zero objective by 2030.

Given our business model, our aggregate portfolio broadly reflects the market, and our perspective is that of a “universal owner” of assets. This means that real economy carbon emissions reductions, across all sectors and all regions, are critical for our ability to meet our Net Zero goals by 2050. Our strategy for increasing the proportion of assets to be managed in-line with net zero is tailored to the key levers we have to further the transition to a low carbon economy. Our key levers include (i) engagement with market participants — investee companies, clients, policy-makers, and index vendors; and (ii) capital reallocation.

Within engagement, we encourage investee companies to adopt decarbonization goals and/or energy transition plans, advocate policy-makers to promote climate-related disclosures, and work with index vendors to offer net-zero-aligned indices. Our stewardship efforts are focused on driving broad climate action in the market across sectors, as well as more targeted action for companies with the most significant emissions. In addition, we aim to develop more low carbon and climate-aligned investment solutions, products, and analytics for our clients.

As we work to increase our in-scope assets to 100% over time, we intend to engage with clients to encourage them to adopt net zero goals and consider strategies that are aligned with net zero, where appropriate. In addition, we will look to expand coverage to other asset classes (e.g., sovereign bonds, cash) where we have material AUM, as clear methodologies develop in the industry.

</td></tr>
<tr><td>Baseline Year</td><td>2019</td></tr>
</table>

Targets	We have established the following three targets for our in-scope AUM: **Emissions Reduction** A 50% reduction in financed Scope 1+2 Carbon emissions intensity by 2030 relative to 2019 baseline (based on emissions intensity attributed using Enterprise Value Including Cash (EVIC), adjusted for EVIC inflation). **Portfolio Coverage** Increase AUM invested in assets in material sectors that are (i) achieving net zero or (ii) aligned to net zero, to 100% by 2040. We are currently studying the prevalent methodologies and external vendor data to assess the trade-offs in coverage and quality. We will set quantified targets for the years 2025 and 2030, based on a linear approach to achieve the 100% by 2040 goal. **Engagement** An engagement goal which seeks to achieve that at least 70% of financed emissions in material sectors are either assessed as net zero, aligned with a net zero pathway, or the subject of direct or collective engagement and stewardship actions. We will target to increase this ratio to at least 90% by 2030 at the latest.
GHG Scopes Included	Our emissions reduction target will currently include only Scope 1 and Scope 2 emissions; Scope 3 emissions to be phased in over time when disclosure and methodology improve sufficiently.
Methodology	Paris Aligned Investment Initiative Net Zero Investment Framework
Scenarios	We have assessed multiple net zero pathways (including IPCC P1, P2, P3 scenarios, One Earth Climate Model, IEA Net Zero Emissions by 2050), and our overall emissions reduction target of 50% is broadly in-line with emission reductions indicated by these pathways. We will provide additional information on specific pathways being used, should we pursue region or sector-specific target setting in the future.
Further Information	https://www.ssga.com/us/en/institutional/ic/capabilities/esg/our-target-net-zero

About State Street Global Advisors

For 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, we build from a breadth of active and index strategies to create cost-effective solutions. As stewards, we help portfolio companies see that what is fair for people and sustainable for the planet can deliver long-term performance. And, as pioneers in index, ETF, and ESG investing, we are always inventing new ways to invest. As a result, we have become the world's fourth-largest asset manager* with US $4.14 trillion† under our care.

* Pensions & Investments Research Center, as of December 31, 2020.
† This figure is presented as of December 31, 2021 and includes approximately $61.43 billion of 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.

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Marketing Communication

State Street Global Advisors Worldwide Entities

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Net zero means that the total greenhouse gas (GHG) emissions being emitted should be lower than or equal to the total GHG emissions being removed or absorbed (ie, no positive emissions). On a net basis, no additional emissions should be released into the Earth's atmosphere.

Net zero strategies Investment strategies that seek to align investments with a net-zero goal by a particular point in time (e.g., 2050).

The returns on a portfolio of securities which exclude companies that do not meet the portfolio's specified ESG criteria may trail the returns on a portfolio of securities which include such companies. A portfolio's ESG criteria may result in the portfolio investing in industry sectors or securities which underperform the market as a whole.

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Responsible-Factor (R Factor) scoring is designed by State Street to reflect certain ESG characteristics and does not represent investment performance. Results generated out of the scoring model is based on sustainability and corporate governance dimensions of a scored entity.

A **Smart Beta** strategy does not seek to replicate the performance of a specified cap-weighted index and as such may underperform such an index. The factors to which a Smart Beta strategy seeks to deliver exposure may themselves undergo cyclical performance. As such, a Smart Beta strategy may underperform the market or other Smart Beta strategies exposed to similar or other targeted factors. In fact, we believe that factor premia accrue over the long term (5-10 years), and investors must keep that long time horizon in mind when investing.

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The value style of investing that emphasizes undervalued companies with characteristics for improved valuations, which may never improve and may actually have lower returns than other styles of investing or the overall stock market.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates raise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Currency Risk is a form of risk that arises from the change in price of one currency against another. Whenever investors or companies have assets or business operations across national borders, they face currency risk if their positions are not hedged.

The Fund may emphasize a "growth" style of investing. The market values of growth stocks may be more volatile than other types of investments. The prices of growth stocks tend to reflect future expectations, and when those expectations change or are not met, share prices generally fall. The returns on "growth" securities may or may not move in tandem with the returns on other styles of investing or the overall stock market.

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1063408-4751122.1.1.GBL.RTL 0522
Exp. Date: 05/31/2023