A Case For: Sustainable Climate Equity Strategy

Environmental, Social & Governance (ESG)

State Street Global Advisors has developed a deeply researched equity climate strategy. Our climate-aware investment process seeks to enable investors to improve their portfolio's carbon profile and reduce climate risk, while maintaining target returns.

The Slow-Burning Crisis

The scientific evidence for man-made climate change is incontrovertible. The last five years have been the hottest on record and there is a greater than even chance that 2020 will be the hottest.[1]

Last year was marked by disaster caused by more frequent and extreme weather events brought about by climate change. A notable example was the Australian wildfires, set off by a record heatwave, which destroyed 44,400 square miles of bushland and forest and led to the killing or displacement of an estimated 3 billion animals.[2]

Warming has also led to unprecedented melting of ice and snow at the north and south poles. Sea level rise will mean coastal communities are much more exposed to flooding and extreme storms, leading many to migrate inland, putting pressure on infrastructure and resources. And with greater carbon dioxide in the oceans comes ocean acidification, degradation of marine ecosystems and reduction in marine biodiversity.

Research suggests that 'tipping points' such as the melting of huge ice sheets or the loss of the Amazon rainforest are much more likely to occur than previously thought.[3]

Tackling the Climate Threat

In recognition of the severity of climate risks, countries have committed to reducing carbon emissions in line with the 2015 Paris Agreement of limiting global warming to 2° Celsius or less over the 21st century. The European Union, UK and several other countries have committed to be carbon neutral by 2050. In advance of regulation, many companies are proactively taking steps to reduce their carbon footprints and disclose their exposure to climate risks. Below are three trends in the global response to climate change that investors will have to address.

1 **The Seismic Energy Transition** Recent years have seen a sustained shift in energy use away from fossil fuels and towards renewable energy, driven largely by acknowledgement of the impact of fossil fuel pollution and the need to reduce carbon emissions. The falling costs of solar and wind energy have further increased their attractiveness compared to fossil fuels. The COVID-19 crisis has acted to hasten the decline in fossil fuel demand and by the time the global economy recovers, it is possible that most of the growth in energy demand may be met by renewable energy sources.[4] The transition to the low carbon economy will require companies in all sectors to decrease their carbon footprint.

2 **Regulatory Tipping Point** An increasing number of countries and local jurisdictions are implementing carbon pricing and emissions trading initiatives in order to reach net zero carbon emissions by 2050. The European Parliament approved the EU Taxonomy Regulation, which will be fundamental to the realisation of the European Green Deal, which aims to boost private sector investment in green and sustainable projects. The European Insurance and Occupational Pensions Authority has stated that pension funds and insurers can play a key role in the transition towards a low carbon economy and that they should actively incorporate climate change risks in their own risk management frameworks. The European Commission is also seeking to integrate sustainability risks and sustainability factors into Undertakings for the Collective Investment in Transferable Securities (UCITS) schemes, the Alternative Investment Fund Managers Directive (AIFMD) and the Markets in Financial Instruments Directive (MiFID).

3. **Capital Allocations** A growing number of investors are incorporating climate considerations into capital allocation decisions. A recent study found that two-thirds of the world's largest pension schemes expect to increase their allocations to climate-related index funds over the next three years.[5] Another potential driver for the increased adoption of climate considerations in investment portfolios is the perceived robustness of sustainable investment strategies.

Portfolio Impact

Investors are increasingly appreciating that climate risks are financial risks. Climate change is the highest priority among UN PRI signatories, representing over 3,000 investors and over $100 trillion of assets.[6] For investors, climate change and its impact on asset valuations are becoming important criteria for investment decisions. The risks from climate change can be split into four broad categories:

Figure 1 **Climate Change Risks**

Systemic Risk to financial markets as they seek to digest impact on economic growth, societal disruption and energy-mix change	**Country Risk** to petro-states that fail to reinvent themselves in time
Corporate Risk in sectors across the world, from drilling to diesel engines and from transport to banks	**Asset Value at Risk** as investors digest vast amounts of potentially stranded fossil fuel assets Fossil fuel and related sectors comprise about a quarter of all equity and debt markets

Companies face a multitude of climate-related risks, from supply chain disruptions and shortage of raw materials, to falling demand for products and services, to regulations, including carbon taxes.

Appreciating that climate risks must be addressed, what should an optimal climate-aware approach look like? Limiting carbon emissions is clearly necessary but insufficient on its own.

Asset owners must also build long-term resiliency into their portfolios. Resiliency is critical in a world that will be shaped by climate change for decades, perhaps even centuries, to come.

A 'Mitigation and Adaptation' Approach

We believe in an investment approach that incorporates both **mitigation** of greenhouse gas emissions, and **adaptation** to the future impacts of climate change. These are complementary approaches to reducing climate risks and correspond with asset owners' need to balance short and long-term risks and opportunities.

- Mitigation aims to reduce the flow of heat-trapping greenhouse gases into the atmosphere and increase exposure to new energy and green companies.
- Adaptation aims to increases exposure to companies working proactively to minimise their exposure to the actual or expected physical, economic and regulatory impacts of climate change and the transition to a low-carbon economy.

Introducing the Sustainable Climate Equity Strategy

Imagine if you could improve your portfolio's carbon profile and reduce climate risk, all while keeping risk and return characteristics broadly in place.

This is the rationale behind the State Street Sustainable Climate Equity Strategy (the Strategy). The Strategy adopts a systematic mitigation and adaptation approach that targets Paris-aligned reductions in carbon emissions and reallocation of capital towards companies benefiting from low-carbon technologies.

The Strategy aims to achieve the following objectives in relation to five climate categories utilised in the portfolio construction process:

Figure 2 **Paris-Aligned Objectives of the Sustainable Climate Equity Strategy**

	Objectives	Metrics
1	**Minimise** Carbon Emission Intensity	CO_2 emissions per $m revenues
2	**Minimise** Fossil Fuel Reserves	Total reserves of CO_2 emissions (metric tonnes)
3	**Minimise** Brown Revenues	% revenues from extractive activities
4	**Maximise** Green Revenues	% revenues from low carbon technologies
5	**Build** Resilient Portfolio	Score on Climate Change Preparedness

Our approach follows a four-step process:

1 Start with the Right Universe Clients can select three core exposures — World Equity, Europe Equity and US Equity. For each exposure, we first incorporate a set of screens that are aligned with our climate and ESG objectives.

We utilise three sets of exclusions based on product involvement and prescriptive regulatory screens, which we update on a quarterly basis:

Figure 3 **Exclusionary Screening Criteria**

Climate Related Exclusions	**Thermal Coal**
	Arctic Oil & Gas
	Oil Sands
ESG and Reputation Risk Related	**UN Global Compact Violators** Provide universal principles on human rights, labour, environment and anti-corruption
	Controversial Weapons/Armaments Screen companies involved in production and distribution of weapons that have disproportionate and indiscriminate impact on civilians
	Severe ESG Controversies
Based on Prescriptive Regulatory Screen	**Swedish Ethical Council** Focused on influencing companies to operate in a more sustainable way by acting to bring about positive change in companies associated with violations of international conventions on environment and human rights

We follow a well-defined methodology that leverages best-in-class data from multiple data providers. Our approach is attentive to the impact on tracking error of excluded securities.

2 Source Quality Data All investment strategies rely on relevant and high-quality data and climate strategies are no different. At State Street Global Advisors, we employ an open architecture to source the best-available data.

We have currently selected the following data providers for the Strategy:

- **Trucost** for carbon emission intensity, fossil fuel reserves and brown revenues
- **FTSE Russell** for green revenues
- **ISS ESG** for adaptation score

3 Design for Optimal Outcomes We utilise a mitigation and adaptation framework to rebalance the portfolio towards companies that will achieve our stated objectives:

Figure 4 **Designed for Maximum Impact**

↓	**Reduce Exposure** to companies with worse-than-average carbon emissions and fossil fuel assets.
↑	**Increase Exposure** to companies generating revenues from low-carbon opportunities.
↑	**Increase Resiliency** by targeting companies that are positioned to benefit from the transition to the low-carbon economy.

4 Balance for Risk-Adjusted Return We then balance the portfolio to target the highest expected risk-adjusted return, given the desired constraints.

The Strategy's optimisation parameters are calibrated by our Global Equity Beta Solutions research team. We model the portfolio based on the following specifications:

Figure 5 **Portfolio Construction Specifications**

Objective: Minimise Portfolio Carbon Intensity, Quarterly Balance

Constraints	World	US	Europe
Tracking Error	<=1%	<=1%	<=1%
Liquidity	20% of 60-day MDV buy or sell max	20% of 60-day MDV buy or sell max	20% of 60-day MDV buy or sell max
Holdings	Less than or equal 10x benchmark weight	Less than or equal 10x benchmark weight	Less than or equal 10x benchmark weight
Holdings	+/-2%	+/-2%	+/-2%
Grandfathered Holdings	+/-2.5%	+/-2.5%	+/-2.5%
Sector/Country/ Currency	+/-1%	+/-1%	+/-2%
Turnover	Soft constraint of 10% two-way quarterly turnover	Soft constraint of 10% two-way quarterly turnover	Soft constraint of 10% two-way quarterly turnover
Brown Revenues Score	**-90%**	**-90%**	**-75%**
Fossil Fuel Reserves Score	**-90%**	**-90%**	**-75%**
Green Revenues Score	**+300%**	**+300%**	**+200%**
Adaptation Score	**+0.25 exposure improvement**	**+0.25 exposure improvement**	**+0.25 exposure improvement**

As an example, on average for the World Equity Strategy, we are able to achieve a carbon intensity reduction of 70% by targeting a brown revenue and fossil fuel reserves reduction of 90%, a green revenue improvement of 300% and an improvement in adaptation score of 20%, compared to the corresponding MSCI World Equity Index.

Key Features of the Sustainable Climate Equity Strategy

- Flexibly balances the five objectives of reduced fossil fuel exposure, reduced brown revenue exposure, increased green revenue exposure, as well as increasing exposure to adapting companies, all while minimising carbon intensity.
- Represents sustainable climate parameters while reducing the impact of stock-specific returns.
- Minimises active exposures that do not provide out-performance expectations, such as currency, country, sectors and industries.

Key Benefits of the Sustainable Climate Equity Strategy

- Cost-efficient access to diversified Global, US and European equity exposures in a Paris-aligned format
- Significantly improve investors' carbon profile in advance of incoming regulations
- Screen companies that do not meet basic environmental and human rights standards
- Benefit from a state-of-the art portfolio optimisation model

Who We Are

State Street Global Advisors' ESG experience covers portfolio management, investment research, proxy voting and engagement, as well as valuable relationships with third-party research providers.

We apply a multi-dimensional approach to our ESG investing solutions. Over more than 30 years of ESG investing, we have advanced our portfolio management and stewardship capabilities to deliver value to our clients.

Through our extensive ESG data and research, we can help develop and implement solutions for our clients that align policy, principles and values, yet seek maximum performance or minimum tracking error within the constraints.

1 Based on NASA data (2020).

2 'Australia's 2019-2020 Bushfires: The Wildlife Toll', WWF (2020).

3 'Climate tipping points — too risky to bet against', Lenton et al (2019).

4 'COVID-19 and Energy in the New World', State Street Global Advisors and Carbon Tracker Initiative (2020).

5 'Passive Investing 2020: Addressing climate change in investment portfolios', Create Research (2020).

6 UN-backed PRI (as at 31 March 2020).

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 $3.90 trillion† under our care.

* Pensions & Investments Research Center, as of December 31, 2020.
† This figure is presented as of June 30, 2021 and includes approximately $63.59 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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Investment in the Fund carries with it a degree of risk.
Investors should read the "**Risk Information**" section of the Prospectus. The following are the principal risks of investing in the Fund:

Currency Hedging Risk Hedges are sometimes subject to imperfect matching between the hedging transaction and the risk sought to be hedged. There can be no assurance that the Fund's hedging transactions will be effective. As the purpose of currency hedging is to try to reduce or eliminate losses caused by exchange rate fluctuations, it can also reduce or eliminate gains where the currency in which the Fund's assets are denominated appreciates.
Equity and Equity related securities Risk The market prices of equity and equity related securities may go up or down, sometimes rapidly or unpredictably. The value of these securities may decline for reasons that directly relate to the issuer and/or due to general industry or market, such as real or perceived adverse economic conditions, changes in the general outlook for corporate earnings, changes in interest or currency rates, or adverse investor sentiment generally. Equity markets tend to move in cycles, which may cause stock prices to fall over short or extended periods of time.
ESG Risk If the Fund invests in companies taking into account environmental, social and corporate governance (ESG) criteria, then the performance of the Fund may trail the returns of a portfolio of securities that includes companies that are not excluded as a result of such ESG criteria. Investing only in a portfolio of securities that are not excluded as a result of such ESG criteria may affect the Fund's exposure to certain types of investments and may adversely impact the Fund's performance.
Integrating Sustainability Risk Integrating Sustainability Risk into the Fund's investment process does not assure the mitigation of any or all Sustainability Risk. Any deterioration in the financial profile of an underlying investment affected by a Sustainability Risk may have a corresponding negative impact on the Net Asset Value and/or performance of the investing Fund.
Modelling Risk The Investment Manager and/or Sub-Investment Manager uses quantitative models in an effort to enhance returns and manage risk. Any imperfections, errors or limitations in these models or in their programming could limit any benefit to the Fund from the use of the models, or could result in incorrect outputs or in investment outcomes different from or opposite to those expected or desired by the Investment Manager and/or Sub-Investment Manager. Such imperfections, errors or limitations might never be detected, or might be detected only after a Fund has sustained a loss (or reduced performance). Further, there can be no assurance that the models will behave as expected in all market conditions.
Screening Risk There is a risk that the screen provider may make errors, such as incorrect assessment of the screen criteria and/or include incorrect/exclude correct constituents in the screening process or discontinue its screening services. In such circumstances, the Company may change the screen provider although there is no guarantee that a replacement screen provided would result in a similar screening process to that intended or would be available at all.

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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