Insights
Environmental, Social & Governance (ESG)

June 2021

Weathering the Storm: Exploring Climate Strategies

Jennifer Bender, Ph.D.
Director of Research, Global Equity Beta Solutions

Kushal Shah, MS
Research Associate, Global Equity Beta Solutions

Climate change is here and we will experience the impact of changing weather patterns, rising sea levels and deteriorating ecosystems on the real economy for decades to come. Globally, governments are showing greater commitment to address climate change, while the spirit of European regulatory initiatives to decarbonise looks likely to spread to the US and beyond.

Therefore, the question is no longer whether asset owners should act to address climate risks in their portfolios. It is *how* best to preserve and grow long-term returns in an environment where climate risks will only heighten and regulations will only become more onerous. This article outlines the options available for asset owners.

Climate Risks and Opportunities

Climate change and the multitude of its impacts pose a variety of direct and indirect risks to investors. These can be broadly categorised into two types of risk:

- **Physical risks** are tangible risks of climate change that could manifest through a rise in sea levels, droughts, flooding, extreme temperatures and increased frequency of extreme weather events. These phenomena could damage infrastructure, cause supply-chain disruption, result in raw materials scarcity or harm human health.

- **Transition risks** are risks to economic and business models that are associated with new carbon pricing or emissions trading schemes, and the risk that higher costs of carbon may lead to stranded assets. Transition risks include changing consumer habits and labour market shifts, as well as investment allocation decisions in companies and sectors better suited to a low carbon economy.

Like any form of disruption, climate change also presents opportunities for forward-thinking investors:

Green energy investments represent an opportunity to reposition toward "green" revenue sectors, including renewable energy generation, energy management and efficiency, and green environmental infrastructure.

Climate resilient investments represent an opportunity to benefit from the success of firms that are building in resiliency to the potential impacts of climate change. These companies are proactively adapting their business models, including how they deploy capital and where they grow their business lines in response to the climate threat.

An ideal solution would mitigate the impact of both physical and transition risks on the long-term value of an investor's portfolio while taking advantage of opportunities by adding exposure to green and climate-resilient investment opportunities.

Integrating Climate Considerations

Armed with this knowledge, how can asset owners create sustainable and resilient portfolios that can weather the climate storm and generate attractive sources of green revenue?

While previously, the only choice for asset owners would be to invest token amounts in satellite allocations, the growth of climate investment strategies has meant there are now many more options available today. Increasing evidence of climate change combined with regulatory action have resulted in rapid innovation in climate investing. Investors can now integrate climate considerations at the total portfolio level.

1. **Climate-related Screening** Negative screening involves excluding specific companies, industries, or countries from an investment portfolio based on ESG or climate-related factors or risks. Investments can be screened for poor ESG performance or because the investment violates the investor's ethical principles. Norms-based screening involves exclusion investments based on minimum standards of business practice based on international norms such as the UN Global Compact.

   One drawback to negative screening is that by excluding companies in the sectors like energy and materials, the investor can miss out on green revenues and opportunities associated with the energy transition. For index investors, excluding investment in whole groups of companies, sectors or countries can also result in high tracking error. In addition, by divesting, investors lose their ability to bring about positive change through engagement and voting.

2. **Mitigation** A more nuanced approach than blanket exclusions would be to minimise climate risks and maximising opportunities across the entire portfolio by targeting specific metrics. This is done by focussing on mitigation of current and future carbon emissions. Mitigation aims to reduce the flow of heat-trapping greenhouse gases into the atmosphere and increase exposure to new energy and green companies.

   Climate risks can be mitigated by reducing the following three portfolio climate metrics:

   — **Carbon emissions intensity** (CO_2 emissions per $m of company revenues)

   — **Fossil fuel reserves** (Total reserves of CO_2 emissions)

   — **Brown revenues** (% revenues from extractive activities)

   Rules-based approaches have the benefits of simplicity and transparency compared to optimisation, which is done algorithmically.

3. **Mitigation and Adaptation** In a decarbonising world, mitigation of carbon emissions is a very logical approach. Yet, it foregoes the investment opportunities associated with the move to net zero emissions and the energy transition. A mitigation and adaptation approach addresses both climate risks and opportunities.

   This is the focus of the State Street Sustainable Climate Equity and Bond Funds, which allow investors to gain a desired equity exposure, while also managing climate risks and building long-term resiliency into their portfolios. In addition to the reducing the above carbon metrics, both funds are structured to increase **climate adaptation** scores, which evaluate companies' climate change preparedness. Our Sustainable Climate Equity funds also benefit from allocation to sources of **green revenues**, while our Sustainable Climate Bond funds increase allocation to **green bonds** compared to the index.

   Our analysis shows that substantial improvements in green revenue exposure and climate risk adaptation as well as significant reductions in carbon intensity, fossil fuel reserves exposure and brown revenue exposure are all achievable, while still being orientated towards the characteristics of the starting universe.

   Below is a summary of the three main climate investing approaches.

Figure 1
Key Characteristics of Climate Investing Approaches

Climate Investment Strategy	Description	Advantages	Disadvantages	Considerations
Screening	Exclude investments based on ESG factors or risks	Easy to understand	Uncertain impact on portfolio characteristics	Which screens are implemented?
		Straightforward to implement in theory	Leads to higher tracking error than other approaches	How will screens impact on tracking error?
		Allows for client-specific requirements	Divestment does not allow for engagement	
Mitigation	Achieve a specified reduction in carbon intensity, fossil fuels and brown revenues relative to the benchmark	Reduce exposure to companies contributing to climate change	Ignores the investment opportunities associated with the transition to net zero	What is the impact of reducing the investment universe?
		Reduce climate transition risk		What is the impact on tracking error?
				How is carbon intensity reduction measured?
Mitigation and Adaptation	Achieve a specified reduction in carbon intensity, fossil fuels and brown revenues, while also targeting an improvement in green revenues and climate adaptation	Reduce exposure to companies contributing to climate change	Applied models are sophisticated and require a high level of understanding	What is the impact of reducing the investment universe?
		Reduce climate transition risk		What is the impact on tracking error?
		Benefit from green opportunities and investment in companies that are successfully adapting to climate change		How is carbon intensity reduction measured?
				How are green opportunities evaluated?

Source: State Street Global Advisors.

Investors should carefully consider the benefits and drawbacks of each approach when evaluating which strategy to adopt. It's important to remember that screening and other more complex approaches are not mutually exclusive — they can be used in combination to achieve an investor's desired portfolio climate profile.

The Future of Climate Investing

That the world needs to transition to a low carbon future to avoid catastrophic climate change is no longer in doubt. Governments, industries and asset managers globally are all making net zero commitments by 2050 in line with the Paris Agreement. Even the International Energy Agency, historically a proponent of fossil fuels, has called for an end to fossil fuel expansion and huge investments in clean energy.

So the question is really how investors will maintain returns and portfolio resiliency amid stringent regulations the systemic impact of climate change on financial market and the real economy. In this article, we have outlined the characteristics of three broad investment strategies that investors can use to address climate risks.

We expect to see further innovations in the quality of climate data, climate finance research and portfolio-level techniques. In particular, there is work being undertaken around integrating climate metrics in traditional investment approaches, from the potential impact of climate change on portfolio tail risk, to whether carbon is priced into markets, and within which asset classes over various time horizons.

Investors today have a unique opportunity to ensure the long-term preservation and growth of their portfolios, while also contributing to the solutions we require to tackle climate change. The time to act is now.

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 third-largest asset manager with US $3.59 trillion* under our care.

* This figure is presented as of March 31, 2021 and includes approximately $60.33 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.

ssga.com

Marketing Communication

State Street Global Advisors Worldwide Entities

Abu Dhabi: State Street Global Advisors Limited, ADGM Branch, Al Khatem Tower, Suite 42801, Level 28, ADGM Square, Al Maryah Island, P.O Box 76404, Abu Dhabi, United Arab Emirates. Regulated by the ADGM Financial Services Regulatory Authority. T: +971 2 245 9000. **Australia:** State Street Global Advisors, Australia, Limited (ABN 42 003 914 225) is the holder of an Australian Financial Services License (AFSL Number 238276). Registered office: Level 14, 420 George Street, Sydney, NSW 2000, Australia. T: +612 9240-7600 F: +612 9240-7611. **Belgium:** State Street Global Advisors Fosbury & Sons Chaussée de La Hulpe, 185 B-1170 Watermael-Boitsfort, Belgium. T: 32 2 663 2036. F: 32 2 672 2077. SSGA Belgium is a branch office of State Street Global Advisors Ireland Limited. State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. **Canada:** State Street Global Advisors, Ltd., 1981 McGill College Avenue, Suite 500, Montreal, Qc, H3A 3A8, T: +514 282 2400 and 30 Adelaide Street East Suite 800, Toronto, Ontario M5C 3G6. T: +647 775 5900. **France:** State Street Global Advisors Ireland Limited, Paris branch is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Ireland Limited, Paris Branch, is registered in France with company number RCS Nanterre 832 734 602 and whose office is at Coeur Défense - Tour A - La Défense 4 33e étage 100, Esplanade du Général de Gaulle 92 932 Paris La Défense cedex France. T: (+33) 1 44 45 40 00. F: (+33) 1 44 45 41 92. **Germany:** State Street Global Advisors GmbH, Brienner Strasse 59, D-80333 Munich. Authorised and regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin"). Registered with the Register of Commerce Munich HRB 121381. T: +49 (0)89-55878-400. F: +49 (0)89-55878-440. **Hong Kong:** State Street Global Advisors Asia Limited, 68/F, Two International Finance Centre, 8 Finance Street, Central, Hong Kong. T: +852 2103-0288. F: +852 2103-0200. **Ireland:** State Street Global Advisors Ireland Limited is regulated by the Central Bank of Ireland. Registered office address 78 Sir John Rogerson's Quay, Dublin 2. Registered Number: 145221. T: +353 (0)1 776 3000. F: +353 (0)1 776 3300. **Italy:** State Street Global Advisors Ireland Limited, Milan Branch (Sede Secondaria di Milano) is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Ireland Limited, Milan Branch (Sede Secondaria di Milano), is registered in Italy with company number 10495250960 - R.E.A. 2535585 and VAT number 10495250960 and whose office is at Via Ferrante Aporti, 10 - 20125 Milano, Italy. T: +39 02 32066 100. F: +39 02 32066 155. **Japan:** State Street Global Advisors (Japan) Co., Ltd., Toranomon Hills Mori Tower 25F 1-23-1 Toranomon, Minato-ku, Tokyo 105-6325 Japan. T: +81-3-4530-7380. Financial Instruments Business Operator, Kanto Local Financial Bureau (Kinsho #345), Membership: Japan Investment Advisers Association, The Investment Trust Association, Japan, Japan Securities Dealers' Association. **Netherlands:** State Street Global Advisors Netherlands, Apollo Building, 7th floor Herikerbergweg 29 1101 CN Amsterdam, Netherlands. T: 31 20 7181701. SSGA Netherlands is a branch office of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. **Singapore:** State Street Global Advisors Singapore Limited, 168, Robinson Road, #33-01 Capital Tower, Singapore 068912 (Company Reg. No: 200002719D, regulated by the Monetary Authority of Singapore). T: +65 6826-7555. F: +65 6826-7501. **Switzerland:** State Street Global Advisors AG, Beethovenstr. 19, CH-8027 Zurich. Registered with the Register of Commerce Zurich CHE-105.078.458. T: +41 (0)44 245 70 00. F: +41 (0)44 245 70 16. **United Kingdom:** State Street Global Advisors Limited. Authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 2509928. VAT No. 5776591 81. Registered office: 20 Churchill Place, Canary Wharf, London, E14 5HJ. T: 020 3395 6000. F: 020 3395 6350. **United States:** State Street Global Advisors, 1 Iron Street, Boston, MA 02210-1641. T: +1 617 786 3000.

For use in EMEA: The information contained in this communication is not a research recommendation or 'investment research' and is classified as a 'Marketing Communication' in accordance with the Markets in Financial Instruments Directive (2014/65/EU) or applicable Swiss regulation. This means that this marketing communication (a) has not been prepared in accordance with legal requirements designed to promote the independence of investment research (b) is not subject to any prohibition on dealing ahead of the dissemination of investment research.

Important Risk Information

The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor. All information is from SSGA unless otherwise noted and has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

The views expressed are the views of Global Equity Beta Solutions through June 8, 2021, and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

Investing involves risk including the risk of loss of principal. Quantitative investing assumes that future performance of a security relative to other securities may be predicted based on historical economic and financial factors, however, any errors in a model used might not be detected until the fund has sustained a loss or reduced performance related to such errors.

The trademarks and service marks referenced herein are the property of their respective owners. Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

ID556681-3623544.1.1.GBL.RTL 0621
Exp. Date: 30/06/2022