





CLIMATE RISK IN PRIVATE INVESTING

An Anthesis Whitepaper

INTRODUCTION

Private companies and the funds that invest in private assets face the same challenges as publicly traded operating companies on emerging climate change risks:

- · How to address rising investor expectations that they will analyze, disclose and manage risks associated with climate
- · How to refine their approach to ESG integration to reflect this heightened focus on climate risks
- · How to evaluate this distinct set of risks across private holdings where current disclosure is mostly minimal

INVESTOR DRUMBEAT

The drumbeat of investment asset owners requesting or demanding greater disclosure on the risks and opportunities associated with climate change has increased in breadth, cadence and volume. The outward signs are:

- BlackRock's CEO Larry Fink saying: "The evidence on climate risk is compelling investors to reassess core assumptions about modern finance" as he questions the questions the long-term viability of financial instruments including 30-year mortgages and infrastructure project finance in the face of climate change. 1
- Other very large investors such as State Street Global Advisors have also publicly announced minimum expectations for climate change risks and opportunities.
- TCFD claims the support of financial institutions with asset under management of \$118 trillion
- · Among publicly listed issuers, increasing numbers are reporting against the TCFD standard or taking steps in that direction.

DRIVERS BEYOND INVESTORS

But the drumbeat from investors isn't the only force driving companies of all types to analyze their climate change risks and opportunities. Regulation in some jurisdictions is echoing the investors sentiment and requiring new disclosures from public and private companies alike. The pattern of emerging regulatory requirements in Europe for mandatory energy use and GHG disclosure in parallel to TCFD is already in process. In the UK for example, the new Streamlined Energy and Carbon Reporting (SECR) regulations are estimated to require an additional 11,000 private companies to disclose their energy use and GHG emissions, including at least one intensity ratio, within their financial filing from 2020 onwards.

These disclosures will inevitably lead to company by company benchmarking by industry and firm size on key dimensions of energy use and GHG emissions. While this transparency won't inherently lead to assessment and reporting of climate risks, it does put the issue on the table with a substantial set of data as the starting place and set the stage for consumer selection based on standardized data.

While it is difficult to project what other regulatory schemes on carbon will be in our future, but again the patterns are becoming clear. The Principles for Responsible Investment have developed an initial take on what those policies might include. The most obvious is increased pricing on carbon in more markets, covering a larger scope of emissions and with higher prices on carbon. PRI also anticipates policies globally that phase out the use of thermal coal and ban internal combustion engine vehicles by a certain date. The UK, the Netherlands, France, Norway and Denmark have all laid out plans to eventually ban the sale of cars with internal combustion engines. The UK for instance only recently announced plans to bring this forward from 2040 to 2035.

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LET'S BE PRECISE ABOUT CLIMATE RISK

The starting point is that here we are not talking about risks to society from climate change. Those are very real presently and in the future. They are also well documented by the scientific community in the reports of the IPCC and others based on scientific consensus.

Here, we are talking about risks to business success posed by climate change. For investors, that means changes to investors' financial risk-adjusted returns expectations based on physical and transitional climate risks.



Physical climate risks stem from chronic, or incremental, changes in climate like temperature rises, reduced water supply in some regions, changing growing seasons, changes in drought cycles and sea level rise. They also include acute or events risks from more intense rainfall events, increase in powerful cyclones, and hurricanes/typhoons. Some risks combine chronic and acute risks. For example, big storm surges from storms may combine with higher sea levels to increase hazards.

Transition climate risks from how we respond to climate change in public policy and as consumers in the market as well as how technology evolves lower-carbon alternatives. Above we noted that we most often think of a price on carbon or regulation of carbon emissions, but the transition to a lower-carbon economy will involve other sources of risk and not just in the energy and other highly-carbon exposed industries.

These risks are already manifesting with business impacts across operations, supply chains and markets. TCFD provides guidance for how to categorize, describe and analyze these risks. Much of it parallels best practices in governance and management of key ESG issues that include climate and may not be challenging for many companies

The critical innovation in the TCFD guidance is the call for scenario analysis applied to the financial performance of the company under different scenarios for climate change. This scenario analysis is distinct from prior best practices and not something most companies have done already absent the TCFD. This is important because investors are setting the expectation that operating companies will analyze and manage these risks with diligence. Similarly, it set ups the expectation that asset managers will analyze and manage these risks on behalf of beneficial owners and report the same.

To analyze scenarios, one needs to be specific and clear about the pathway to value from any risk to financial consequence. The diagram below depicts this process from unmitigated hazard to financial consequence. Not that this pathway to value is different in different instances, industries and positions in any given value chain.

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LET'S BE PRECISE ABOUT CLIMATE RISK

These risks are real, potentially material and manageable in many instances. They are also most obvious and best described in long time horizons relative to most typical investment horizons.

What investors are asking for is best captured in Fink's letter:

"This year, we are asking the companies that we invest in on behalf of our clients to: ... disclose climate-related risks in line with the TCFD's recommendations, if you have not already done so. This should include your plan for operating under a scenario where the Paris Agreement's goal of limiting global warming to less than two degrees is fully realized, as expressed by the TCFD guidelines."

But this is directed at publicly traded companies. What does this mean for private investors? Investors have an expectation that you have analyzed and are managing climate change as a risk factor systematically in your investments and documenting it. The expectation is that you know the potential consequences to risk-adjusted return of the climate risk exposure of your assets and have tested portfolio companies or other assets against more difficult climate scenarios.

Virtually no one has done that already and fulfilling those expectations won't be easy.

WHAT DOES GOOD CLIMATE RISK ANALYSIS LOOK LIKE?

That chapter is still being written, but we have some pretty clear understanding of the key concepts:

- Materiality is key: focus on the specific risks that you believe have the greatest potential to be financially material to an asset
- Comparable scenarios: use climate scenarios that are as standardized as possible to test your financial model
- Financial analysis: demonstrate that you've done financial analysis based on scenarios even if you don't disclose the specifics of that analysis

Steps in the methodology:

- Start with a comprehensive view of the ways that the full range of climate risks and opportunities may affect the long-term success of a business or asset
- Engage those in the organization with knowledge and management responsibility for climate related functions and product categories
- Prioritize the risks that are most likely to have a material impact on the financial performance of the asset and develop a clear description of the pathway to value, or how a physical, policy, market or technology change would lead to a change in financial performance
- Develop a simple financial model of the pathway to value for each prioritized risk
- 5. Select scenarios that:
 - a. Include variables that are key inputs for the financial model
 - b. Are as standardized as possible (e.g. IEA Energy Outlook)
 - c. Test the range of possible outcomes from Business as Usual to actions effective in limiting climate change to the levels set out in the Paris Accords
- 6. Apply the scenarios to the financial models
- Work with the others in the organization to adapt the model, improve the data inputs and incorporate the analysis into the overall risk management function.

CONCLUSION

How do you get started? Since this is about identifying the most material implications, start by looking across all your assets to identify those in industries with the greatest business exposure to climate risks. Then, identify the priority risks for those industries before doing the financial analysis of specific assets under different plausible climate scenarios.

There's a good bit of quality research available on climate change impacts by industry, but it does require some assembly to get an understanding of which industries face the biggest financial risks from physical, policy, market and technology risks associated with climate change. For assets in the most exposed industries, prioritize which specific risks warrant further analysis along that pathway to value. It could be a price on carbon leading to a competing low-carbon technology or process capturing market share. Or it could be a supply chain choke point that is vulnerable to increased severe weather events. Test it out against different climate scenarios and get a sense of the financial result.

Most importantly, have a logical process. And get started.

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