



# Rising Climate Change Risk Not Yet Factored in by Markets

Limited impact on near-term cash flows is masking longer-term risk.

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## KEY INSIGHTS

- Climate change has seen a dramatic increase in attention in recent years, and this has been reflected in its prominence as an investment issue.
- Despite this focus, however, only those sectors facing high transition risk, like fossil fuel producers, have seen valuations materially impacted.
- In our view, rising climate change risk is not being reflected in broader valuations due to the limited impact of climate factors on near-term cash flows.



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Last year we saw a dramatic increase in concern over climate change, which was reflected in its prominence as an investment issue. Despite all this attention, however, climate change has only had a significant impact on the valuations of select sectors—specifically those facing extremely elevated transition risk, such as fossil fuel producers. We believe valuation dislocations have been limited to a narrow universe of companies because climate change has not been particularly impactful to near-term cash flows for the broader market.

This is not to say that companies are not vulnerable to climate change today, but more that they are not yet directly feeling the impact. In many instances, insurance is covering physical risks. Meanwhile, governments have not started to regulate or tax companies for greenhouse gas (GHG) emissions, deforestation, or other catalysts of climate change. We believe that valuations will eventually start to factor in climate change risks—and

opportunities—affecting virtually our entire investment universe, albeit to varying degrees.

## The Science Behind Climate Change

For the world to have a chance of at least minimizing the impact of climate change, it is necessary to keep global temperatures to within +1.5°C from preindustrial levels. To experience less severe impacts from climate change, global temperatures need to stay within +2.0°C. The UN's Intergovernmental Panel on Climate Change (IPCC) Special Report on Climate Change found that keeping the global temperature rise to +1.5°C would require a 45% reduction in net emissions by 2030 and net zero emissions by 2050. Keeping to +2.0°C would require a 25% reduction in emissions by 2030 and net zero by 2070.

## Viewing Our Investments Through a +1.5°C and +2.0°C Lens

Science indicates that keeping the global mean surface temperature rise to less

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## Minimizing the Impact of Climate Change Is a Challenge

(Fig. 1) Required reduction in net GHG emissions

Global Temperature Rise Target	Reduction Needed in Net Emissions by 2030	Year to Achieve Net Zero Emissions
+1.5°C scenario	45%	2050
+2.0°C scenario	25%	2070

As of 2018.

Source: UN Intergovernmental Panel on Climate Change.

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than +1.5°C will be extremely challenging, if not impossible. Therefore, in our view, the probability that our investments will need to be capable of adapting to either a +1.5°C or +2.0°C scenario is high. Even keeping global warming within these parameters means there will be climate change impacts that will affect the investment landscape, such as rising sea levels, increased storm frequency, hotter, more frequent heat waves, and shifting growing seasons.

In its 2019 Global Warming of 1.5°C report, the IPCC aggregates the various scientific climate models that keep global warming within a +1.5°C pathway. Taking the midpoint of these models implies a massive re-engineering of the world’s energy infrastructure, including significant energy efficiency gains as well as transitioning away from fossil fuels and into renewables between now and 2050. Potentially even more material to many investment cases is how the regulatory landscape might evolve to meet a +1.5°C or +2.0°C scenario.

### Climate Change in Our Investment Analysis

How our investee companies are assessing their exposure to climate change and building environmental sustainability into their long-term strategic planning are key concerns for our analysts and portfolio managers. We believe that almost the entire investment universe will feel some impacts of climate change—through revenues, sourcing, or cost structure—and companies that

can create economic value with a low or zero carbon footprint will be better positioned than peers in a world of rising environmental regulation. Figure 2 illustrates some examples of where we believe climate change factors are most material across equity and fixed income credit markets.

When we evaluate climate change factors in our investment thesis, we believe that fundamental analysis, coupled with our Responsible Investing Indicator Model (RIIM) analysis, is a real strength. RIIM can help our analysts compare how one potential investment stacks up versus another on a range of climate-related issues. Applying RIIM portfolio analysis can also help portfolio managers quantify the amount of risk they are taking on climate-related issues across the whole portfolio and compared with its benchmark.

In addition to our RIIM analysis, the responsible investing team works closely with our sector analysts in evaluating climate change factors. Work done by the responsible investing team can range from company-specific analysis, such as assessing environmental ratings on real estate companies, to more thematic work like creating a carbon tool. This tool allows our analysts to input their own gross domestic product (GDP), energy efficiency, de/reforestation, and other forecasts to understand how certain assumptions compare with a +1.5°C and +2.0°C pathway.

### The Disconnect Between Science, Policy, and Corporate Reporting

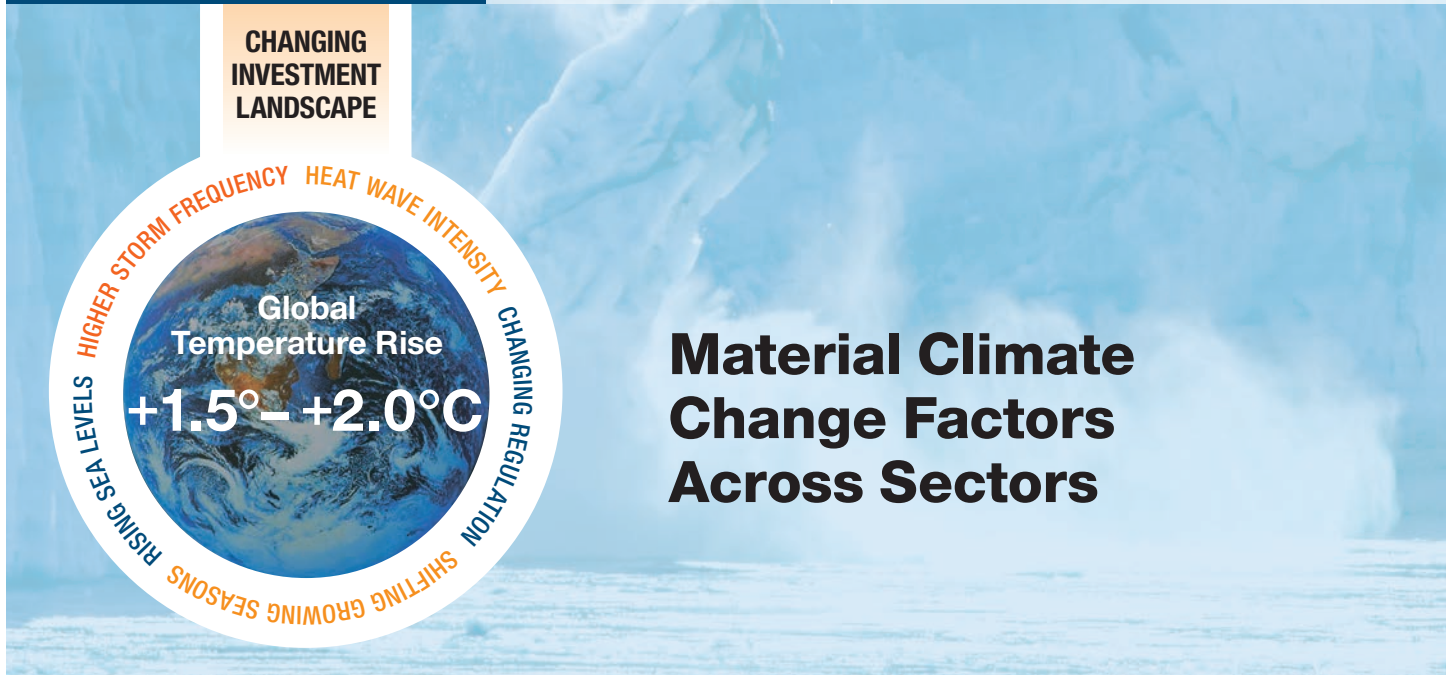
A profound disparity exists between science and policy regarding climate change. Despite the prominence of this issue in society, we continue to see varying levels of commitment from governments on combating rising

temperatures. On the global stage, nations were unable to come to an agreement at the UN Climate Change Conference COP 25 summit held in Madrid. However, on a regional and national level, there has been action to push policy closer to science. Perhaps the most notable is the European Union

## Climate Change and the Investment Universe

(Fig. 2) The impact will be felt more materially in certain sectors

	Examples of Sectors Facing Primary Impact (Revenue)	Examples of Sectors Facing Secondary Impact (Supply Chain, Operational and Capital Expenditure)
<b>ENERGY EFFICIENCY</b>	Industrials, Technology	Apparel and Textiles, Manufacturing and Construction, Transportation, Real Estate, Other Industry and Large Energy Consumers
<b>DECARBONIZATION</b>	Energy, Utilities	
<b>NON-CARBON GHG REDUCTION</b>	Natural Gas and Pipelines, Agriculture, Waste Management	Food and Beverage, Food Retailers
<b>IMPROVED LAND</b>	Food and Beverage, Forestry and Paper Products and Other Packaging, Agricultural Chemicals	Apparel and Textiles, Food Retailers, Packaging



As of December 2019.  
Source: T. Rowe Price.

“Despite the prominence of [climate change] in society, we continue to see varying levels of commitment from governments on combating rising temperatures.

(EU) Green Deal, which contains a series of proposed legislation aimed at moving the EU to net zero GHG emissions by 2050.

While we have seen improvement over recent years, an ongoing issue that impacts the quality of environmental, social, and governance reporting we can provide to our clients is corporate disclosure. Even for the most widely reported environmental metrics, namely total GHG emissions and total carbon emissions, we find that disclosure levels are low across most benchmarks.

We can compensate to some degree for low disclosure levels by using estimated carbon emissions (provided by third parties), but it still does not allow for full coverage of benchmarks and portfolios in many cases. Additionally, estimating carbon emissions for a company is a very difficult task, so accuracy is a concern, and we would caution clients about making decisions based solely on this quantitative dataset. As companies start to report these data more consistently, and in a standardized format, we will likely see notable adjustments.

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