Markets Don't Deny the Existence or Risks of Global Climate Change

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Larry Fink is the CEO of BlackRock, the largest money management firm in the world, with more than $6 trillion of assets under management. He recently described climate change as a "defining factor in companies' long-term prospects" and called for firms to better incorporate global warming in their decisionmaking. He wants corporations to disclose publicly their actions and progress to enable accountability. Fink expects a major reallocation of capital as companies, investors, and governments take climate change more seriously.

The evidence is clear that investment decisions in private companies are beginning to respond to two factors, *climate risk* and *carbon risk*. With the increasing severity and, in some cases, frequency of hurricanes, fires, droughts, heat waves, and flooding, companies are dedicating more resources and staff to mitigate the exposure of their assets and supply chains to these risks.

Accounting for such climate risk influences how a company performs when subject to a climate shock, which can signal to investors the extent to which a business has climate-proofed its operations. Recent research by Brigitte Roth Tran and Mathias Kruttli, economists on the staff of the Federal Reserve Board, along with Sumudu Watugala of Cornell has explored how hurricane risk affects the stock returns of publicly traded companies. They find that firms with significant activities exposed to hurricane risk — in terms of both the likelihood that a hurricane will strike the region where a given company has locations as well as the severity of the impacts — are more likely to have lower returns on their stocks and have greater future volatility as reflected in the prices on stock options.

While investors may want some high-risk, high-reward investments in their portfolios, increasing the likelihood of hurricane damages increases the risk without increasing the reward for companies with this greater climate-related exposure. Fully hedging this greater uncertainty in firm performance due to hurricanes would have cost several billion dollars per year over the past several decades.

In housing markets, buyers and sellers are incorporating the potential damages from sea-level rise in the valuations of coastal properties. Comparisons of otherwise similar homes that differ in their likely inundation due to long-term effects find that an exposed house sells for about seven percent less. The price differential reflects how market transactions are pricing in future climate risks.

Firms must respond to climate risk and carbon risk to remain competitive

As governments implement more ambitious efforts to combat climate change, companies face the second factor, carbon risk — the cost for emitting CO_2 under these policies that may affect firms' investments, long-term strategy, and economic returns. Some companies have implemented internal carbon prices to guide their operations and planning. Since 2012, Microsoft has imposed a company-wide carbon tax, which it recently increased to $15 per ton of carbon dioxide, that finances the firm's climate-related innovation fund. This will be one of the major tools the company employs as it strives for its goal to be carbon-negative by 2030.

Many other companies have employed internal carbon prices as a way to guide investment decisions and the development of strategy consistent with their expectations of future climate policy and carbon prices. It's important to recognize that incorporating such carbon risk in business planning can help identify opportunities. Companies have a good incentive to explore new opportunities as the clean energy transition progresses. Some companies have noted that actively addressing their role in contributing to climate change has enabled them to attract high-quality, purpose-driven employees. Incorporating carbon pricing as a part of business planning can also appeal to investors — such as those who use BlackRock — who want to ensure that a company's investments and strategy account for the prospect of carbon risk.

While denial of climate change among some politicians may inhibit, in the near-term, policy action, the business actions by investors and companies alike reflect their understanding that climate risk affects their bottom line. And as the risks of climate change evolve from being distant and abstract to current and salient — more intense hurricanes in the Caribbean and Gulf States, more extreme wildfires in California and Australia, more severe heat waves across Europe, etc. — firms will anticipate that climate risk will inform carbon risk.

Governments already taking action may increase their ambition, and those that have been lagging may finally advance meaningful policies to price carbon and drive investments and behavioral changes in order to mitigate their carbon dioxide emissions.

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