Rising tides, sinking stocks: Study explores cost of climate change

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Henk Berkman is professor of finance at the University of Auckland Business School. Credit: University of Auckland

As the financial implications of climate change continue to soar, a forthcoming journal article explores its effects on company values.

Professor Henk Berkman (Business School) and co-authors Naomi Soderstrom (University of Melbourne) and Jonathan Jona (University of

New Mexico) developed a novel way to figure out just how exposed individual companies are to climate risks using a detailed analysis of annual reports.

"There has been a real movement over the past decade to require firms to be forthcoming regarding their sustainability performance and climate risks," says Professor Berkman.

"Companies are reporting on how climate change might impact their sales, their exposure to physical risks, all of those things, and our measure uses this detail and converts it into a number."

That number, says Berkman, demonstrates how vulnerable a firm is to climate change.

"If a company is highly exposed to climate risks, a spike in climate anxiety due to a flood event or the release of a report by the Intergovernmental Panel on Climate Change, for example, tends to hit its value harder than it would a less vulnerable company.

"In other words, the stock market appears to view exposure to climate risk as value-reducing.

"We also find that the stock market evaluates the impact of climate-related news on firms through the lens of the firm's climate risk exposure—firms with higher levels of climate risk have more negative returns surrounding increases in concerns about climate risk."

For investors looking to understand how climate change will affect a certain company, the researchers' tool enables them to rank firms according to their vulnerability.

"This is helpful for investors and researchers because you can start to see those firms that are highly sensitive to climate change, and then you can look at their risk management measures—whether they hold more cash, lower their leverage or do other things to diversify their activities away from climate-sensitive industries."

Berkman says demonstrating that climate risk disclosures are value-relevant will help efforts to develop further measures and standards to enable investors to better understand climate risks in relation to firm value.

"Our evidence supports the argument that companies with greater exposure to climate risk have a lower market value and are more exposed to climate-related events. It's apparent that the market recognizes climate risk as relevant and undiversifiable, penalizing those firms that face more significant risks from climate change."

The paper, "Firm-Specific Climate Risk and Market Valuation," has been accepted for publication by the journal *Accounting, Organizations and Society*.

More information: Henk Berkman et al, Firm-specific climate risk and market valuation, *Accounting, Organizations and Society* (2024). DOI: 10.1016/j.aos.2024.101547

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