Environmental Reputation Risk and the Cost of Equity: The Impact of Corporate Response to Climate Change Exposures

Executive Summary

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Abstract

This study examines the impact of environmental and climate change reputation risk on the cost of equity, emphasising the role of financial analysts' perceptions of corporate responses to climate change exposures. We find that reputational risk measured by environmental misconduct is positively associated with a higher cost of equity. However, firms that adopt a proactive approach to climate change, demonstrated by positive attitudes in earnings conference calls, experience lower equity costs following environmental misconduct. Conversely, negative corporate attitudes toward climate risks increase the equity costs of such incidents. The mediating effect of corporate attention on climate change exposures arises through its influence on analysts' earnings forecast revisions. These results highlight the importance of proactive corporate engagement with environmental and climate risks in shaping investor perceptions and financial outcomes.

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Executive summary

Environmental reputation risk has emerged as a key factor in financing for net zero. The transition to a low-emission economy has introduced significant risks to financial systems, corporate financing, and economic stability by pricing carbon emissions and incentivising renewable energy adoption. Investors increasingly recognise the financial implications of climate risks, particularly for carbon-intensive sectors. Understanding the dynamic impact of these transition risks on asset pricing and capital flows is vital for leveraging opportunities in the low-carbon transition. Amid these changes, environmental reputation risk has emerged as a critical factor, reflecting the financial market's response to climate-related misconduct.

We quantify the impact of environmental- and climate-related reputation risks on financial performance. While extensive research has been conducted on regulatory, litigation, and technological risks, the impact of environmental reputation risk—arising from environmental, including climate change, misconduct—on financial performance has received limited attention. This study aims to address this gap by examining how environmental reputation risks affect the cost of equity and the role of corporate attention to climate change in mitigating these effects.

We measure reputation risk using news-based data on environmental and climate change related incidents from RepRisk, a data provider that tracks environmental, social and governance (ESG) issues associated with the 10 UN Global Compact Principles since 2007. We use climate change exposures, as documented by Sautner et al. (2023) based on earning conference calls, as a proxy for financial analysts and corporate attention to climate change[1]. To estimate the cost of equity capital, we adopt a widely used approach in accounting and finance research, using the ex-ante cost of equity derived from analyst earnings forecasts and stock prices. Our findings are as follows.

First, environmental as well as climate change reputation risk increases cost of equity. For a sample of 9378 firms with 52203 firm-year observations from 2007 to 2022, we find that environmental misconduct, including climate change incidents, significantly increases the cost of equity. For example, *a one-standard-deviation increase in environmental incidents raises the cost of equity by twenty basis points.* The relationship holds across metrics weighted by severity, scope, and novelty, indicating that environmental risks amplify financial uncertainty for investors. Similarly, climate change misconduct also demonstrates a significant positive impact on equity costs. For example, *one standard deviation increase in climate change incidents leads to an increase of nineteen basis points*.

[1] Sautner et al., (2023) quantifies the level of attention financial analysts pay to firm's climate change exposures during earnings conference calls. They examine transcripts of earnings conference calls from 2001 onward to construct time-varying measures that reflect how participants globally perceive firms' exposure to various aspects of climate change. These measures serve as indicators of the attention financial analysts and management dedicate to climate change topics at specific points in time. Additionally, the study categorises climate change exposures in the transcripts based on tone, identifying them as either positive or negative, depending on the overall sentiment associated with the firm.

Second, corporate attention to climate change can mitigate the impact of environmental reputation risk. We find strong evidence that corporate and financial analyst attention to climate change exposures can mitigate the negative financial impact of environmental misconduct. Specifically, firms with a proactive, positive management approach toward climate change issues show a weakened association between environmental misconduct and the cost of equity (see Table 1). For example, *one standard deviation increase in the level of attention to climate change exposure in presence of environmental incidents is associated with a twenty-four basis points reduction in the cost of equity* . Conversely, negative attitudes intensify this relationship, leading to higher equity costs associated with environmental risks. These results suggest that the proactive management of climate change exposure not only protects corporate reputation but also provides a financial advantage by reducing the equity costs related to environmental misconduct.

Table 1. The impact of corporate climate (CC) attention/response

	Coefficient	Economic significance
The impact of CC attention/response on the relation between environmental incidents and the cost of equity		
Environmental incidents*CC attention	-0.057***	-24 basis points
Environmental incidents*CC negative attention	0.052***	+22 basis points
Environmental incidents*CC positive attention	-0.053***	-23 basis points
The impact of CC attention/response on the relation between climate change incidents and the cost of equity		
Climate change incidents*CC attention	-0.105***	-19 basis points
Climate change incidents*CC negative attention	0.097***	+17 basis points
Climate change incidents*CC positive attention	-0.092***	-16 basis points

NS*: Not statistically significant.

Finally, analyst attention to climate change exposures affects earnings forecast revisions. To further elaborate on the mediating role of corporate climate change attention, we examine the impact of analysts' earnings forecast errors and revisions on a three measures of corporate attention to climate change exposures: overall climate change attention, negative attention, and positive attention. We find that corporate and financial analyst attention to climate change exposures affects analysts' earnings forecast revisions, with positive attention reducing earning forecast revision and negative attention increasing uncertainty. It suggests that market analysts integrate corporate climate strategies into their evaluations, influencing the implied cost of equity. The results remain robust under various sensitivity analyses, including staggered difference-in-difference models to address endogeneity concerns and tests using individual measures of the cost of equity.

In summary, this study extends the literature on sustainable finance by highlighting the financial consequences of environmental reputation risk and the moderating role of corporate climate attention and strategies. It complements existing research on transition risks by emphasising the importance of proactive climate management in mitigating financial costs associated with environmental misconduct. It suggests that, while environmental reputation risk can increase the cost of capital, this effect can be alleviated by firms by not only paying attention to this risk but also proactively reducing this risk.

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