

The capital market effects of climate change disclosure: evidence from social media and analyst forecasts

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Abstract

Purpose – The growing urgency of climate change has intensified regulatory, market and societal pressures on firms to enhance transparency regarding their environmental strategies, positioning climate change disclosure (CCD) as a critical component of nonfinancial reporting. Although prior research has extensively examined sustainability disclosure, limited attention has been devoted to CCD as a distinct disclosure dimension and to its implications for capital market intermediaries. Drawing on voluntary disclosure theory, this study aims to address this gap by investigating whether climate-related information disseminated through social media – particularly Twitter – influences the quality of financial analysts' earnings forecasts, measured in terms of forecast error and forecast dispersion.

Design/methodology/approach – This study employs a dictionary-based content analysis to identify CCD disseminated through firms' Twitter accounts. The climate-related dictionary was developed through an expert validation process drawing on the United States Environmental Protection Agency glossary and prior literature to identify keywords relevant to climate-related communication. The empirical analysis is based on a panel dataset comprising 463 firm-year observations from 134 firms operating in environmentally sensitive industries and included in the S&P 500 index over the period 2021–2024. Panel regression models are used to examine whether more frequent CCD via social media is associated with lower analyst forecast error and reduced forecast dispersion.

Findings – The results indicate that firms engaging more intensively in CCD on Twitter exhibit significantly lower analyst forecast error and reduced forecast dispersion. These findings suggest that social media functions as an effective informal disclosure channel, providing timely and decision-useful climate information that enhances analysts' evaluative capacity and supports more transparent capital markets.

Originality/value – This study contributes to the literature on nonfinancial disclosure and capital markets by isolating CCD as a specific and economically relevant dimension of nonfinancial reporting and by examining



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its dissemination through social media. It offers novel evidence on the role of Twitter as an informal disclosure channel that complements traditional reporting mechanisms, improves the information environment for financial analysts and supports more transparent and efficient capital markets. Moreover, the findings reinforce the explanatory power of voluntary disclosure theory in the context of climate-related communication and digital disclosure strategies.

Keywords Climate change, Disclosure, Analyst forecast error, Analyst forecast dispersion, Social media, Voluntary disclosure theory

Paper type Research paper

1. Introduction