Do Fund Managers Misestimate Climatic Disaster Risk?

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1 Research questions

Will fund managers overestimate the impact of climate disasters on companies and stock prices?

2 Why are the research questions interesting?

• Climate risks can have a significant impact on companies' stock prices and investors' investment portfolios.
• Salience bias: Individuals evaluate risk based on the significance rather than events' actual probability.
• Erroneous estimates due to salience bias affect the info efficiency and market efficiency of stock prices.

3 What is the paper's contribution?

***(1)* Literature on Climate Risk and Asset Pricing**
Previous: Market prices accurately reflects long-term climate risks, such as temperature fluctuations.
This: Climate disaster risk assessment causes irrational bias in investment portfolio decisions for fund managers.

***(2)* Literature on the Impact of Climate Risk on Corporate Behavior**
Previous: Companies located in hurricane areas irrationally hoarded excess liquidity after the hurricane hit.
This: A large amount of data on the actual trading behavior of fund managers was used.

***(3)* Literature on the Response of Investor Behavior to Climate Risk**
Previous: Examining implications of climate risks for investor behavior.
This: Study whether mutual fund managers misjudge the economic risk of climate disasters.

***(4)* Literature on Fund Managers' Risk Appetite**
Previous: How fund managers became more risk averse after disasters, thereby reducing the volatility of funds.
This: Such biased investment decisions lead to local and short-term market efficiency changes in the stock prices.

4 What hypotheses are tested in the paper?

H1: Compared to funds located far from the disaster area, those located nearby have reduced holdings of stocks.
H2A: Stocks that are underweighted by managers with superior information are expected to perform poorly then.
H2B: Stocks that are underweighted by managers with salience bias are expected to perform poorly then.

a) Do these hypotheses follow from and answer the research questions?
• Yes, these hypotheses follow from and answer the research questions.
Do these hypotheses follow from theory or are they otherwise adequately developed?
• If fund managers overreact after a disaster (H1), this may be due to salience hypo(H2B) or information hypo(H2A).
• H1 is based on the salience theory in behavioral finance, where people tend to evaluate risk based on the significance of events rather than just actual probability.

5 Sample: comment on the appropriateness of sample selection procedures.

The clear division between the control group and the treatment group ensures the impact of climate disaster risk can be more accurately assessed.

6 Dependent and independent variables: comment on the appropriateness.

By using a series of control variables and fixed effects, the impact of climate disasters can be accurately estimated.

7 Regression model specification: comment on the appropriateness.

Regressions are appropriate for evaluating whether fund managers' responses to climate disasters are biased.

8 What difficulties arise in drawing inferences from the empirical work?

When considering temporal dynamics effects, the model may become very complex and difficult to estimate.

9 Describe at least one publishable and feasible extension of this research.

Machine Learning Approaches:
Research Question: How can machine learning algorithms help detect and correct for the misestimation of climate disaster risks by fund managers?
Feasibility: By applying machine learning to historical data, researchers could potentially develop algorithms that predict and correct for salience bias in real-time.