

# Examining the effect of climate change media reports on stock returns

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SMU Ph.D. candidate in Finance Wang Luying examines the effect of climate change media reports on stock returns. Credit: Singapore Management University

Climate change is the defining crisis of the 21st century. [United Nations Secretary-General Antonio Guterres called it a "crisis multiplier"](#), while renowned naturalist Sir David Attenborough described climate change as "the biggest threat to security that modern humans have ever faced." Extreme weather events, the latest being the floods in South Korea and India and record heat waves in Greece and the United States, dominate media headlines with worrying and increasing regularity.

Wang Luying, a Singapore Management University (SMU) Ph.D. candidate in Finance, decided to ask the question: Can [media coverage](#) of [climate](#) change move or influence aggregate stock market returns?

"If media coverage can predict market returns, then it is important to invest in areas of climate change that are covered by the [news media](#)," she explains, referring to her [research paper](#) titled "Media Climate Change Concern and Stock Returns".

"We constructed a media climate change index based on media coverage about climate change from newspapers, television, and radio. The finding is: The monthly change of the index could predict market return both in-sample and out-of-sample. It can also deliver sizeable economic gains for various investors in asset allocation."

## **The research**

For the project, Wang and her collaborators looked at the monthly number of climate change news reports from five newspapers, seven television networks, and one radio network between January 2000 and September 2021, as well as two wire services between January 2004 and September 2021.

Unlike most existing climate change indexes which are based on a single media outlet, Wang's work is more representative of the media's effect

on market reaction to climate change events. For example, retail investors are more likely to sell carbon-intensive firm stocks during hot weather. Keeping track of multiple media sources would be a better gauge of aggregate market sentiment than just focusing on one [media outlet](#).

For Wang, who was awarded the 2022 SMU Interdisciplinary Doctoral Fellowship, the study of climate change's economic and financial effects encapsulates the spirit of the Fellowship award.

"This paper looks at Climate Finance, bringing together the disciplines of Climate Economics, news media, and Returns Forecasting in Finance," she explains. "Climate change is an urgent and defining issue of our time, and it has also become the central topic in the news media. In finance, the news media plays an important role in market movements. Prior studies have documented that news sentiment and coverage about certain topics can predict market returns."

She adds, "We need immediate action to mitigate the effects of [climate change](#). Finance is important. It can help allocate resources towards projects that help [sustainable development](#), reduce carbon emissions, or develop renewable energy. This area is important and meaningful.

"Climate risk is very complex. Where it can affect financial markets are two primary channels: The first is physical risks, the second is transition risks. Physical risks include things such as [extreme weather](#) and natural disasters, while transition risks pertain to policies and regulations, such as carbon taxes or emission limits. The way to measure these two types of risks effectively is quite important and interesting."

## Looking ahead

As Wang approaches the conclusion of her Ph.D. journey, she credits

the expertise and guidance of SMU faculty for her development—from her thesis advisor Professor Jun Tu, thesis committee members Professors Hong Zhang and Dashan Huang, to other faculty members such as Professor Hao Liang. Wang believes she is well-prepared for post-Ph.D. life.

"I'm focused on positions looking at empirical finance and asset pricing, but I'm only starting to explore my options," she says. As for those who are just starting out on, or are looking at a Finance Ph.D. at SMU, she points out that "there are seminars every week so there is plenty of opportunity to talk to the faculty for career advancement."

"But for the first two years, focus on passing the Qualifying Examination and also try to explore your interested research area as early as possible," she emphasizes.

**More information:** Paper: [papers.ssrn.com/sol3/papers.cfm ... ?abstract\\_id=4045115](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4045115)

Provided by Singapore Management University

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