Companies' stock value can be hurt by greenhouse emissions

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How much greenhouse gas a company produces has a significant effect on the value of the company's stock, according to a new study by researchers at the University of California, Davis; University of California, Berkeley; and University of Otago in New Zealand.

The greater the carbon emissions, the lower a company's stock, all other factors being equal, the researchers found. The study was led by Paul Griffin, a professor in the UC Davis Graduate School of Management.

Griffin and his colleagues also discovered that markets respond almost immediately when a company reports an event that could affect global climate change, with stock values responding the same day as the disclosure.

“It really does appear to be a valuation factor,” Griffin says. “Greenhouse gas emissions are important to investors in assessing companies.”

The study was posted recently on the Social Science Research Network, a database of social science research.

The findings bolster the arguments of investor groups, environmental advocates and watchdog organizations that have been seeking greater disclosure of company actions that affect climate change.

Although the U.S. Securities and Exchange Commission does not require all companies to report greenhouse gas emissions, firms are bound by a rule that mandates disclosure of any information material to stock values. Today, about half of large U.S. firms report greenhouse gas emissions through the Carbon Disclosure Project, a British organization representing mostly institutional investors.

Griffin and colleagues David H. Lont of the University of Otago in New Zealand and Yuan Sun of the University of California, Berkeley, analyzed four years of data (2006-09) on firms listed in the Standard & Poor's 500 and five years of data (2005-09) for the top 200 publicly traded firms in Canada.

The researchers developed mathematical models to analyze the data. They found the link between stock values and greenhouse gas emissions to hold true in most industries, although the correlation was strongest for energy companies and utilities.

"After controlling for normal valuation factors like assets and earnings, we found the value of stocks to be a function of greenhouse gas emissions," Griffin says.

Many firms file formal notices with the SEC and issue press releases following an event that could affect climate change. The researchers identified approximately 1,400 such reported events by firms in the study.

The researchers then tracked movements of stocks on days around when these events were reported. "We see a response on exactly the day you would expect to see it, and that is when the information becomes public," Griffin says.

Why do investors care about greenhouse gas emissions? Griffin says markets are always looking forward, and in this case they appear to be anticipating a time when companies responsible for climate change will face increased costs for mitigation, regulation and taxes.

"They are examining the economic impact of what a company is doing on climate change, and they are assessing whether that is positive or negative for the company's value," Griffin says.

More information: Download the full study at: ssrn.com/abstract=1735555

Provided by UC Davis

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