文献导读（六）：气候变化与金融

Climate Change and Finance

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Outline

- Environmental Policy and Finance
- Weather and Stock Market
- CSR and Finance
- Pollution and Finance
- Climate change and Corproate Fraud

Environmental Policy and Finance

- Griffin et al (2015) examined the market reaction to two “Nature” papers.
- Two “Nature” papers concluded that only a fraction of theworld's existing oil, gas, and coal reserves could be emitted if global warming by 2050 were not to exceed 2 °C above pre-industrial levels.
- Therefore, it will interesting to find out the market reactions.
- Findings of this paper shows that this publication prompted an average stock price drop of 1.5% to 2% for our sample of the 63 largest U.S. oil and gas firms.

Environmental Policy and Finance

Ramiah et al (2013) investigated the impact of 19 announcements of environmental regulation on the equities listed on the Australian Stock Exchange over the period 2005–2011.

Empircial findings provided a mixed resluts, depends on the industries.

Energy sector recorded the highest negative cumulative abnormal return of 31.18% after the Australian government submitted its target carbon reduction range to the Copenhagen Accord on 27 January 2010.

Weather and Stock Market

Saunders (1993), arguably was the first to link stock performance, investment behavior to weather conditions, as mood, feelings and emotions play an important role in making decisions and forming judgments.

Focusing on the City of New York for the period of 1927–1989, he showed that less cloud cover is associated with higher returns, and the return difference between the most cloudy days and the least cloudy days is statistically significant.

The results confirm the conjecture that investors' mood is more optimistic on sunny days, which uplifts the stock market returns, and that their pessimistic mood on cloudy days depresses the stock returns.

These findings were confirmed by Hirshleifer and Shumway (2003) who examined 26 stock market indices around the globe for the period of 1982–1997.

Weather and Stock Market

Cao and Wei (2005) examined the relation between stock return and tempture. The logical behind this is that temperature significantly affects mood, and mood changes in turn cause behavioral changes.

Evidence suggests that lower temperature can lead to aggression, while higher temperature can lead to both apathy and aggression. Aggression could result in more risk-taking while apathy could impede risk-taking.

Emprically, this study finds a statistically significant, negative correlation between temperature and returns across the whole range of temperature.

CSR and Finance

CSR and Firm Performance

- Good CSR standards may assist firms to conduct better marketing campaigns. As a result, it will increase customer demand of their products and services, as well as reducing customer pricing sensitivities (Fombrun et al., 2000).
- High CSR standards may assist firms to be more innovative and increase their level of differentiation, which leads to active development of intangible assets (Hull & Rothenberg, 2008).
- Greening and Turban (2000) report that socially responsible firms are more likely to attract and retain high quality employees. As a result, firms with good CSR performance tend to have a more competitive advantage in the long term.

CSR and Finance

CSR and Firm Performance

On the other hand, some studies find that CSR has a negative effect on firm performance. For example, Elliott et al. (2013) discovered that firm value is negatively correlated to CSR.

Surroca et al. (2010) failed to find any direct relationship between CSR and fund financial performance.

Margolis et al. (2007) ascertained a positive relationship between CSR and financial performance based on 251 published papers, books, dissertations and working papers, both accounting-based and market-based, with diminishing magnitude of the relationship in recently years.

These mixed research results can be attributed to many reasons, such as variations in research methodologies, choice and measurement of key variables, data set, and limitation on the design of studies.

CSR and Finance

CSR and Firm Characteristics

Goss and Roberts (2011) reported that firms with low CSR scores pay 7 to 18 basis points more on their bank loans compared to firms with higher CSR scores.

Cheng et al. (2014) identified that firms with better CSR performance face significantly lower capital constraints, indicating that firms can effectively reduce their business cost via improving their CSR performance

Jiraporn et al. (2014) uncovered that socially responsible firms are associated with a more favourable credit rating.

Ioannou and Serafeim (2016) established that investment analysts treat CSR as an agency cost signal therefore, these analysts generate more selling recommendations for firms with high CSR ratings.

Climate Change and Corporate Fraud

Li et al (2018) invistigated the Volkswagen emission scandal and empirically identifies the motives behind corporate deception under climate mitigation pressures.

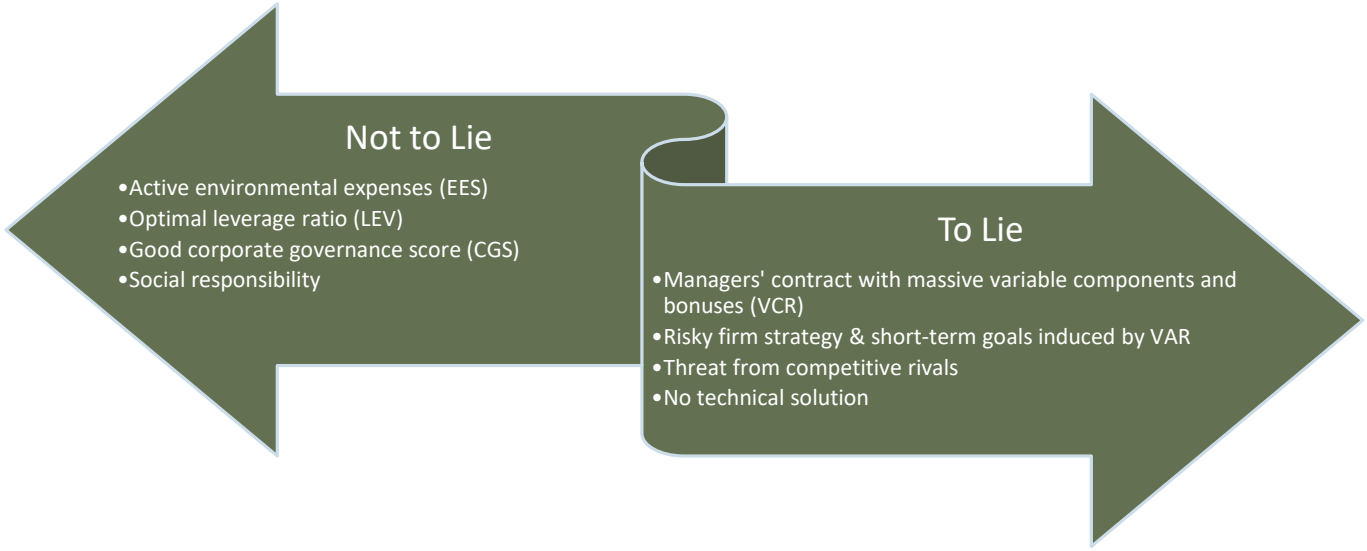
This paper developed a conceptual model summarising the factors affecting decision-making, and the firms' environmentally responsible investments (ERIs).

- legal and regulatory pressures
- firm's existing level of expertise and competency in ERIs
- pressures from emission regulation,
- market competitors
- consumers and owners or shareholders

Climate Change and Corporate Fraud

Empirically, the paper found that firms are more likely to experience corporate fraud if their senior managers are paid with substantial variable components

- riskier business behaviour
- more short-term focused



Research Method of Finance Studies

Popular data format: panel data

Polular data analysis appraoches: fixed and random effects, GMM, and DID

Dependent variables: stock returns, accounting performance, leverage, borrowing cost, financial constraint level, dividend policy, risk proxy, credit rating, and etc

Key independent variables: depends on the research questions.

- Corporate governance: ownership structure, board composition, political connections, etc
- Environmental matters: CSR score, R&D input, ESG score, emission indicators, etc
- business diverification: diverfification level

- Control vaiables: firm size, profitability, efficiency, industry, etc

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Q&A

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