Effects of Green Business on Firm Value

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Motivation

Shareholders have traditionally been a firm's greatest constituents, but new stakeholder models are emerging that suggest firms have a greater obligation to society than simply maximizing shareholder profits.

This concept of Corporate Social Responsibility (CSR) is becoming a major point of interest for many companies. One aspect of CSR is environmental responsibility, which refers to the degree to which firms act in a responsible manner in the natural environment.

Methodology

Data: Dow Jones company stock prices and articles in The Wall Street Journal and New York Times.

- Companies that have been listed in the DIJA for all 10 years from 1998—2008.
- Articles contain keyword in title or lead paragraph, sorted for relevance
- The announcement brings new information to the market

Method: Event study using Eventus and Stata software:

- Test hypotheses by examining if there is a correlation between announcements and stock price movement
- Capital Asset Pricing Model (CAPM) is used to predict expected returns

Summary of Findings

- There seems to be no statistical relationship between positive and negative events and stock price movement.
- Further analysis is needed to determine if specific announcement categories have statistically significant relationships to changes in equity valuation.

Research Questions

Do corporations go "green" to benefit of their shareholders, or do shareholders see little financial benefit from increased environmentalism?

If there is no financial benefit to acting responsibly towards the environment, what motivation do firms have to continue to pursue these initiatives?

Event Study Results

Estimation window: 51 days before event date, 200 days in length

Days	Positive Announcement (N=178)	Negative Announcements (N=65)	All Announcements (N=243)
(-5,+5)	0.16%	0.44%	0.24%
(-1,+1)	**-0.21%**	**0.46%**	**-0.03%**
(-1,0)	0.01%	-0.06%	-0.01%
(0,+1)	-0.14%	0.49%	0.03%

Announcement Classifications

Announcements have been classified into 15 categories for further analysis:

Positive

- New product/service or New Orders for Products
- Investment made into environmentally friendly
- Partnerships/Coalitions for Environmental Benefit
- Firm voluntarily acts in positive environmental manner
- Settlement of outstanding violation
- Positive environmental announcement by rival
- Environmental agreements reached
- Process innovations (cost control)
- Harmful product line dropped or modified
- Stakeholder actions for the firm's environmental policy
- Positive Political lobbying
- Negative environmental announcement by rival

Negative

- Stakeholder actions opposed to the firm's environmental policy
- New violations
- Firm acts in a negative manner towards environment

Hypotheses

H0: The market values of firms' equities are unaffected by the announcement of positive environmental initiatives.

H1: There is a correlation between positive environmental announcements and changes in stock price

H2: Positive environmental announcements correlate with a positive change in stock price.

H3: The type of positive environmental announcement made plays a role in how the stock price reacts.

Regression Analysis

Robust regression on positive/negative announcements and excess returns shows no statistical significance:

Event Window	P
(-10,10)	0.843
(-5, 5)	0.568
(-3,3)	0.843
(-1,1)	0.791
(-1,0)	0.946

Number of observations 242

Included controls: Assets, Employees, Net Income, EBIT and Revenue

**p<.05 are significant

Conclusion

Under a regression, there is no statistically significant relationship between the announcement of an environmental event and the change in a companies stock price.

However, it is interesting to note that negative environmental announcement windows tend to have a higher return while positive environmental announcement windows have lower returns. This would indicate corporate environmental responsibility is not valued, or valued less, by shareholders.

The reaction to specific types of announcements may lead to a better understanding of what types of environmental events shareholders value the most, and a better understanding of why firms undertake these policies.