

THE EFFECT OF POSITIVE CORPORATE SOCIAL ACTIONS ON SHAREHOLDER WEALTH

Pamela L. Hall* and Robin Rieck

Abstract

This study examines the impact of voluntary positive corporate social actions on shareholder wealth. After performing an event analysis, the announcement of corporate donations is found to have a significant positive effect on stock prices. Firms producing environmentally-friendly products exhibit a large significant positive reaction on Day 0, however no significant returns accrue over the cumulative time period from -5 to +5. No other announcement of a voluntary corporate social action is found to have a significant impact on shareholder wealth, specifically those firms engaged in recycling or social policy issues.

INTRODUCTION

The increasing realization over the past 30 years that corporations have tremendous influence on the environment and society has led to the emergence of many arguments as to why firms should act as socially responsible citizens. Many of the arguments boil down to this: society has granted tremendous power and freedom to corporations with the expectation that they will use that power to effectively serve society's needs. If corporations use that power in ways that are not consistent with society's expectations, they will eventually face increasing externally-imposed controls over their behavior—society will circumscribe that power.

These controls may not necessarily be limited to the countervailing forces of government nor will they only occur over the long term. Recent surveys by MORI [13], Boston College [4], and Walker Research [18] show that consumers (a second countervailing force) not only expect corporations to act responsibly but also base some of their purchase decisions on whether corporations are perceived to be socially responsible or not, suggesting that the results of responsible or irresponsible behavior can be relatively immediate.

A third countervailing force is the rise in investor interest in corporate social responsibility. Social investing initially focused on avoiding "sin" investments (*i.e.*, alcohol, gambling, smoking and the profits generated thereof) but has evolved to encompass many diverse areas, including environmental impacts, world peace, animal rights, women's rights, employee relations, minority groups and low-income groups. Social investing has increased twenty-fold from \$40 billion in 1984 to \$825 billion in 1991 (Kinder, Lydenberg & Domini [11]). A plethora of socially responsible mutual funds and newsletters devoted to the issue have developed. The primary focus to date has been on avoidance—avoiding those firms that are engaged in non-socially responsible activities. However, recently a movement has emerged toward proactive investment—investing in firms that "do the right thing" rather than divesting of firms that "do the wrong thing" (Kinder *et al.* [11]).

These three countervailing forces suggest that a rational financial market would positively evaluate socially responsible actions. Indeed, in the first issue of *Business and Society Review*, editor Milton Moskowitz [14] asserted that socially responsible firms were good investment risks. This assertion initiated more than 20 years of research effort to verify such a link. These considerations suggest several questions that this paper attempts to answer:

- (1) Do voluntary social actions boost shareholders' wealth via an immediate effect on stock price?
- (2) Do investors value certain voluntary social activities more than others?

This study uses "event analysis" to examine the short-term market effects of "positive" corporate social events to address these research questions. Event analysis measures the immediate effect of a specific corporate behavior on

*Western Washington University

share price and return. Only short-term effects are examined because, according to the Efficient Market Hypothesis, the effect of a specific event on share return should be quickly incorporated by the market. In addition, this study is limited to short term effects because other studies have examined the long-run performance of companies engaged in socially responsible activities (see McGuire, Sundgren & Schneeweis [12]; and Cochran & Wood [5]). This study examines only positive corporate social activities because other researchers have examined the impact of negative events—such as corporate illegalities and environmental pollution—on stock returns (see Davidson & Worrell [7]; Frooman [9] and Rao [15]). In a review of that literature, Wood and Jones [19] found that ten of eleven event studies from 1979 through 1992 show significant drops in share prices following announcements of socially irresponsible events. Event analysis was chosen because it links specific acts with specific share price changes, and because it provides a much stronger basis for inferring causality than other relational techniques

PREVIOUS RESEARCH

A truly vast amount of research has been focused on determining the financial effect of corporate social actions during the last 25 years (see Wood & Jones [19] for an excellent review of this research). A review of that literature shows that a consistent, accepted, operational definition of corporate social responsibility (CSR) has yet to be developed. In the absence of an accepted measure of corporate social responsibility, different researchers developed their own measures, making comparisons difficult. Most studies show very mixed results concerning empirical links between social and financial performance.

Of the previous studies that have examined CSR and financial performance via stock returns, the early studies failed to consider features such as dividends' contribution to stock returns and risk (Moskowitz [14]; Vance [17]; Abbott & Monsen [1]). Alexander & Buchholz [2] corrected for these problems by examining stock market performance and CSR adjusted for risk. They found '... no significant effect of social responsibility on stock market performances ([2]: 481). However, because they did not perform an actual 'event analysis,' they were unable to ascertain whether new information released to the market concerning a particular firm's CSR led to an immediate market reaction.

Anderson & Frankle [3] examined Fortune 500 companies' stock market returns on a monthly basis, comparing firms that voluntarily disclosed social responsibility information and those that did not. They found that firms voluntarily disclosing CSR earned higher returns. Anderson & Frankle contend that voluntarily disclosing social responsibility offers important information. However, because the Anderson & Frankle study did not contain a daily event analysis they failed to demonstrate a direct link between disclosure and higher returns.

The performance of socially responsible mutual funds is another area of analysis. A recent study by Hamilton, Jo and Statman [10] found that socially responsible mutual funds do not outperform or under-perform a benchmark group of conventional mutual funds. The authors state: "... the market does not price social responsibility characteristics" (p. 66). Studies that evaluate the performance of mutual funds are not only evaluating the performance of the individual firms within the fund, but also the performance of the mutual fund portfolio manager. This type of analysis does not examine the reaction of investors to corporate social actions and may offer misleading information to investors and corporations.

Other studies focus on firms' financial performance as measured by various accounting rates of return. A recent study by Curcio and Wolf [6] finds that firms adopting an environmentally responsible strategy appear to significantly enhance their financial performance. Several authors point out the unsuitability of these types of studies for analyzing CSR and financial performance (Davidson & Worrell [8]; and Cochran & Wood [5]). Davidson & Worrell argue that there are several problems inherent in working with specific measures of profitability such as "... industry and regulatory differences, accounting and demographic differences, risk, leverage, inflation and timing. Furthermore, accounting variables do not directly measure owners' wealth" ([8]: 8). For instance, company results across regulated and non-regulated industries may be meaningless. The timing of accounting data is also problematic, as accounting reports are typically published on an annual or quarterly basis. Also, accounting data does not serve as a measure for owners' wealth, whereas stock returns do measure the stockholders' wealth. Additionally, daily market data allows one to pinpoint the effect, if any, of an event upon stock returns. Both studies support the suitability of event analysis as a method for exploring the relationship between CSR and shareholder wealth.

METHODOLOGY

The Efficient Market Hypothesis argues that new information will be immediately reflected in a stock's return. In light of this hypothesis, many of the older studies exhibit methodological difficulties. One of the best methods for examining the effect of a firm's social responsiveness on shareholders' wealth is to use event analysis methodology to examine the impact of a socially responsible action on the daily stock return. The event analysis method, since it examines stock market returns, is an effective tool for examining investors' perceptions of a corporate social action. Event analysis has the added benefits of "automatically" adjusting for risk and showing the immediacy of the impact of an event.

Using a market-based approach requires only that risk differences be considered. As such, the immediate impact of a social adoption upon a company's stock price will be examined using the single index market model (SIMM):

Equation 1

$$R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}$$

where:

- R_{jt} = the rate of return of firm j on day t ;
- α_j = alpha, or an intercept estimated by the equation;
- β_j = beta, or the sensitivity of security j to the return on the market;
- R_{mt} = the rate of return for the market index on day t ; and
- ε_{jt} = an error term.

This model involves estimating a company's market risk and then attempting to predict the company's return. According to the semi-strong form of the EMH, any new public information will be quickly assimilated into stock prices. If unexpected information arises, abnormal returns may be present for a short period. Investors' perceptions concerning the unexpected information can be determined by examining the abnormal return. To determine the abnormal return, or prediction error (PE), for a firm, simply subtract the expected (or predicted) returns from the actual:

Equation 2

$$PE_{jt} = R_{jt} - (\alpha_j + \beta_j R_{mt})$$

The standardized prediction error (SPE) is determined by dividing the PEs by the estimated standard error of the forecast:

Equation 3

$$SPE_{jt} = PE_{jt} / s_{ft}$$

where the standard error of the forecast (s_{ft}) is simply an adjusted standard deviation for security j :

Equation 4

$$s_{ft} = s_j \times \sqrt{1 + 1/k + (R_{mt} - \bar{R}_m)^2 / \sum_{t=1}^k (R_{mt} - \bar{R}_m)^2}$$

where:

- R_m = the average R_{mt} for the given interval;
- k = the number of days in the estimation period;
- s_j = the standard deviation of company j ;
- ε_{jt} = the regression residual for company j in period t ; and
- μ_j = the average residual over the estimation period.

The standard deviation of company j (s_j) is defined as:

Equation 5

$$s_j = \sqrt{\sum_{t=1}^k (\epsilon_{jt} - \mu_j)^2 / k}$$

Dividing by s_{jt} makes the SPE approximately unit normal. Also, the standard error of the forecast allows for variation in the event window separately from that during the estimation period and adjusts for the number of observations in the estimation interval.

The standardized cumulative prediction error for firm j (for a given interval of time for t_1 to t_2) is computed as follows:

Equation 6

$$SCPE_j = \sum_{t=t_1}^{t_2} SPE_{jt} / \sqrt{m}$$

where m is the number of days being considered. The test statistic for N firms is computed as follows:

Equation 7

$$Z = \sum_{j=1}^N SCPE_j / \sqrt{N}$$

Z is also unit normal. The average cumulative prediction error for all companies across a cumulative time period is represented as $MCPE$ or Mean Cumulative Prediction Error. Note that Z may differ in sign from the $MCPE$.

SAMPLE COLLECTION

The firms included in the sample are those performing social actions during the 1982-1995 time period. The firm had to have a *Wall Street Journal* (*WSJ*) event date announcing the social action. Various terms were used to search the *WSJ* (via INFOTRAC and the *WSJ Index*), including: “donations,” “corporate giving,” “employee relations,” “social responsibility,” “environment,” as well as many variations such as “environmentally safe/friendly,” “social awareness,” “social policy,” etc. These generated a plethora of corporate social actions, including activities such as donating money to charities, adopting an environmentally-safe product line, sanctioning women’s rights, offering child-care services within the organization and corporate-sponsored employee education services.

An initial search found approximately 349 announcements meeting the search term requirements. However, to be included in the sample the firm had to be carried on the Center for Research in Security Prices (CRSP) data files for 120 trading days preceding the event window in order to calculate the firm’s baseline co-movement with the market. Additionally, the social action had to be entirely voluntary. That is, no mandatory government regulation or public outcry from environmental groups, etc., could drive the social action. The *WSJ Index* was examined for each company to determine if any furor existed concerning the issue prior to the company’s social action. Furthermore, the remaining firms in the sample had to be “cleaned”—removing those companies having a major event (such as a takeover announcement) occur during the observation period or the event window. This was done so that conflicting events would not unduly influence the results. In other words, any abnormal effects that may have existed after the sample was cleaned could then be attributed solely to the corporate social action. The final sample contained 99 announcements meeting all the requirements.

EVENT STUDY RESULTS

Table 1 shows the results of the event analysis for all firms in the sample. Day 0 represents the day the announcement was published in the *Wall Street Journal*. For the sample as a whole, no statistically significant returns exist.

TABLE 1
Event Analysis Results for All Firms and Categories

TIME	All Firms (n=99)		Donations (n=27)		Social Policy (n=32)		Recycling (n=16)		Environmentally Friendly (n=24)	
	MCPE	Z	MCPE	Z	MCPE	Z	MCPE	Z	MCPE	Z
-5	0.0022	0.4502	0.0100	1.9815**	0.0014	0.4950	0.0067	0.7272	-0.0085	-2.2381*
-4	-0.0018	-0.3896	0.0013	0.9088	-0.0061	-1.7637**	0.0047	0.8739	-0.0039	-0.3492
-3	0.0010	-0.0686	0.0036	0.3895	-0.0006	-0.7272	0.0026	0.7233	-0.0010	-0.1557
-2	0.0013	0.1215	0.0017	-0.0850	0.0009	-0.0398	0.0057	1.2448	-0.0017	-0.7798
-1	-0.0017	-0.8944	-0.0004	-0.1521	-0.0029	-0.7339	0.0007	-0.0104	-0.0030	-0.5743
0	0.0042	1.3507	-0.0003	0.0911	-0.0010	-0.2329	0.0029	0.4887	0.0170	2.4365*
1	-0.0005	0.1394	0.0004	0.1284	-0.0021	-0.9290	0.0070	1.6254	-0.0046	-0.1971
2	0.0002	0.8227	0.0013	1.5275	0.0033	0.6702	-0.0089	-1.4426	0.0011	0.4601
3	-0.0003	-0.3228	0.0091	2.3739*	-0.0030	-0.9236	-0.0011	-0.3151	-0.0066	-1.8432**
4	0.0008	0.4977	0.0008	0.2493	0.0032	1.4273	-0.0067	-1.3332	0.0026	0.1981
5	-0.0017	-0.3906	0.0004	0.2387	0.0013	0.5736	-0.0032	-0.4906	-0.0072	-1.2688
-5 to 0	0.0052	0.2326	0.0160	1.2794	-0.0056	-0.6585	0.0233	1.6524	-0.0010	-0.8182
0 to +5	0.0027	0.8561	0.0117	1.8816**	0.0017	0.2391	-0.0100	-0.5991	0.0025	-0.0439
-5 to +5	0.0038	0.3968	0.0280	2.3070*	-0.0056	-0.6585	0.0105	0.6306	-0.0156	-1.3955

*Significant at the 5% level.

**Significant at the 10% level.

Although the results support the contention that corporate social activities do not lead to an increase in investors' returns, they do not indicate whether investors value certain types of corporate social actions more than others. For instance, do certain activities (such as recycling) contribute to the increase in shareholders' wealth, whereas other activities do not (such as employer-sponsored education)? In an attempt to further classify the effect of positive CSR on shareholders' wealth, the sample was divided into four categories consisting of recycling, donations, social policy, and environmentally-friendly activities. Recycling included reducing packaging materials or switching to a recycled product. Donations included donated funds, tangible goods (such as computers, land, *etc.*) or time to a good cause. Social policy activities included offering employer-supported day care centers, aid for battered women, *etc.* when these are not an integral part of corporate activities. Environmentally-friendly activities included marketing or developing products that are friendly to the environment, such as those products with fewer emissions or having a high recycled content. The results of this analysis are also presented in Table 1.

It is clear from the results shown in Table 1 that the insignificant returns found in the original sample cannot be attributed to the sample as a whole. Rather, positive effects on share return accrue to those firms engaged in donations and environmentally-friendly activities. The environmentally-friendly group experienced a significant positive abnormal market reaction of 1.7% the day of the *WSJ* announcement. However, over the cumulative time periods no significant abnormal returns exist. The donation group experienced a cumulative eleven-day abnormal return of +2.8%, with significant one-day abnormal returns of 1% and .91% on days -5 and +3, respectively. In contrast, the recycling and social policy groups experience insignificant cumulative abnormal returns over all cumulative time periods examined.

IMPLICATIONS FOR MANAGEMENT

The relationship between socially responsible actions and financial performance has been an important topic of debate since the 1960s. Cochran and Wood [5] note that "[If] a positive relationship can be shown to exist, then management might be encouraged to pursue such activities with increased vigor or to investigate the underlying causes of the relationship."

Results from our study support the hypothesis that socially responsible actions can have positive impacts on the market value of a firm. Second, they suggest that the market assesses different types of social actions differently.

Finally, none of the social actions researched here showed a statistically significant negative effect on the value of the firm. The message to management is that judicious use of corporate citizenship activities can enhance the market value of their firm, keeping in mind that different types of corporate citizenship activities may have differing effects on a firm's market value.

It is noteworthy that corporate donations evoked the highest rise in share return. This is consistent with new role that corporate donations are coming to play in corporate strategy. According to Smith [16], in hundreds of companies including AT&T, IBM, and Levi Strauss, corporate contribution units are joining with other business units to develop donations strategies that increase name recognition among consumers, enhance employee morale and productivity, reduce R&D costs, overcome regulatory obstacles, and foster synergy among business units. In short, "... strategic use of philanthropy has begun to give companies a powerful competitive edge." Corporate donations can be particularly effective in emerging international markets like Taiwan, Brazil, and Hungary, which are still uncluttered by social initiatives. There, Smith argues, even small, well-conceived grant programs can have a large impact.

Yet, according to Smith, many CEOs are cutting their philanthropy budgets and downgrading their staff just as their companies are about to export philanthropy to overseas subsidiaries. He warns that Japan, Taiwan, and Korea are carefully studying American corporate philanthropy and that U.S. companies must act now or risk missing out on the benefits of the model of corporate philanthropy that they have developed. The results of our study reiterate the contribution that corporate citizenship activities make to the value of the firm and imply that the market recognizes this value. This is a message that should not be lost on management.

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