

**THE VALUE OF A REPUTATION FOR CORPORATE SOCIAL
RESPONSIBILITY: EMPIRICAL EVIDENCE**

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We explore the relationship between corporate sustainability, reputation, and firm value by asking whether membership on a recognized sustainability index is value generating. Increasingly, stakeholders are demanding that firms demonstrate their commitment to sustainability. One signal that companies can send to stakeholders to indicate that they are sustainable is membership on a recognized sustainability index. This article explores whether inclusion on the Dow Jones Sustainability Index [DJSI] is a goal that firms should pursue. Our results provide evidence that being added to the DJSI results in a permanent increase in a firm's share price, suggesting that the benefit of being included on the DJSI outweighs the costs associated with applying.

Key Words: corporate social responsibility, Dow Jones Sustainability Index, financial performance, reputation

Introduction

In today's business environment, intangible assets, such as reputation, are increasingly important in determining the value of a company. Evidence that corporate reputation is positively related to firm value raises the question of how a firm can develop a favorable reputation. Stakeholders increasingly expect companies to behave in an ethically, socially and environmentally responsible manner and to communicate transparently about their actions. Satisfying these expectations is one way to earn a favorable reputation as a sustainable company. The challenge then becomes how to signal that the company is meeting stakeholder demands for sustainable practices. One mechanism that is available is to seek inclusion on a reputable sustainability index. If stakeholders value sustainability practices, then inclusion on a sustainable index should be associated with a positive increase in value.

This paper responds to the increasing interest in the relationship between corporate sustainability, reputation, and firm value by asking whether membership on the Dow Jones Sustainability World Index (DJSI) actually provides the reputational effects that firms seek. Using inclusion on the DJSI as a signal of a company's reputation for being a sustainable company, we investigate whether being added to, or dropped from, the DJSI results in a significant change to the value of a North American company. Our results provide evidence that there is a permanent positive stock market reaction when firms are added to the DJSI, but that there is no permanent loss in value to firms that are removed from the DJSI. This result is generally consistent with the literature that examines the impacts of reputation on value, as well as the literature that examines the impact of being added to, or deleted from, a major US stock index.

The remainder of the paper is organized as follows. In the next section, we review relevant literature in the area of CSR/sustainability, reputation and the impact of index membership on firm value. This is followed by a discussion of the relationship between reputation and value, and development of our hypotheses. We then describe our methodology and data, followed by the results and a discussion of the implications.

Related Literature

There is a vast literature that examines the relationship between different aspects of sustainability, such as corporate social responsibility (CSR)¹, and financial performance. Overall, results suggest that CSR has a positive, albeit sometimes weak, relationship with financial performance.² In a recent meta-analysis of 30 years worth of CSR/CFP studies, Orlitzky et al. (2003) find that CSR is positively correlated with FP and that the relationship tends to be bidirectional and simultaneous.³ The positive

relationship between CSR and FP has resulted in a business case being made to justify investments in CSR as a way to enhance corporate reputation and firm value (Sen and Bhattacharya, 2001; Smith, 2003).

A related stream of literature considers the direct relationship between reputation and value, often using stakeholder theory to explain the positive relationship between CSR and FP. For example, according to McGuire, Sundgren and Schneeweis (1988) a firm has an investment in reputation, including its reputation for being socially responsible. An increase in perceived social responsibility may improve a firm's reputation and permit it to exchange costly explicit claims for less costly implicit charges whereas, if stakeholders perceive a decline in social responsibility, this may increase explicit claims.

This idea is expanded by Fombrun and Shanely (1990) who suggest that favorable reputations can generate excess returns by permitting companies to charge premium prices, attract better job applicants, and attract investors. Firms with a good reputation for sustainability will be able to negotiate better terms of trade with all stakeholders (customers, suppliers, employees, etc.) because they are able to signal the quality of their products and services and their ability to honor claims in the future. Customers may be willing to pay a higher price for firms with a better reputation since reputation serves as a signal of the quality of the product. Similarly, employees should prefer to work for high reputation firms and therefore should either work harder or accept lower compensation, lowering the firm's costs (Roberts and Dowling, 2002). These examples help to illustrate the perspective that investments in sustainability are not simply altruistic but rather value maximizing. When firms invest in safer products, a safer work environment, or "green"

technology, they do so recognizing the impact it will have on future revenues and costs. Being socially responsible has its costs, but these costs may be justified when compared to the benefits: a reduction in other costs or an increase in revenue (McGuire, et al., 1988).

Another potential benefit of social responsibility is an expected decrease in the variability of future cash flows, whereas disregard of implicit stakeholder claims (being socially irresponsible) may lead to uncertain future explicit claims and higher cash flow volatility (Waddock and Graves 1997). For example, products are sold with an implicit guarantee that they will safely perform as expected. If a firm does not invest in product safety and sells an unsafe product, this will increase the probability of legal proceedings against the firm and increase expected future costs. Low social responsibility may also increase financial risk by increasing the likelihood of regulatory intervention. In essence, “socially and ecologically responsible organizations may have incorporated organizing principles that are surprise avoiding” (Frederick, 1995; King, 1995).

Epstein and Schneitz (2002) find further evidence of this. They consider whether a reputation for social responsibility helps to protect firms from shareholder losses. They test whether firms with a reputation for social responsibility, as indicated by their inclusion on the KLD Domini Social Index, suffered less loss as a result of the failure of the 1999 Seattle World Trade Organization meetings. Given that the meetings were derailed due to protests against irresponsible corporate social practices, the authors hypothesize that this event should have a larger negative impact on firms with a bad reputation for CSR and their results support this prediction.

As summarized by Fombrun et al. (2000) “...the activities that generate CSR do not directly impact the company’s financial performance, but instead affect the bottom line via its stock of ‘reputational capital’ – the financial value of its intangible assets.” Citizenship activities help a company build reputational capital, which enhances its ability to negotiate more attractive contracts with suppliers and governments, to charge premium prices for its products, and to reduce its cost of capital. Further, CSR activities can mitigate the risk of reputational losses by hedging against downside risk (Fombrun, et al., 2000).

The studies cited above imply that a reputation for CSR impacts stakeholders’ perception of a company in a way that increases expected cash flows, and therefore value. The challenge then becomes how to build a reputation for CSR. The desire of companies to credibly signal socially responsible behavior and to benefit from a good reputation has contributed to the development of a whole new business sector that is charged with reviewing and reporting on the CSR activities of companies. Inclusion in socially responsible investment (SRI) funds and indices is one way to build a reputation for being socially responsible. These indices are viewed as objective, professional benchmarks assessed by ‘neutral parties’. In the past, most of the ranking of CSR traits was undertaken by investment analytics companies whose services were used by investment managers to manage portfolios with SRI mandates. For example, the Kinder, Lydenberg, Domini (KLD) database contains profiles on 650 U.S. companies that have social ratings evaluating each company’s strengths and concerns.⁴

More recently several new measures have emerged to rank and list companies according to socially responsible investing criteria. The FTSE⁵ and Dow Jones

organizations have both launched indices of socially responsible companies to meet the growing market demand for professional, objective and reliable benchmarks.

Institutional investors are increasingly relying on these “socially responsible” indexes to create portfolios. According to the Dow Jones Sustainability Index webpage “Currently 66 DJSI licenses are held by asset managers in 16 countries to manage a variety of financial products including active and passive funds, certificates and segregated accounts. In total, these licensees presently manage close to 6 billion USD based on the DJSI.”⁶

To date there has been little research that addresses whether inclusion on such indices serves as a credible signal to financial markets regarding a company’s reputation for sustainability. Curran and Moran (2007) test whether inclusion in, or deletion from, the FTSE4Good Index results in a positive (negative) impact on share price. Their results show only minor evidence of any significant effect due to being added to or deleted from the index. This may be explained by the fact that the FTSE4Good Index also uses market capitalization as a screen, and hence changes to the index do not necessarily indicate a change to a company’s social responsibility practices.

A recent study by Consolandi et al (2008) examines whether inclusion in, or deletion from, the Dow Jones Sustainability Stoxx Index (DJSSI), an index for European corporations, results in a stock market reaction. They find that companies experience a positive excess return of 0.03% after it is announced they are being added to the DJSSI, but no significant effect after its addition becomes effective. Firms being removed from the DJSSI have an announcement effect of -0.05% and a further loss of -0.03% once the removal becomes effective. While statistically significant the absolute value of these

changes is much smaller than the effects documented in other index studies. The finding of such small absolute changes may be due to their use of an event period that extends only from 10 days before the announcement of an index change to 10 days following the effective date.

A number of other studies examine the effect of being included in, or excluded from, different stock indices. Although the evidence is somewhat mixed, more recent studies tend to find an asymmetric reaction to listing changes, with a permanent price increase being associated with being added to the S&P 500 Index, but no permanent price decrease associated with being removed (Chen, Noronha, and Singal, 2004). In contrast to the Consolandi et al (2008) study, Chen, Noronha, and Singal (2004) find a permanent increase of 6.2%, during their most recent time period, when firms are added to the index.

We build on the literature cited above by testing whether there are significant impacts on the value of North American firms associated with the reputational effect of being added to, or deleted from, the DJSI World Index.

The Relationship between Reputation for Sustainability and Value

There is now substantial evidence that corporate reputation has an increasingly large impact on shareholder value (Roberts and Dowling, 2002; Sabate and Puente, 2003; Sen and Bhattacharya, 2001; Williams and Barrett, 2000). Below we develop a theoretical framework to investigate the effect of having a reputation for being a sustainable company, as measured by inclusion on the DJSI.

In order to see the effect of having a reputation for being sustainable on firm value, (V), consider the following firm valuation equation:

$$V = \sum_{t=1}^{\infty} \frac{E(\text{Free_Cash_Flow}_t)}{(1 + \text{WACC})^t}$$

Where: $E(\text{Free_Cash_Flow}_t)$ is the expected free cash flow to the firm in year t ;

WACC is the weighted average cost of capital of the firm.

This equation shows that there are two methods of increasing firm value:

increasing the expected free cash flow or reducing the weighted average cost of capital (which is positively related to firm risk). In this context, the effect of a good reputation on expected cash flows can be understood in the context of stakeholder theory.

The potential benefit of being listed on the DJSI depends on how a reputation for sustainability affects value. As described above, having a reputation for being socially responsible is an intangible asset that can increase the value of a firm's expected cash flows and/or reduce the variability of its cash flows. A commitment to social responsibility acts as a signal to stakeholders of the quality of their claims. Stakeholders can be expected to view firms with a reputation for social responsibility more favorably due to this "guarantee" (Sabate and Puente, 2003). A critical issue, therefore, is how companies signal their commitment to sustainability to stakeholders. Given its recognition as a leading indicator for sustainability, we use inclusion on the DJSI as a measure of a company's reputation for sustainability.

The DJSI was introduced in 1999 and was the first global index to track the financial performance of leading international sustainability-driven companies. Inclusion within the index is based on criteria that are weighted approximately equally for economic, environmental, and social performance. In order to apply for inclusion in the DJSI, companies must complete the Sustainability Asset Management (SAM)

questionnaire, which is an extensive survey that incorporates both generic questions on issues such as governance, as well as industry specific questions, such as the percent of revenue from different operations. This information is supplemented by company and third party documents, as well as personal contact between analysts and company representatives. The process is time-consuming and requires a significant commitment of person hours in order to complete it. One company estimated that it takes approximately 30 person days in order to complete the survey and provide the additional information required. Although companies that have completed the survey before can begin the next year by populating the survey with the previous year's answers to those questions that remain the same, on an annual basis up to 25% of the questions may change, requiring a substantial time commitment to update the previous year's report.

Companies included are recognized as being in the top ten per cent of their industry in terms of corporate sustainability, and are industry leaders in best practices and superior environmental, social and economic performance. The firms selected for the index announce their inclusion on their corporate websites and include the DJSI symbol on their promotional material. Thus, despite the onerous requirements for information and the costs associated with completing the survey, companies see the DJSI label as an important mechanism in establishing a reputation for sustainability. In speaking to companies about the benefits of being on the DJSI, two key benefits were discussed. First, the DJSI is recognized as a global standard and used by a number of SRI funds that do not do their own screening for social responsibility. By being included on the DJSI, companies also become eligible for inclusion in other SRI funds. Given that the number of SRI investors is increasing, being identified as a sustainable company is seen as

important for attracting investors. Second, applying for the DJSI is a good starting point for developing a quality sustainability report. The information that is required to apply for inclusion on the DJSI, along with information required for the Global Reporting Initiative, provides a comprehensive overview of a company's sustainability practices. Given the large number of requests that companies receive for social responsibility reporting, companies that dedicate resources to these two initiatives, which are broadly recognized and viewed as credible measures, perceive that it is an efficient use of their resources when dealing with the multiple requests coming from other parties.

Methodology and Results

To examine the question of whether the capital markets view being included on the DJSI as a credible signal of sustainability, we measure the stock market reaction to the announcement that North American firms were added to, or deleted from, the DJSI World Index over the period 2002-2007. Table 1 provides summary data about the announcement and effective dates for DJSI index changes as well as information about the number of North American firms that were added or deleted in each year.

---Insert Table 1 Here---

We draw on the methodology of previous studies that examine the effect of firms being added to, or deleted from, a well known stock market index.⁷ This methodology computes the abnormal return on each added and deleted stock, equal to the return on the stock minus the return on major national index (the S&P 500 in the US and the S&P/TSX

in Canada), during every day in an event window that includes three time periods: the pre-announcement period which begins 60 days before the announcement (Day -60 until Day -1), the announcement period that includes all trading days from the date of announcement until one day before the effective date (this period is called Day 0 and ranges from eight to thirteen trading days), and an effective period which runs from the effective date of the change until 59 days after that date (Days 1 through 60). These abnormal returns were then averaged across all seventy-eight added stocks and ninety-four deleted stocks⁸. The significance of the mean price movement on each day within the event period was tested, and the mean cumulative abnormal return (CAR) was derived by summing up the mean price changes from in each of the three periods: preannouncement, announcement, and effective.

We test the following hypotheses by examining the mean price changes of stocks around the time of their announced addition to, or deletion from, the DJSI World Index:

H1: Stocks that were added to the DJSI experienced a positive price change following the announcement of their addition to the DJSI.

H2: Stocks that were removed from the DJSI experienced a negative price change following the announcement of their removal from the DJSI.

Changes in DJSI Membership: The Effect on Value

To test H1 and H2 we computed the mean returns for the set of North American stocks added to, and deleted from, the DJSI World Index around the date that the changes were announced. Table 2 presents the cumulative abnormal returns (CAR) during three time periods for additions and deletions. While the results suggest that there is a slight positive drift to the returns of added stocks and a slight negative drift to the returns of

deleted stocks in the pre-announcement period, neither of these effects is statistically significant.⁹ As well, there is a slight negative cumulative abnormal return during the announcement period for both additions and deletions, but none of the individual day's returns or the cumulative abnormal returns in this period are significant. During the three months following the effective date, the CAR for firms added to the index are positive, and statistically and economically significant at over 3.7%. The CAR for firms deleted from the index have a positive, but insignificant, cumulative return.

---Insert Table 2 Here---

To gain further insights into this result, a graph of the cumulative abnormal return from 60 days prior to the announcement until 59 days after the effective date was created for both additions to, and deletions from, the DJSI (see Figure 1). This graph yields some interesting insights. As previously discussed, there is no evidence of any abnormal price movements prior to the announcement of a stock being added to the DJSI, or during the announcement period, but following the effective date of the additions there is a gradual increase in the CAR from about Day 30 until Day 59. This result suggests that there would be an opportunity to trade based on the announcement that a firm was being added to the DJSI and earn a significant positive return of almost 4%. This result also provides compelling evidence that the benefit to a firm of being added to the DJSI far outweighs the considerable cost and effort involved in seeking this certification.

---Insert Figure 1 here---

With respect to North American firms being removed from the DJSI World Index, Figure 1 shows the slight negative drift in returns prior to the announcement of a firm's removal and an insignificant change during the announcement period. Beginning with the effective date of the change, however, there is a significant negative reaction to this change on the day following the effective date, which results in the CAR being significantly negative for about one month following that date (the maximum loss from the effective date is 3.5%, but the cumulative loss from 60 days before the announcement exceeds 5.5%). This effect appears to be temporary as it is gradually reversed over the next two months so that by the end of three months following the effective date the overall CAR is very close to zero.

This asymmetry in results for the additions to, and deletions from, the DJSI are consistent with the most recent results with respect to changes to the S&P 500 index. Chen, Noronha, and Singal (2004) document that there is a permanent price increase when a firm is added to the S&P 500 index in recent years, but no permanent decline when a firm is removed from this index. They suggest that this asymmetry could be due to an increase in investor awareness about a firm when it is added to the index, and a subsequent increase in demand for these added stocks. When a firm is removed from the index, however, there is no corresponding decrease in investor awareness.

The results of this study are in contrast to the results of Consolandi et al (2008) in that they find a larger impact from deletions than additions to the DJSSI, and find much smaller absolute return changes. The differences may be due to their use of a much

shorter event period, or may be indicative of a different pattern of investment behaviour by European versus North American investors. This issue warrants further study.

Discussion: Implication for Managers

Our goal in this study has been to determine whether inclusion on the Dow Jones Sustainability Index is viewed by stakeholders as a credible signal of a company's commitment to sustainability and whether there is a positive reward associated with the DJSI label. Our results provide evidence that there is a permanent positive stock market reaction to the addition of a firm to the DJSI; however, there is not a significant loss in value to firms as a result of their removal from the DJSI. This asymmetrical result is consistent with recent evidence regarding the price effects of firms added to, and deleted from, the S&P 500 index. The explanation given for the S&P asymmetry is that when a firm is added to an index more investors will become aware of the added stock and this results in a permanent increase in the security's price. Firms deleted from the index do not experience a large loss in awareness and thus do not suffer a loss in value (Chen, Noronha, and Singal, 2004).

In the context of the DJSI, our results suggest that being included in this index is very valuable for a firm and results in an increase in market value of almost 4%. Applying for DJSI membership appears to be a worthwhile investment when firms are seeking to demonstrate the sustainability of their business operations to shareholders. The significant increase in the firm's market value is large enough to offset the considerable effort and cost on the part of the companies that apply for inclusion on the DJSI. Likely explanations for this permanent value increase are that investors use

membership on the DJSI as a signal of higher expected returns for this firm and the DJSI label helps to attract new investors.

Given the pressure on companies to demonstrate that they are behaving as good corporate citizens, it is not surprising that an industry has developed around reporting on and reviewing the CSR activities of companies. Our results provide evidence that membership on the DJSI serves as a signal to shareholders of the value of a company's CSR activities. However, the long-term value of a reputation for CSR can only be preserved if a company's CSR activities are aligned with the values and goals of the organization (Porter and Kramer, 2006). This will continue to be an ongoing challenge. According to Smith, a company's CSR strategy needs to be customized for its intended stakeholders. "Clearly, a firm's social responsibility strategy, if genuinely and carefully conceived, should be unique, despite the sameness of a growing number of corporate reports on CSR [...] it should reflect the individual company's mission and values –what it stands for– and thus must be different from the CSR strategy of even its closest competitors." (Smith, 2003). In determining a CSR strategy, stakeholder engagement must be at the core and firms must develop an understanding of their current performance through the use of appropriate metrics. In the end, this may be the real value in participating in indices like the DJSI. By demanding that companies account for their social and environmental performance, the DJSI serves as an excellent benchmarking tool for those organizations that truly wish to remain best in class.

Notes

¹ Sustainability is a broad umbrella which encompasses different aspects, with corporate social responsibility being one key element.

² For a comprehensive summary of the studies examining the relationship between CSR and FP see Griffin and Mahon (1997), McWilliams and Siegel (1997), Orlitzky and Benjamin (2001), and Orlitzky, et al. (2003).

³ Furthermore, they conclude that reputation appears to be an important moderator of the relationship.

⁴ KLD Social Ratings consist of two categories: Social Issues and Controversial Business Issues. The Social Issue ratings measure corporate social responsibility across a range of issues that impact the company's various stakeholders. The Controversial Business Issues ratings reflect company involvement in lines of business of interest to social investors.

⁵ FTSE is an independent company whose sole business is the creation and management of indices and associated data services. The company originated as a joint venture between the Financial Times and the London Stock Exchange.

⁶ Source: <http://www.sustainability-indexes.com/>

⁷ See for example Harris and Gurel, 1986; Lynch and Mendenhall, 1997; Chen, Noronha and Singal, 2004.

⁸ Six DJSI additions, and eight DJSI deletions, were excluded from the sample as either the data was unavailable or the firms were affected by confounding events, such as a major sales announcement, a stock split, or the firm was delisted within 59 days of being removed from the DJSI.

⁹ This result may reflect the fact that decisions about which firms to add or delete from the DJSI World index are partially based on a firm's economic performance.

Abbreviation List:

CRSP - Center for Research in Security Prices

CSR - corporate social responsibility

DJSI – Dow Jones Sustainability Index

FP - financial performance

FTSE – Financial Times & London Stock Exchange

KLD - Kinder, Lydenberg, Domini

SEC – Securities and Exchange Commission

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Table 1
Changes in North American Stocks in the
Dow Jones Sustainability World Index (DJSI) from 2002 to 2007

Year	Additions	Deletions	Announcement Date	Effective Date
2002	22	32	September 4	September 23
2003	15	12	September 4	September 22
2004	8	9	September 2	September 20
2005	17	16	September 7	September 19
2006	11	18	September 6	September 18
2007	11	15	September 6	September 24
TOTAL	84	102		

Table 2
Cumulative Abnormal Returns Around the Time of
Announcements of a Change in the DJSI Index

	Additions	Deletions
Initial Sample	84	102
Sample Size	78	94
Cumulative Abnormal Returns		
Announcement Date – 60 to Announcement Date -1	0.9501%	-1.3122%
Announcement Date to Effective Date – 1	-0.4308%	-0.6665%
Effective Date to Effective Date + 59	3.7377%*	1.6649%

* denotes statistical significance at a 1% level.

Figure 1
Cumulative Abnormal Returns during a Period around the Announcement
of Additions to, and Deletions from, the DJSI in 2004 and 2005
(Day 0 Captures the Entire Announcement Period and
Day 1 is the Effective Date of the Changes)

