Corporate Social Responsibility and Financial Performance

Haas School of Business

University of California at Berkeley

Applied Financial Project

By:

Margarita Tsoutsoura

Berkeley, California

March, 2004
ABSTRACT

The field of corporate social responsibility (CSR) has grown exponentially in the last decade. Nevertheless, there remains a protracted debate about the legitimacy and value of corporate responses to CSR concerns. There are different views of the role of the firm in society and disagreement as to whether wealth maximization should be the sole goal of a corporation. Using extensive data over a period of five years, this study explores and tests the sign of the relationship between corporate social responsibility and financial performance. The dataset includes most of the S&P 500 firms and covers the years 1996-2000. The relationship is tested by using empirical methods. The results indicate that the sign of the relationship is positive and statistically significant, supporting the view that socially responsible corporate performance can be associated with a series of bottom-line benefits.

Acknowledgements

I would like to express gratitude towards Professors John O’Brien and Dr. Kelly McElhaney, and to Scott Pinkus and Ron Tanemura for their support and guidance. I would also like to thank the Directors of the Center for Responsible Business at Haas School of Business for their financial support for this project.
INTRODUCTION

The field of corporate social responsibility has grown exponentially in the last decade. More than half of the Fortune 1000 companies issue corporate social responsibility (CSR) reports. A larger number of companies than at any time previous are engaged in a serious effort to define and integrate CSR into all aspects of their businesses. An increasing number of shareholders, analysts, regulators, activists, labor unions, employees, community organizations, and news media are asking companies to be accountable for an ever-changing set of CSR issues. There is increasing demand for transparency and growing expectations that corporations measure, report, and continuously improve their social, environmental, and economic performance.

The definition of corporate social responsibility is not abstruse. According to Business for Social Responsibility (BSR), corporate social responsibility is defined as “achieving commercial success in ways that honor ethical values and respect people, communities, and the natural environment.” McWilliams and Siegel (2001:117) describe CSR as “actions that appear to further some social good, beyond the interest of the firm and that which is required by law.” A point worth noticing is that CSR is more than just following the law (McWilliams & Siegel, 2001). Alternatively, according to Frooman (1997:227), the definition of what would exemplify CSR is the following: “An action by a firm, which the firm chooses to take, that substantially affects an identifiable social stakeholder’s welfare.” A socially responsible corporation should take a step forward and adopt policies and business practices that go beyond the minimum legal requirements and contribute to the welfare of its key stakeholders. CSR is viewed, then, as a comprehensive set of policies, practices, and programs that are integrated into business operations, supply chains, and decision-making processes throughout the company and usually include issues related to business ethics, community investment, environmental concerns, governance, human rights, the marketplace as well as the workplace.

Each company differs in how it implements corporate social responsibility, if at all. The differences depend on such factors as the specific company’s size, the particular industry involved, the firm’s business culture, stakeholder demands, and how historically
progressive the company is in engaging CSR. Some companies focus on a single area, which is regarded as the most important for them or where they have the highest impact or vulnerability—human rights, for example, or the environment—while others aim to integrate CSR in all aspects of their operations. For successful implementation, it is crucial that the CSR principles are part of the corporation’s values and strategic planning, and that both management and employees are committed to them. Furthermore, it is important that the CSR strategy is aligned with the company’s specific corporate objectives and core competencies.

The Dean of Rotman School of Management, Roger L. Martin (2002), developed the “virtue matrix” as a framework for how socially responsible behavior enters business practice. The matrix is framed by four quadrants. The two bottom quadrants include socially responsible conduct in which corporations engage by choice, by following norms and customs, or by compliance to existing laws or regulations. Those actions both promote social responsibility and enhance shareholder value. On the other hand, the two top quadrants of the matrix include the strategic and structural frontiers, which include activities whose value to shareholders is either clearly negative or not immediately apparent. The boundaries between the different categories of socially responsible conduct are porous, since a change in the law or in common practices can cause an activity to migrate from the upper quadrants to the bottom ones.

THE POINT OF TENSION

There is a protracted debate about the legitimacy and value of corporate responses to CSR concerns. As CSR comes into contact with many of the issues traditionally addressed by government, like human rights and community investing, there is strong criticism that societal problems are best solved by freely elected governments. The resources of a corporation are poorly suited for addressing those social problems, and therefore, it is argued, they should not be misallocated.
According to Friedman (1970), in a free society, “there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.” He prefers that the state address social problems, arguing that an executive, by taking money and resources that would otherwise go to owners, employees, and costumers, and allocating them according to the will of the minority, fails to serve the interests of her or his principal. In this way, the executive imposes a tax and spends the proceeds for “social” purposes, which is intolerable, since she or he has neither the skills nor the jurisdiction to do so.

On the other hand, there are many appeals by others for corporate adoption of the CSR principles. Although the government is mainly responsible for addressing those issues, the contribution of private firms can be substantial. There is also the argument of the shifting balance of power. According to the OECD, of the 100 largest global economies, as measured by GDP, 51 of them are US corporations, and only 49 are nation states. So economic power has shifted to the corporations; they, therefore, should have an increasing role in and responsibility for addressing social problems. For example, the government sets the regulations and the minimum standards for the workplace, but a company can further improve the work environment and the quality of living of its employees. A firm cannot ignore the problems of the environment in which it operates. The poverty of a nation state’s citizens, political unrest, and the exhaustion of natural resources can have destructive effects for a corporation. For example, resources that are inputs in the production process and which, at the beginning of the industrial revolution, were abundant, are now in many regions of the planet scarce, polluted, or diminishing. Naturally, this imposes an extra cost to the corporations and may force them to relocate or to cease operations. From one perspective, companies may be poorly equipped to address some of the social or environmental problems, but from another perspective, no matter how poorly equipped, companies may still be best positioned to ameliorate the problems.

Certainly, adopting the CSR principles involves costs. These costs might be short term in nature or continuous outflows. These costs might involve the purchase of new
environmentally friendly equipment, the change of management structures, or the implementation of stricter quality controls. Since being socially responsible involves costs, it should generate benefits as well in order to be a sustainable business practice. A corporation could not continue a policy that constantly generates negative cash flows. The shareholders invest their money in a corporation, expecting the highest possible risk adjusted return. Therefore, being socially responsible should have bottom-line benefits in order to be sustainable.

Socially responsible corporate performance can be associated with a series of bottom-line benefits. But in many cases, it seems that the time frame of the costs and benefits can be out of alignment—the costs are immediate, and the benefits are not often realized quarterly. Nevertheless, many benefits can be identified. Firstly, socially responsible companies have enhanced brand image and reputation. Consumers are often drawn to brands and companies with good reputations in CSR related issues. A company regarded as socially responsible can also benefit from its reputation within the business community by having increased ability to attract capital and trading partners. Reputation is hard to quantify and measure; it is even harder to measure how much it increases a company’s value. But since companies have developed methods to measure the benefits of their advertisement campaigns, similar methods can and should be able to be applied in the case of corporate reputation.

Socially responsible companies also have less risk of negative rare events. Overlooking negative social and environmental externalities when valuing a company might be equal to ignoring significant tail risk. The risks related to CSR could be grouped into three categories: corporate governance, environmental aspects, and social aspects. Companies that adopt the CSR principles are more transparent and have less risk of bribery and corruption. In addition, they may implement stricter and, thus, more costly quality and environmental controls, but they run less risk of having to recall defective product lines and pay heavy fines for excessive polluting. They also have less risk of negative social events which damage their reputation and cost millions of dollars in information and advertising campaigns. The scandals about child–labor and sweatshops that affect the clothing industry are two fine examples. Thus, socially responsible
businesses should have more stable earnings growth and less downside volatility. Since companies that adopt the CSR principles carry less risk, when valuing those companies, a lower discount rate should be used. In the company valuation this lower tail risk should be taken into account.

There are also other cases in which doing what is good and responsible converges with doing the best for the particular business. Some CSR initiatives can dramatically reduce operating costs. For example, reducing packaging material or planning the optimum route for delivery trucks not only reduces the environmental impact of a company’s operation, but it also reduces the cost. The process of adopting the CSR principles motivates executives to reconsider their business practices and to seek more efficient ways of operating.

Companies perceived to have a strong CSR commitment often have an increased ability to attract and to retain employees (Turban & Greening 1997), which leads to reduced turnover, recruitment, and training costs. Employees, too, often evaluate their companies CSR performance to determine if their personal values conflict with those of the businesses at which they work. There are many known cases in which employees were asked, under pressure of their supervisors, to overlook written or moral laws in order to achieve higher profits. These practices create a culture of fear in the workplace and harm the employees’ trust, loyalty, and commitment to the company.

Companies that improve working conditions and labor practices also experience increased productivity and reduced error rates. Regular controls in the production facilities throughout the world ensure that all the employees work under good conditions and earn living wages. These practices are costly, but the increased productivity of the workers and improved quality of the products generate positive cash flows that cover the associated costs. Thus, firms may actually benefit from socially responsible actions in terms of employee morale and productivity (Moskowitz, 1972; Parket & Eibert, 1975; Soloman & Hansen, 1985).
As mentioned earlier, although it is rather straightforward to identify the above benefits as being socially responsible for businesses, it is an arduous task to quantify and measure them. Since CSR is integrated into the business practices, it is by definition complicated to try to measure its effects separately. Ideally, it should be possible to keep all other factors constant and measure a company’s financial performance and volatility of cash flows before and after adopting the CSR principles. As this is not possible, however, empirical methods are used to identify the relationship between a company’s socially responsible conduct and its financial performance.

EMPIRICAL STUDIES OF CSR AND FINANCIAL PERFORMANCE


Empirical studies of the relationship between CSR and financial performance comprise essentially two types. The first uses the event study methodology to assess the short-run financial impact (abnormal returns) when firms engage in either socially responsible or irresponsible acts. The results of these studies have been mixed. Wright and Ferris (1997) discovered a negative relationship; Posnikoff (1997) reported a positive relationship, while Welch and Wazzan (1999) found no relationship between CSR and financial performance. Other studies, discussed in McWilliams and Siegel (1997), are similarly inconsistent concerning the relationship between CSR and short run financial returns.

The second type of study examines the relationship between some measure of corporate social performance (CSP) and measures of long term financial performance, by using accounting or financial measures of profitability. The studies that explore the relationship between social responsibility and accounting-based performance measures have also produced mixed results. Cochran and Wood (1984) located a positive
correlation between social responsibility and accounting performance after controlling for the age of assets. Aupperle, Carroll, and Hatfield (1985) detected no significant relation between CSP and a firm’s risk adjusted return on assets. In contrast, Waddock and Graves (1997) found significant positive relationships between an index of CSP and performance measures, such as ROA in the following year.

Studies using measures of return based on the stock market also indicate diverse results. Vance (1975) refutes previous research by Moskowitz by extending the time period for analysis from 6 months to 3 years, thereby producing results which contradict Moskowitz and which indicate a negative CSP/CFP relationship. However, Alexander and Buchholz (1978) improved on Vance’s analysis by evaluating stock market performance of an identical group of stocks on a risk adjusted basis, yielding an inconclusive result.

**MEASUREMENT PROBLEMS**

**Measures of Corporate Social Responsibility**

Determining how social and financial performances are connected is further complicated by the lack of consensus of measurement methodology as it relates to corporate social performance. In many cases, subjective indicators are used, such as a survey of business students (Heinze, 1976), or business faculty members (Moskowitz, 1972), or even the Fortune rankings (McGuire, J. B., A. Sundgren, and T. Schneeweis 1988; Akathaporn and McInnes, 1993; Preston and O’Bannon, 1997). Significantly, it is unclear exactly what these indicators measure. In other cases, researchers employ official corporate disclosures—annual reports to shareholders, CSR reports, or the like. Despite the popularity of these sources, there is no way to determine empirically whether the social performance data revealed by corporations are under-reported or over-reported. Few companies have their SCR reports externally verified. Thus, information about corporate social performance is open to questions about impression management and
subjective bias. Still other studies use survey instruments (Aupperle, 1991) or behavioral and perceptual measures (Wokutch and McKinney, 1991). Waddock and Graves (1997) drew upon the Kinder Lydenberg Domini (KLD) rating system, where each company in the S&P 500 is rated on multiple attributes considered relevant to CSP. KLD uses a combination of surveys: financial statements, articles on companies in the popular press, academic journals (especially law journals), and government reports in order to assess CSP along eleven dimensions\(^1\). Based on this information, KLD constructed the Domini 400 Social Index (DSI 400), the functional equivalent of the Standard and Poors 500 Index, for socially responsible firms.

**Measures of Financial Performance**

Although measuring financial performance is considered a simpler task, it also has its specific complications. Here, too, there is little consensus about which measurement instrument to apply. Many researchers use market measures (Alexander and Buchholz, 1978; Vance, S. C., 1975), others put forth accounting measures (Waddock and Graves 1997; Cochran and Wood 1984) and some adopt both of these (McGuire, J. B., Sundgren, A., Schneeweis, T., 1988). The two measures, which represent different perspectives of how to evaluate a firm’s financial performance, have different theoretical implications (Hillman and Keim, 2001) and each is subject to particular biases (McGuire, Schneeweis, & Hill, 1986). The use of different measures, needless to say, complicates the comparison of the results of different studies.

In other words, accounting measures capture only historical aspects of firm performance (McGuire, Schneeweis, & Hill, 1986). They are subject, moreover, to bias from managerial manipulation and differences in accounting procedures (Branch, 1983; Brilloff, 1972). Market measures are forward looking and focus on market performance. They are less susceptible to different accounting procedures and represent the investor’s

---

\(^1\) Additional details on the KLD file and the social “screens” is presented in Waddock and Graves (1997) and Kinder and Domini (1997).
evaluation of the ability of a firm to generate future economic earnings (McGuire, J. B., A. Sundgren, and T. Schneeweis, 1988). But the stock-market-based measures of performance also yield obstacles (McGuire, Schneeweis, & Branch, 1986). According to Ullmann (1985), for example, the use of market measures suggests that an investor’s valuation of firm’s performance is a proper performance measure (McGuire, J. B., Sundgren, A., Schneeweis, T., 1988).

**HYPOTHESIS**

In our study, the sign of the relationship between corporate social responsibility and financial performance is tested. The sign may imply negative, neutral or positive linkages. The argument for a negative relationship follows the thinking of those such as Friedman (1970) and other neoclassical economists. According to their view, socially responsible firms have a competitive disadvantage (Aupperle et al., 1985), because they incur costs that fall directly upon the bottom line and reduce profits, while these costs could be avoided or borne by individuals or the government. On the other hand, many empirical results reveal no significant relationship between CSR and financial performance. According to this line of thinking (e.g., Ullman, 1985), there are so many variables that intervene between the two that a relationship should not be expected to exist. The third view proposes that there is a positive linkage, since the actual costs of CSR are covered by the benefits. A firm that attempts to decrease its implicit costs by socially irresponsible behavior—by, for example, neglecting to take measures against pollution—will eventually incur higher explicit costs. Socially responsible companies have less risk of negative events. It is less likely for these companies to pay heavy fines for excessive polluting, to have costly lawsuits against them, or to experience socially negative events that would be destructive to their reputation. Theoretically, if there could be two identical companies, where the one is socially responsible and the other is not, it should be expected that the former would have less downside risk for value and encounter fewer events which would be detrimental to its line of profit. In the present study, empirical techniques will be used to identify the sign of the relationship.
METHOD

Measuring Corporate Social Responsibility and Financial Performance

In the current study, in order to measure CSR, we employ two measures. The first measure is the KLD rating data for the companies in the S&P 500. We convert the absolute KLD scores to scale, with 10 as a base. Any score lower than 10 shows that the CSR concerns about the company are more than its CSR strengths. As a second measure, we use the Domini 400 Social Index as a proxy. As in McWilliams, A., and D. Siegel (2000), our measure of CSP is a dummy variable, with a value of 1 if a firm is included in the DSI 400 in a given year (for having passed the “social screen”) and 0 otherwise.

In our study, firm financial performance is measured by accounting variables. The financial data used are return on assets (ROA), return on equity (ROE), and return on sales (ROS). The source of our data is the COMPUSTAT database. The survey covers the firms included in the S&P 500 index for the years 1996 - 2000.

Control Variables

Because risk, size, and industry have been suggested in previous articles (Ullman 1985, McWilliams, A., and D. Siegel 2000) to be factors that affect both a firm’s performance and CSP, each of these characteristics is used as a control variable. Size is an important control variable, since larger firms seem to adopt the CSR principles more often. According to Burke, et al. (1986), as they grow, firms attract more attention from stakeholders. Furthermore, the leverage of the firm is an important control variable; and as a proxy, we adopt the level of debt held by the firm. Finally, although McWilliams, A., and D. Siegel (2000) suggest that R&D costs should be included as individual control variables, we follow the Waddock, S. A., and Samuel B. Graves (1997) approach which controls for industry and thereby takes these differences into account. Industry is determined by the 4-digit SIC (Table 1) and is represented in the model by dummy
variables. The segmentation of the industries conforms to that described by Waddock and Graves (1997).

Table 1. Industries in the sample

<table>
<thead>
<tr>
<th>Industry</th>
<th>SIC</th>
<th>N</th>
<th>Average KLD score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining, Construction</td>
<td>100-1999</td>
<td>21</td>
<td>7.6</td>
</tr>
<tr>
<td>Food, textiles, apparel</td>
<td>2000-2390</td>
<td>20</td>
<td>10.22</td>
</tr>
<tr>
<td>Forest products, paper, publishing</td>
<td>2391-2780</td>
<td>23</td>
<td>10.04</td>
</tr>
<tr>
<td>Chemicals, pharmaceuticals</td>
<td>2781-2890</td>
<td>32</td>
<td>10.27</td>
</tr>
<tr>
<td>Refining, rubber, plastic</td>
<td>2891-3199</td>
<td>13</td>
<td>8.15</td>
</tr>
<tr>
<td>Containers, steel, heavy mfg.</td>
<td>3200-3569</td>
<td>25</td>
<td>9.5</td>
</tr>
<tr>
<td>Computers, autos, aerospace</td>
<td>3570-3990</td>
<td>78</td>
<td>9.93</td>
</tr>
<tr>
<td>Transportation</td>
<td>3991-4731</td>
<td>9</td>
<td>8.77</td>
</tr>
<tr>
<td>Telephone, utilities</td>
<td>4732-4991</td>
<td>45</td>
<td>8.18</td>
</tr>
<tr>
<td>Wholesale, retail</td>
<td>4992-5990</td>
<td>47</td>
<td>9.8</td>
</tr>
<tr>
<td>Bank, financial services</td>
<td>6150-6700</td>
<td>72</td>
<td>10.7</td>
</tr>
<tr>
<td>Hotel, entertainment</td>
<td>6800-8051</td>
<td>32</td>
<td>10.19</td>
</tr>
<tr>
<td>Hospital management</td>
<td>8052-8744</td>
<td>5</td>
<td>9.5</td>
</tr>
</tbody>
</table>

ANALYSIS

A total of 422 companies remained in the sample after companies missing either financial or CSP data were eliminated. Table 1 demonstrates the average KLD score for each industry. Higher scores indicate a better rating for the company corresponding to different aspects of CSR. The sectors of mining and construction as well as refining, rubber, and plastic have the lower scores, while the financial services sector has the highest.

Regressions were used on the panel data for the 422 companies for years 1996-2000. The financial data used are returns on assets (ROA), returns on equity (ROE,) and returns on sales (ROS). For the measurement of CSR, both the KLD rating and the
participation in Domini 400 Social Index are used. Table 2 gives descriptive statistics for all the variables used in the study.

Table 2. Descriptive Statistics for years 1996-2000

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on assets</td>
<td>422</td>
<td>5.15</td>
<td>5.61</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>422</td>
<td>19.05</td>
<td>22.52</td>
</tr>
<tr>
<td>Return on sales</td>
<td>422</td>
<td>8.56</td>
<td>11.78</td>
</tr>
<tr>
<td>Debt/Asset</td>
<td>422</td>
<td>0.25</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Table 3 provides the correlation matrices for the key variables for the years 1996-2000. KLD scores and Domini index participation are strongly correlated with p<0.001. Note that both the KLD scores for the companies and the dummy variable for the participation in the Domini 400 Social Index are positively and significantly correlated with all three measures of financial performance (ROA, ROE, ROS) at $p^2 \leq 0.1$ or better.

Table 3. Correlation matrices for the key variables for years 1996-2000

<table>
<thead>
<tr>
<th></th>
<th>KLD</th>
<th>Domini</th>
<th>ROA</th>
<th>ROE</th>
<th>ROS</th>
<th>LogAssets</th>
<th>LogSales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domini</td>
<td>0.495***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>0.114***</td>
<td>0.087***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>0.041+</td>
<td>0.012+</td>
<td>0.114***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROS</td>
<td>0.103***</td>
<td>0.043*</td>
<td>0.559***</td>
<td>0.025+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LogAssets</td>
<td>0.002</td>
<td>-0.039+</td>
<td>-0.322***</td>
<td>-0.04</td>
<td>0.015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LogSales</td>
<td>-0.022</td>
<td>-0.003</td>
<td>-0.118**</td>
<td>0.01</td>
<td>-0.129***</td>
<td>0.77***</td>
<td></td>
</tr>
<tr>
<td>Debt/Assets</td>
<td>-0.12***</td>
<td>-0.09***</td>
<td>-0.37***</td>
<td>0.059***</td>
<td>-0.18***</td>
<td>0.35***</td>
<td>0.226***</td>
</tr>
</tbody>
</table>

$\text{+}p \leq 0.1$; $\ast p \leq 0.05$; $\ast\ast p \leq 0.01$; $\ast\ast\ast p \leq 0.001$

---

$^2$ The probability that a variate would assume a value greater than or equal to the observed value strictly by chance: $p(z \geq z_{\text{observed}})$
Cross-sectional time series regression analysis was used to test our hypotheses using financial performance as the dependent variable and controlling for size, debt level, and industry. In all models, CSR is the key dependent variable and the measurement of the other independent variables varies. Table 4 presents the results of the regression analysis using financial performance as the dependent variable and the dummy variable for Domini Index participation as independent variable. In the first model, the logarithm of assets is used as proxy for size, while in the second, the logarithm of sales is used.

Table 4. Regression results from regressing ROA, ROE and ROS with Domini Index participation when controlling for risk, size and industry for 1996-2000.

<table>
<thead>
<tr>
<th>Year</th>
<th>Dependent Variable</th>
<th>Domini Participation Coefficient</th>
<th>Adj R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROA</td>
<td>0.74</td>
<td>24.84</td>
<td>13.97</td>
</tr>
<tr>
<td></td>
<td>(p ≤ 0.1)</td>
<td></td>
<td>(p ≤ 0.001)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log of assets used as proxy for size</td>
<td>ROE</td>
<td>1.82</td>
<td>8.27</td>
</tr>
<tr>
<td></td>
<td>(p ≤ 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996-2000</td>
<td>ROS</td>
<td>0.63</td>
<td>15.66</td>
<td>5.16</td>
</tr>
<tr>
<td></td>
<td>(p ≤ 0.1)</td>
<td></td>
<td>(p ≤ 0.001)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ROA</td>
<td>0.67</td>
<td>23.99</td>
<td>13.18</td>
</tr>
<tr>
<td></td>
<td>(p ≤ 0.1)</td>
<td></td>
<td>(p ≤ 0.001)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log of sales used as proxy for size</td>
<td>ROE</td>
<td>1.22</td>
<td>8.21</td>
</tr>
<tr>
<td></td>
<td>(p ≤ 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ROS</td>
<td>0.58</td>
<td>11.24</td>
<td>5.46</td>
</tr>
<tr>
<td></td>
<td>(p ≤ 0.1)</td>
<td></td>
<td>(p ≤ 0.001)</td>
<td></td>
</tr>
</tbody>
</table>

Each of the models is significant at (p ≤ 0.001). When ROA and ROS are used as dependent variables, they seem to be related to Domini participation at p ≤ 0.10. The relationship is in the same direction when ROE is used as a measure of profitability, but it is not significant.
The dummy variable for Domini Index participation is a proxy of the CSR performance, but it does not yield any information concerning the individual CSR score of each company. Thus, in our second analysis, we use the Kinder Lydenberg Domini (KLD) rating system as a measure of CSR.

Table 5 presents the results of the regression analysis using financial performance as the dependent variable and the KLD social responsibility score as the independent variable. In the first model, the logarithm of assets is used as proxy for size, while in the second, the logarithm of sales is used.

Table 5. Regression results from regressing ROA, ROE and ROS with KLD social score when controlling for risk, size, and industry for 1996-2000.

<table>
<thead>
<tr>
<th>Year</th>
<th>Dependent Variable</th>
<th>Domini Participation Coefficient</th>
<th>Adj R²</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-2000</td>
<td>ROA</td>
<td>1.12 (p ≤ 0.05)</td>
<td>24.9</td>
<td>13.96 (p ≤ 0.001)</td>
</tr>
<tr>
<td></td>
<td>Log of assets used as proxy for size</td>
<td>ROE</td>
<td>0.99 (p ≤ 0.1)</td>
<td>8.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ROS</td>
<td>0.52 (p ≤ 0.05)</td>
<td>15.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ROA</td>
<td>0.98 (p ≤ 0.01)</td>
<td>23.81</td>
</tr>
<tr>
<td></td>
<td>Log of sales used as proxy for size</td>
<td>ROE</td>
<td>1.00 (p ≤ 0.05)</td>
<td>8.97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ROS</td>
<td>0.61 (p ≤ 0.05)</td>
<td>15.88</td>
</tr>
</tbody>
</table>
In general, the results are stronger when the KLD scores are used as a measure of CSR, rather than when the Domini Index participation is used. In both cases, however, the results show a positive association between CSR and profitability. This result was expected, since the KLD scores give more detailed and refined information about the CSR performance of the different companies.

The ROA appears to be more closely related to the KLD score than the other two measures of financial performance. As can be seen, each of the models is significant overall at the $p \leq 0.001$ level and the ROA and the ROS as dependent variables are seen to be strongly related to KLD score at $p \leq 0.05$. The results here are less strong; but they are still significant at $p \leq 0.1$, when the financial variable used is ROE. These results allow us to reject the null hypothesis that the coefficient of the KLD score is zero, and show that improved CSR is related to better financial performance.

**CONCLUSIONS AND IMPLICATIONS**

There is an extensive debate concerning the legitimacy and value of being a socially responsible business. There are different views of the role of a firm in society and disagreement as to whether wealth maximization should be the sole goal of a corporation. Most people identify certain benefits for a business being socially responsible, but most of these benefits are still hard to quantify and measure.

This study attempts to address the question whether corporate social performance is linked to financial performance. Using empirical methods, we tested the sign of the relationship between corporate social responsibility and financial performance. The study used extensive data covering a five year period, 1996-2000. The dataset included most of the S&P 500 firms. Results indicate that the sign of the relationship is positive, which supports those studies that found positive linkages in the past (Waddock and Graves, 1997; McGuire, et al., 1988,1990; Auperle, et al., 1985). Different explanations for this result depend on the direction of the causality between CSR and profitability.
Arguments exist that support the view that firms which have solid financial performance have more resources available to invest in social performance domains, such as employee relations, environmental concerns, or community relations. Financially strong companies can afford to invest in ways that have a more long-term strategic impact, such as providing services for the community and their employees. Those allocations may be strategically linked to a better public image and improved relationships with the community in addition to an improved ability to attract more skilled employees. On the other hand, companies with financial problems usually allocate their resources in projects with a shorter horizon. This theory is known as slack resources theory (Waddock and Graves, 1997).

Other arguments propose that financial performance also depends on good or socially responsible performance. According to Waddock and Graves (1997), meeting stakeholder expectations before they become problematic indicates a proactive attention to issues that otherwise might cause problems or litigation in the future. Furthermore, socially responsible companies have an enhanced brand image and a positive reputation among consumers; they also have the ability to attract more accomplished employees and business partners. Socially responsible companies also have less risk of negative rare events. Companies that adopt the CSR principles are more transparent and have less risk of bribery and corruption. In addition, they run less risk of having to recall defective product lines and pay heavy fines for excessive polluting. They also have less risk of negative social events, which could damage their reputation and costs millions in information and advertising campaigns or litigation.

The two different explanations of this relationship depend on its causality. This study did not explore the direction of the causal connections. Nevertheless, the findings indicate that CSR is positively related to better financial performance and this relationship is statistically significant, supporting, therefore, the view that socially responsible corporate performance can be associated with a series of bottom-line benefits.
Future research in this area could proceed in a number of directions. First, more extensive studies are needed to explore the causal mechanisms linking CSR to profitability and to determine whether or not those relationships hold consistently over time. The source of the connection between CSR and profitability has rarely been systematically investigated. It is also important to posit the timing in the relationship, since it would be valuable to investigate and to ascertain how long it takes for the impact of CSR on financial performance to be revealed. For the above to be realized, more data on CSR should become available. The reliability of the CSR data is also an important issue, as data from different sources have significant differences regarding how to evaluate the CSR performance of a firm.
REFERENCES


