

# Corporate Socially Responsible Firms Perform Well! Evidence from Financial and Operating Performances<sup>1</sup>

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## Abstract

This paper analyzes the financial and operational performance of Corporate Socially Responsible firms. We test different hypothesis of over- and under-performance of such companies and show that the firms identified as Corporate Socially Responsible perform just as they were expected to perform financially and operationally, even after bearing the cost of being socially responsible. We also show that firms, being successful in the stock market in the past, tend to invest in socially responsible activities. Our findings indicate that bearing the cost of socially responsible behavior does not have a negative tradeoff. We find that strong past financial performance has implications for current investments in Corporate Social Responsibility; however, past measures of Corporate Social Responsibility have no negative impact on the future financial or operational performance of firms. The overall findings indicate that socially responsible firms “outperform” in that they satisfy their stakeholder needs and may generate even higher returns for their shareholders in the future due to the feedback effect.

**JEL classification:** M14, A13, L21.

**Key words:** Corporate Socially Responsible, Financial Performance, Operational Performance, Four-Factor Model of Stock Returns.

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# 1 Introduction

Should firms engage in Corporate Socially Responsible activities? Do ethical and socially responsible companies perform better than their peers? These questions have been the topic of many academic papers and the popular business press. Opposing opinions have emerged in the literature as to whether acting in an ethical and socially responsible manner adds any economic value to firms. Some argue that the primary objective of the management of a firm should be maximizing shareholder wealth (see Friedman (1982)). Others claim that companies should try to be socially responsible, and gain support for their operations from their customers, suppliers, employees, investors, and society, in general. The latter suggest that managers should maximize the well-being of stakeholders, in general. Some argue that to maintain profitable operations and to maximize shareholder wealth, socially responsible behavior may prove to be a path to it (see Clarkson (1995), Donaldson and Preston (1995), Freeman (1984) and Mitchell, Agle, and Wood (1997) for similar arguments). These problems of ethical behavior, corporate social responsibility (henceforth CSR), and wealth maximizing actions have become the subject of many discussions in recent years. Mackey, Mackey, and Barney (2007) (MMB from now on) propose a theoretical model to study the impact of CSR activities on the market value of firms, under various conditions. One of their major findings is that managers may invest in CSR activities that may not maximize the NPV of their future cash flows<sup>4</sup>, but they will maximize the overall market value of their firm. That is, seemingly costly CSR activities may prove to be value-maximizing for shareholders. We study this problem empirically and our findings are consistent with the implications of the theoretical model of MMB. We, following MMB, use a market definition of firm

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<sup>4</sup> That is, they may invest in so-called costly “philanthropies”, as named by Windsor (2001).

performance: the market value of the firms under consideration. We study the impact of SCR activities on the market value of the firms. In addition, we study the impact of the SCR activities on the operating performance of the firms, to assess the validity of our findings. Using both measures we find that CSR, even if it is costly, does not reduce value to shareholders, and thus, increases shareholder wealth in that firms, due to the feedback effect, may outperform in the future.

Today, many social and political activists believe that it is the responsibility of a company to make sure that its decisions are not only tailored towards profit maximization, but are also expressed in ethical terms as well. Some companies have adopted policies to be ethical and socially responsible.<sup>5</sup> In this paper we study the performance of a group of such companies, identified as best corporate citizens resulting from their commitment both to their shareholders and other stakeholders. First, we identify sources of motivation for the companies to support CSR activities. We identify corporate governance and CEO pay as one of the potential reasons that some companies adopt a policy of exhibiting CSR. We also review the Stakeholder Theory to see if it possesses merit as the source of adopting CSR policies. Institutional ownership of companies may also potentially explain the adoption of CSR policies. We discuss these factors in detail in the following subsections.

## **1.1 A stakeholder perspective**

A stakeholder view proposes taking into account all stakeholders, not just the firm's shareholders in decision making. While some believe that the "social responsibility of a business is to increase its profits" (see Friedman (1982)), others view organizations as

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<sup>5</sup> Verschoor (1998) finds that 26.8 % of the 500 largest U.S. public corporations in their annual report to shareholders commit to ethical behavior toward their stakeholders or emphasize compliance with their code of conduct.

entities whose responsibilities go beyond maximizing only shareholders' wealth (see Harrison and Freeman (1999), Hillman and Keim (2001)). The definition of Corporate Social Responsibility is consistent with the stakeholder concept (Freeman (1984)), which asserts that organizations are accountable to their employees, customers, suppliers, and local communities in addition to their shareholders.

The CSR theory argues that executives must address the (sometimes divergent) expectations and conflicting objectives of different stakeholders. Hillman and Keim (2001) argue that because different stakeholders often have opposing expectations, a firm's decision makers have to be responsive to the needs and demands of their most important stakeholders.

Stakeholder theory places shareholders as one of the multiple stakeholder groups executives must consider in their decision making process (see Clarkson (1995), Donaldson and Preston, (1995), and Jones (1995)). Like shareholders, other stakeholders may place demands on firms. From a stakeholder theory perspective, corporate social performance is assessed in terms of a company meeting the demands of multiple stakeholders. Firms at some level must satisfy stakeholder demands as an unavoidable cost of conducting business.<sup>6</sup>

Tirole (2001) introduces the concept of the "stakeholder society" and argues that a broader focus on all stakeholders results in better managerial actions as opposed to a narrower focus on only shareholder wealth maximization. However, this broader focus may come at the expense of shareholder wealth, and result in higher agency costs for CSR firms.<sup>7</sup>

## **1.2 Corporate Governance, Compensation, and CSR**

The structures of managerial incentives may encourage strategies that have either positive or negative implications on corporate social performance (henceforth CSP). CEO pay packages rarely contain explicit incentives to focus on CSP and usually contain performance criteria that focus on stock-based measures of performance (see Jensen, Murphy, and Wruck (2004)). Stock-based incentives (executive stock options, restricted stocks, etc.) may provide executives incentives to take actions that increase their stock prices and disregard their

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<sup>6</sup> Cornell and Shapiro (1987) suggest that firms must not only satisfy shareholders' demands, but also those with implicit claims – other stakeholders.

<sup>7</sup> Stigler (1962) argues that companies that consider employee welfare attract better applicants. Consistent with this, Turban and Greening (1997) find that socially responsible firms are perceived as being more attractive to employees.

companies' social responsibilities.<sup>8</sup> An executive pay plan typically consists of a salary, annual bonus, and long-term incentive pay (primarily stock options or restricted stocks) and typically is designed to focus on the achievement of financial objectives. This implies that typical incentive contracts will most likely not provide incentives for CSR actions. Consistent with this argument, existing empirical evidence suggests that corporate governance mechanisms put shareholder interests over those of other stakeholders (see John and John (1993)), and direct managerial effort toward achieving financial objectives. Thus, any observable strong CSP may be primarily driven by managerial moral and beliefs<sup>9</sup>. In search of links between CSR activities and executive pay and governance, some researchers have studied the terms of incentive contracts and the subsequent CSP of firms. Some argue that a short-term focus in incentive contracts provides the CEO with a disincentive to engage in CSR activities. The existing empirical findings suggest that the more firms employ a long-term focus in CEO pay, the higher the firm's CSP<sup>10</sup>. This stems from the idea that a long-term focus removes the disincentives to engage in CSP present in a short-term performance and because in the long term, CSP and Corporate Financial Performance are positively related.<sup>11</sup>

Corporate executive compensation structures reflect the board's views regarding social and financial objectives. Having this in mind, Coffey and Wang (1998), Harrison and Freeman (1999) and McKendall et al. (1999) study the relationship between Board of Director characteristics and social performance. Tirole (2001) states that managerial incentives

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<sup>8</sup> Murphy (2000) suggests that CEO compensation typically does not reward exemplary socially responsible performance.

<sup>9</sup> Donaldson et al. (1995) argue that managerial discretion in decision making plays an important role in determining the company's objectives in the area of social responsibility. Therefore, a strong social position is more likely an issue of executive beliefs than wealth maximization. Jones and Wicks (1999) argue that socially responsible firm performance is often subject to managerial discretion. This finding is in line with the argument that exemplary social performance may be a result of deeply held managerial beliefs, values, and moral.

Aguilera, Rupp, Williams, and Ganapathi (2007) argue that managerial morality influences firm decisions regarding socially responsible activities.

<sup>10</sup> Long term focus is proxied by the percentage of restricted stock and stock options in the total pay package.

<sup>11</sup> Deckop, Merriman and Gupta (2006) find that a CEO's pay structure has an effect on Corporate Social Performance (CSP). They show that if the focus of the CEO pay is short term, then the CSP is lower and that the long-term focus of the pay is associated with higher CSP. McGuire et al. (2003) investigate the effects of CEO pay structure on CSP. They find no significant relationship between a short-term focus and separate measures of CSP strengths and concerns, no significant relationship between a long-term focus and CSP strengths, and a significant positive relationship between long-term focus and CSP concerns.

should be designed to promote the welfare of all stakeholders rather than narrowly focus on only shareholders. This is a difficult task since the stakeholder welfare is not measurable. Therefore Tirole (2001) infers that stakeholder society is best served through flat managerial compensation, which would result in a lower level of pay for performance sensitivity.

### **1.3 Institutional ownership and CSR**

The importance of CSR for corporate sustainability suggests a need to examine how institutional ownership may affect a firm's CSR practices. Some researchers argue that stock ownership gives institutions an incentive to monitor and influence the firm's activities, including CSR. Few studies, including those that have examined CSP, have considered whether institutional owners are passive or active, or if they have long- or short-term investment horizons. Neubaum and Zahra (2006) show that long-term institutional ownership is positively associated with CSR.

Some view institutional owners as myopic investors who are only interested in maximizing their own short-term financial performance. Others believe institutional owners are long-term and active investors who promote CSR. Some institutional owners (for example mutual funds, pension funds or investment banks, in general) demand more attention to CSR. However, their effect on CSR remains unclear ( see Johnson and Greening (1999) and Waddock and Graves (1997)).

### **1.4 Socially Responsible Investment**

The idea of CSR has also carried over to the money management world and attracted many investors into socially responsible funds. Socially responsible investments (henceforth SRI) represent approximately \$3 trillion worldwide, with 2/3 originating in the US and 1/4 in the UK<sup>12</sup>. Some researchers have studied the performance of socially responsible mutual funds with mixed findings.

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<sup>12</sup> There continues to be strong demand for mutual funds that specialize in investing in CSR companies. As reported by SIF (see SIF (2003)) 1/9 of assets under active management in the U.S. was invested in these kinds of mutual funds.

Conventional investment funds have the same opportunities to invest as SRI funds to benefit from any abnormal financial performance of socially responsible firms. On the other hand, a change over time in the number of CSR firms relative to conventional ones may have an effect on SRI performance, since this directly affects a SRI fund's available investment opportunities relative to those of other funds.<sup>13</sup>

Cummings (2000) examined the differences in financial performance between investment funds that base their portfolio selection mainly on ethical issues, compared to major indices. Results indicate that on a risk-adjusted basis there is no difference in the financial performances. Bello (2005) compares SR mutual funds to their peers and finds no difference in their performances. Statman (2000) shows that the Domini Social Index (DSI) performed just in-line with the S&P 500 index. Additionally, Statman (2000) demonstrates that some SR funds underperformed the S&P 500 and the DSI, but not most other mutual funds.

Mallin et al. (1995) analyzed the monthly returns of 29 ethical and 29 non-ethical trusts in the U.K. in 1993. They found that ethical trusts under-perform both non-ethical trusts and the market if excess returns are used for comparison. However, they found that ethical trusts outperformed non-ethical ones on a risk-adjusted basis. This excess return underperformance occurs despite the fact that ethical trusts usually have a small company bias, and smaller companies have been demonstrated to outperform the larger cap ones ( see Luther and Matatko (1994)). Diltz (1995) found that ethical screening has little impact on portfolio performance.

Thus, studies find little evidence of SRI funds over- or under-performing relative to the market, and also minimal evidence of a difference between SRI and non-SRI groups. As a whole, SRI funds appear to follow the market similar to their non-SRI counterparts, each group generally failing to "beat the market" but also generally not underperforming relative to the market.<sup>14</sup>

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<sup>13</sup> Assuming the markets are efficient and the assumptions of the Capital Asset Pricing Model (CAPM), asset allocation to CSR stocks may lead to suboptimal portfolios (compared to the Market Portfolio) and ultimately to lower returns in the long-run due to diversification costs, as CSR stocks are only a subset of the market portfolio.

<sup>14</sup> It should be noted that some even pay a financial penalty as high as 3.5% to invest in SR funds (Geczy, Stanbaugh, and Levin (2003)). Thus, there are investors who are willing to invest in firms that engage in socially responsible activities, even though these investments may generate lower returns for them.

## 2 Theory and hypothesis

Some view CSR as discretionary expenditure that conflicts with enhancing shareholder value, whereas others believe CSP is essential to long-term value creation and sustainable organizational performance. Empirical research on the effects of corporate responsibility so far has yielded mixed results. Some studies have suggested a positive relation, while others have concluded that the effects are negative or inconsequential. Pava and Krausz (1996) review 21 empirical studies to assess the relationship between corporate social responsibility and financial performance and claim that:

*“Nearly all empirical studies have concluded that firms which are perceived as having met social-responsibility criteria have either outperformed or performed as well as other firms which are not (necessarily) socially-responsible.”*<sup>15</sup>

The CSR strategy, even if costly, can produce a feedback effect on shareholder value, since it affects future revenues, future cash flows and earnings, cost of capital, and ultimately the company’s financial performance. The overall and net impact of CSR on costs and revenues and value creation is not clear and is a matter of empirical justification.

### 2.1 Negative impact of SR on performance

Some researchers argue that being socially responsible is costly for firms. The argument is that investment in social responsibility results in additional costs, implying a negative relation between social responsibility and economic performance.<sup>16</sup>

So, why would firms take socially responsible actions that reduce value of their firm?

Some argue that if corporate social responsibility is indeed costly for firms then firms with strong past financial performance may be more willing to bear these costs and invest in CSR (see Roberts (1992) and Ullmann (1985) for similar arguments). These researchers claim that firms with weak financial performance would seek more immediate results and therefore

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<sup>15</sup> The quote is from Pava and Krausz (1996).

<sup>16</sup> McGuire et al. (1988) state that the added costs (to CSR activities) may result in such actions as charitable contributions, promoting community developments, maintaining plants in economically depressed locations, etc.



may prefer short term (and potentially high risk/high yield) investment opportunities to longer term, socially responsible investments. Ullmann (1985) argues that firms must first attain an acceptable level of financial/economic performance before they decide to dedicate resources to bear the costs of CSR. This argument, to some extent, is in line with the statements of Friedman (1982) that the primary responsibility of the firms is the shareholder returns. This argument also implies that firms with strong past financial or economic performance are more likely to have investments in socially responsible activities.<sup>17</sup> Thus, the above arguments imply the following empirical hypothesis:

**H1:** Firms that decide to take SR actions had strong past financial performance. That is, the firms that have been identified as CSR, had strong past financial performance, before the identification.

**H2:** Firms with high investment in CSR will have (relatively) lower future financial and economic performance. We test these two hypotheses in Section 4.

Next, we consider the potentially positive impact of CSR on the future financial and economic performance of firms.

## **2.2 Positive Impact of SR on Performance**

Corporate Socially Responsible behavior of firms (even if it is costly) may in some cases results in maximizing the overall value of equity and thus be compatible with the shareholder wealth maximization actions. As mentioned in Mackey, Mackey, and Barney (2007), SR activities may help firms to differentiate their products in their markets ( see McWilliams and Siegel (2001) and Waddock and Graves (1997)). SR activities may also help firms avoid government imposed fines (see Belkaoui (1976), Bragdon and Marlin (1972), Freedman and Stagliano (1991), Shane and Spicer (1983), Spicer (1978)). SR activities may also help firms to reduce their risk as argued by Godfrey (2004). Exhibiting corporate socially responsible behavior may positively affect a firm's reputation, and, as a result, improve consumers' or

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<sup>17</sup> Ullmann (1985) also states that that firms that have less stable financial performance would be less likely to spend their resources on social activities relative to those that have strong financial performance.

investors' perceptions of the firm.<sup>18</sup> The latter may positively impact the economic and financial performance of those firms. As Legnick-Hall (1996) puts it, CSR qualities enable firms to build effective relationships with their stakeholders (not only shareholders) enhancing the firm's competitiveness, and providing firms with competitive advantages in the market for their products, subsequently resulting in higher financial performance. CSR also aids the long-term sustainability of strong economic and financial performance. These potential benefits of CSR imply that even if the primary goal of the firm is to increase shareholder wealth, it may still be more efficient to achieve that goal by addressing the needs of all of the firm's stakeholders.<sup>19</sup>

Therefore, CSR can improve a firm's long-term profitability and enhance its financial and economic performance. Thus, we arrive at the following empirical implication:

**H3:** Firms that adopt policies to be CSR will exhibit stronger future economic and financial performance and yield higher returns.<sup>20</sup>

### **2.3 Hypothesis for financial and operating performance**

With the arguments of the previous subsections in mind, we define our research hypothesis. Our null hypothesis is that CSR should have no impact on the stock or operating performance of companies that adopt policies to be ethical or socially responsible. The alternative (research) hypothesis is that the performance of CSR companies is *different* (could be better or worse) from otherwise similar firms' performances.<sup>21</sup> An additional hypothesis that we will test is that companies that adopt CSR policies have had strong economic or financial performance.

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<sup>18</sup> Positive reputation enables firms, among other things, to attract, hire, and retain qualified and talented employees (Turban and Greening, 1997). This will in its turn improve firm's long-term productivity and economic/financial performance.

<sup>19</sup> Recent empirical studies found a positive relationship between CSR and firms' financial performance. See Berman et al. (1999), Hillman and Keim (2001) and Johnson and Greening (1999) to mention a few.

<sup>20</sup> Overall, the Mackey, Mackey and Barney (2007) model suggests that there will be a positive correlation between firm choices about investing in socially responsible activities and firm value. Our hypothesis H3 is compatible with their suggestion.

<sup>21</sup> We could use the "positive impact of CSR" story and formulate the alternative hypothesis such that the CSR firms outperform; and we could use the "negative impact of CSR" story and formulate the alternative hypothesis such that the CSR firms under-perform. To be more general and capture both effects, we will test the "significant impact of CSR" alternative hypothesis.

### 3 Data on CSR

For the past six years, “Business Ethics: The Magazine of Corporate Responsibility,” has identified the 100 Best Corporate Citizens. Using social ratings compiled by KLD Research and Analytics as well as total returns to shareholders (dividend yield plus capital gains yield), the magazine’s list ranks companies according to service in seven stakeholder groups:

*stockholders, community, minorities and women, employees, environment, non-U.S.*

*stakeholders, and customers.*<sup>22</sup> For example, in the environment category, a corporation may

possess traits such as beneficial products, recycling and pollution prevention, and concerns such as regulatory problems and emissions. To arrive at a net score in the environment

category, KLD takes the three strengths and subtracts the two concerns for a net score of one.

This practice is repeated in each of the seven categories. For each of the seven categories,

KLD notes where companies possess “strengths” and where they have “concerns.” The next

step in the ranking process is to find a simple average of all seven stakeholder measures to

arrive at a single score per corporation. The measures are not weighted so that the average

gives equal status to each of the seven stakeholders. However, over the past six years, KLD

has been a consistent source of social data and their methodology has evolved slightly.

Initially, the list of winners was drawn from 650 firms used in the socially screened Domini

Index: the S&P500 plus 150 other firms selected for industry balance and social

performance. Beginning in 2003, the magazine expanded the list to cover the Russell-1000<sup>23</sup>

and the 150 Domini firms for consistency.<sup>24</sup>

Firms included on the list are not certified as possessing flawless reputations. Indeed,

controversies often surround the listed companies. Corporations ranking in the top 100 have

been found guilty of age discrimination in employment, faced charges of predatory lending,

accused of air pollution, substandard overseas working conditions and numerous other

shortcomings. However, the magazine has consistently used KLD Research & Analytics of

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<sup>22</sup> The measure of CSR used in our study was an aggregate of all dimensions.

<sup>23</sup> These are the 1000 largest publicly traded firms.

<sup>24</sup> Initially the magazine used three-year average scores. This practice was eliminated in 2003 when one-year scores were used. KLD uses seven stakeholder categories (shareholders, community, minorities and women, employees, environment, non-U.S. stakeholders, and customers)

Boston for its source of social data. Another potential limitation relates to the use of the KLD data to measure CSP, as the reliability and validity of the data has been criticized (e.g., Entine, 2003). As Waddock (2003) points it out, the KLD data are likely to be no less reliable than the majority of the other data used in academic research, including data from corporate financial statements. From a validity perspective, the KLD data conform well to the definition of CSP used in this study (i.e., from Wood, 1991), and in general the KLD data has been empirically shown to be a good summary measure of corporate social action (Mattingly & Berman, 2004). Although other definitions of CSP can be advanced, our use of KLD data is appropriate from a construct validity perspective (Waddock, 2003).<sup>25</sup>

## 4 Financial Performance of CSR firms

In an attempt to understand the relationship between CSR and financial performance, there have been numerous empirical studies devoted to the relationship between corporate social performance and future financial performance. These studies have (mainly) concluded that an overall positive relationship between CSR and performance exists, supporting the perspective of CSR.<sup>26</sup> This positive association between CSR and future financial performance, however, has not consistently been the result of prior studies.<sup>27</sup>

Some argue that there is a feedback effect in the CSR and performance relationship: that is, companies that perform well usually support CSP, and companies that adopt CSP usually perform well financially.<sup>28</sup> Cochran and Wood (1984), find the relationship between CSR and financial performance to be positive. Aupperle, Carroll, and Hatfield (1985), find either

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<sup>25</sup> Margolis and Walsh (2003) have also raised the issue of the reliability and validity of Corporate Social Performance and financial performance measures and the omission of potentially important control variables.

<sup>26</sup> Many articles review the literature on the CSR and financial performance relationship. To list few of them; Wood and Jones (1995) have reviewed 60 empirical studies ranging from 1970 to 1994; Pava and Krausz (1996) have reviewed 21 studies ranging from 1972 to 1992; Margolis and Walsh (2001) cover 95 studies, ranging from 1972 to 2000; Margolis and Walsh (2003) review 109 studies from 1972 to 2002; Orlitzky et al. (2003) cover 52 studies for the time period from 1972 to 1997; and Salzmann et al. (2005) review 15 studies from 1975 to 2001.

<sup>27</sup> Margolis, Walsh (2003) reviewed 109 empirical studies on the association between CSP and future financial performance. About half of the papers showed a significant positive correlation, but there were 7 studies that showed a negative association.

<sup>28</sup> Hillman and Keim (2001) and Waddock and Graves (1997) find that increasing Corporate Social Responsibility results in better financial performance and that strong financial performance makes companies invest in and increase their CSR. See also Berman et al. (1999).

no relationship or mixed results. Nelling and Webb (2006) study the causal relation between corporate social responsibility (CSR) and financial performance of firms using Granger causality models. They discover that the relation between Corporate Social Responsibility and financial performance is much weaker than previously thought. They also suggest that strong stock market performance results in more investment by firms to improve their CSR. However, CSR activities do not affect future financial performance of companies. Verschoor and Murphy (2002) use the top 100 Best Corporate Citizens of the Business Ethics magazine and conclude that socially responsible firms outperform the S&P500 index. McGuire, Sundgren and Schneeweis (1988) find that past financial performance has implications for the current measures of CSR; however, past measures of CSR have no impact on the future financial performance of companies.

In this section we examine the stock performance of the firms that are identified as CSR firms. The advantage of using market-driven measures of performance is that we can estimate the value (or the cost) of companies adopting certain strategies to be socially responsible, conditional on the existing information. If it is costly for companies to be identified CSR, then we would expect them to under perform with negative, abnormal returns in the future. We use standard asset pricing models (Fama-French-Carhart four factor model)<sup>29</sup> to measure the abnormal returns.

The abnormal stock performance is measured by the intercept from Fama-French-Carhart four factor model regressions. For every year starting in 2000 and ending in 2005, we form five deciles-portfolios of CSR stocks based on their KLD rankings and calculate the returns of those portfolios. We use both equally-weighted (EW) and value-weighted (VW) deciles-portfolio returns to detect any abnormal performances. The CRSP database with monthly data on the stocks is used to calculate the value and equally-weighted returns of the portfolios of CSR stocks. We then use the returns of these five portfolios along with the returns of the Fama-French-Carhart four factors (referred to as market beta, HML, SMB and Momentum) and estimate the abnormal returns on the five decile-portfolios. We perform the analysis for the pre and post- events, where the events are the identification of firms as Corporate Socially Responsible firms. Thus, the abnormal portfolio returns are defined as Actual –

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<sup>29</sup> See Fama and French (1993) and Carhart (1997) for the 4-factor asset pricing model.

Expected return, which is estimated by the intercept of the regressions. That is, for each year, starting in 2000, we run the time series regressions:

$$R_t^P - R_t^f = \alpha + \beta_M (R_t^M - R_t^f) + \beta_S SMB_t + \beta_{BM} HML_t + \beta_{MOM} MOM_t + \varepsilon_t^P$$

where the dependent variable  $R_t^P - R_t^f$  is the excess return over the risk-free rate of the value-weighted (VW) decile-portfolio of CSR stocks in time period t,  $R_t^M - R_t^f$  is the market risk premium in period t, where the market return is the value-weighted return of the NYSE, AMEX and NASDAQ stocks,  $SMB_t$  is the return on a portfolio of small stocks minus the return on a portfolio of big stocks in period t,  $HML_t$  is the return on a portfolio of high book-to-market (value stocks) stocks minus the return on a portfolio of low book-to-market (growth stocks) stocks in period t, and  $MOM_t$  is the return on a portfolio of prior winners minus the return on a portfolio of prior losers (Momentum). The monthly factor returns are provided by Kenneth French on his website. We use the equally weighted decile-portfolio returns of Corporate Socially Responsible stocks and conduct similar analysis to detect any abnormal returns.

To determine the strength of our findings, we also analyze the returns of decile-portfolios of stocks that were added to the list and portfolios of stocks that were removed from the list year-to-year. The idea of this analysis is that if inclusion on the list has any implications for the companies' future stock performances, then an addition or deletion on the list would accordingly have positive and negative implications. We study the returns of value and equally weighted portfolios subsequent to their additions to or removals from the SCR lists. In addition, we study the performance of the portfolio of firms that were on the SCR list in all years. There were sixteen such companies. Again, if being included on the list has implications for future stock performances, then being on the list every year should have even stronger positive implications for the stock returns. For robustness, we use both value and equally-weighted portfolios for the analysis of these portfolio performances.

## 4.1 The Results

To measure abnormal performance in the portfolio returns, we employ the four-factor asset pricing model of Fama, French and Carhart (see Fama, French (1993) and Carhart (1997)). The measure of abnormal performance is then the Jensen's measure

$$J_t = R_t^{Actual} - R_t^{Expected},$$

where  $R_t^{Expected}$  is the expected portfolio return in excess of the risk-free rate, computed by the four-factor model. Thus, the abnormal performance is measured by

$$J_t = R^{Actual}_t - \beta_M(R_t^M - R_t^f) - \beta_S SMB_t + \beta_{BM} HML_t - \beta_{MOM} MOM_t,$$

which is the intercept of the regressions of the portfolio excess returns with respect to the four factors. Our null hypothesis (the status quo) is that there is no abnormal performance as companies under the efficient market hypothesis should yield returns that compensate the risk (measured in the four factors of Fama, French and Carhart). The alternative hypothesis here is that bearing the cost of social responsibility may lower the returns and resultantly CSR firms may yield lower than expected returns. That is, the alternative hypothesis is that there are negative abnormal returns.<sup>30</sup>

In Panels A and B of Tables 1 and 2 we report the results of the four-factor regressions for the five portfolios of stock returns. Portfolio-1 is composed of the top 20% of the stocks in the list; portfolio-2 is the next 20% for the corresponding year, and so on. In Panel A, we regress the returns of the five value-weighted portfolios, formed by the stocks that are in the list of 100 CSR companies, *prior to* the identification of the companies as CSR companies. In Panel B, we regress the returns of the five value-weighted portfolios, formed by the stocks that are in the list of 100 CSR companies, *after* they were identified as CSR companies.<sup>31</sup> Panel A of Tables 1 and 2 show that all five portfolios of stocks perform *abnormally well* pre-identification period. In all the cases of Panel A of Tables 1 and 2, the measure of abnormal performance, the Jensen's  $\alpha$ , is positive and statistically significant.

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<sup>30</sup> It could also be argued that the alternative hypothesis is that there would be positive abnormal returns to the CSR firms, since being identified as CSR helps firms gain more consumer support and ultimately more demand for their products and therefore higher than expected returns. In both cases, we test the alternative "abnormal return" hypothesis versus the null: "no differences in returns".

<sup>31</sup> In addition we study the performances of the five portfolios for the other years: 2000-2005. We also study five equally weighted portfolios for each of the six years. The results are the same so we do not report them here.

That is, the companies yield positive unexpected returns in periods before they were identified as SCR companies. Part of the reason for this is that the stock performance itself is one of the important dimensions in the CSR identification process. That is why the abnormal positive return in the pre-identification period is not a surprising result, since the SCR identification process is backward-looking and we are analyzing the past returns of the “winners.”

In Panel B of Tables 1 and 2 we report the results of the regressions in the *post*-identification period. To clarify, we report the stock performances of the companies in the period after they are identified as CSR companies.

Referring to the results of Panel B, we see no sign of any significant abnormal performance. The Jensen’s  $\alpha$  for all five portfolios and for every year is statistically not different from 0. Therefore, no abnormal performance is detected in the performance of the CSR companies in the after-event periods.

Next, we study the impact of the additions and deletions of the companies to and from the CSR company lists. For the years from 2000 and 2005, we study the stock performances of the value and equally-weighted portfolios composed of the companies that were added to the list and dropped from the list. The results of the analysis are reported in Tables 3 and 4. Table 3 reports the results for the value-weighted portfolios and table 4 for the equally-weighted portfolios. In Panel A we report the performances of the portfolios of stocks that were dropped from the CSR lists and in Panel B show the performances of the portfolios of stocks that were added to the lists. In all cases we detect no sign of abnormal performances. That is, companies in the portfolio of stocks (dropped from or added to the CSR lists) perform just as they were expected to perform. In all cases the Jensen’s  $\alpha$  is statistically insignificant implying that the identification of the companies as CSR companies has no implications for the stock’s future performance. The companies in the list perform just as they should. The alternative hypothesis here was the underperformance of the SCR companies in the stock market. This is because to be socially responsible, companies bear a cost and, as a result, they could have yielded negative abnormal returns.<sup>32</sup> Our analysis shows no signs of negative abnormal returns for the CSR firms.

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<sup>32</sup> Whether that cost is measurable and significant or not is outside of the scope of this paper but is important enough to be a subject for further analysis.



We also analyze the stock performance of the portfolio of companies that were on the CSR list for every year. There were 16 such companies. We created value-weighted and equally weighted portfolios of the sixteen stocks for the stock performance analysis. We report the results of the regressions in Table 5. Consistent with all the other results, we detect no abnormal performance in this portfolio either.

Resultantly, our regression analysis demonstrates that the firms that were identified as socially responsible perform in line with the market expectations and show no signs of negative abnormal returns.

## 5 Operating Performance of CSR firms

In this section we investigate the operating performance of the CSR firms prior to and after the firms were identified as CSR.<sup>33</sup> Studying the potential differences in the performances before and after the identification helps to control any time-independent differences in firm characteristics that might have an impact on the firms' performances.<sup>34</sup> In comparing the performances of firms, identified as CSR firms, we take the status quo as the "no difference" which is our Null hypothesis. We perform both one-sided and two-sided hypothesis tests, using various measures of operating performance. We use return on assets (ROA); defined three different ways, return-on-sales (ROS) and the book-to-market (B/M) ratio as measures of operating performance. Compustat data was used to compute the above-mentioned measures of operating performance.<sup>35</sup>

The return-on assets (defined three different ways) is a measure of profitability and is one of the simplest measures of firm's operating performance. This measure, however, can be

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<sup>33</sup> We thank Alan C. Shapiro for suggesting this idea.

<sup>34</sup> Research has yielded contradictory results on the effect of CSP on performance (see Aupperle, Carroll and Hatfield (1985)). Some studies show that the relationship is often reciprocal (see Johnson and Greening (1999) and Waddock and Graves (1997)).

<sup>35</sup> Return on assets (ROA) is defined as operating earnings before depreciation (Compustat data item 13) divided by the total assets (Compustat data item 6); another measure of operating performance is ROA2, defined as Income before extraordinary items (Compustat data item 18) divided by the total assets (Compustat data item 6); the third measure of operating performance is ROA3, defined as operating earnings after depreciation (Compustat data item 178) divided by the total assets (Compustat data item 6); return-on sales is defined as operating earnings before depreciation (Compustat data item 13) divided by Net Sales (Compustat data item 12); book-to-market ratio is defined as book value of equity (Compustat data item 60) plus book value of deferred taxes (Compustat data item 74) divided by market value of equity (Compustat data item 199 times Compustat data item 25).

potentially affected by the choice of capital structure. Operating and net incomes are measures of current firm performance, as opposed to future performance. To capture the future performance, we use the book-to-market ratio, which is a proxy for future investment opportunities (Tobin's Q).

We believe our results capture some market/industry trends, and to avoid the impact of those trends on our analysis, we conduct our analysis using industry-adjusted operating performances of firms as well.

## **5.1 The results**

To analyze the operational performance of CSR firms, we begin by studying the mean differences in firms' operations before and after the inclusion of the firms in the CSR lists. We compute the mean performance (for example ROA for companies in 2000), taking three years of data prior to 2000 and three years of data after 2000 and computing the means of the ROA pre- and post-2000. Our null hypothesis is that those means are not statistically significantly different from each other.

Table 6 shows the means of different measures of operating performances for five different time periods: 2000-2004. Looking at Panel A, we see that the firms' operating performance after the identification worsened compared to their performances prior to identification. This is consistent across time and for all three measure of operating performance. ROA dropped on average by 2.6% and ROS declined by about 1%. The B/M ratio decreased on average by 0.04. Looking at the results of the hypothesis tests, we see that the differences in means (after and prior to the events) are statistically significant and different from zero in almost all cases. For the years 2000, 2001 and 2002, all three measures show significant decline in performance after the events. In 2003 and 2004, however, we see no statistically significant difference in the means, which is interpreted as no change in the performance. These conflicting results arise because of the market/industry effects specific to the time-periods. Because of the recession in 2001, the effects of the economic slowdown would be captured in the operating performances of the firms if 2001 was included in the calculations. Since we employ three years of data to compute the average ROA, ROS and B/M, it is likely that our results would be influenced by the inclusion of 2001. To correct for this bias and properly

measure the true difference in the operating performances, we adjust all measures of firms' operating performances for their industry effects. If a firm's operational efficiency is lower because of the systematic events that influenced the whole industry, then taking industry-adjusted performance before and after the events should correct that bias. For each firm, we compute the average of the ROA, ROS and M/B for the industry they operate in and subtract from the corresponding measure of the firm for the corresponding time period. We then perform the same testing of the hypothesis for differences in the means. We report the results of our tests in Panel B of Table 6. The results show that there are no statistically significant differences in the operations of the firms prior to and after the events. That is, the firms, identified as CSR, perform post-event just as they did prior to the event; there are no significant differences in their performances. In some cases we see that the performance actually improved in the post-event period, but it is not robust.

Therefore, our results in this section show no significant differences in profitability of firms that were identified as CSR firms prior to or after the event year. Thus, the results in this section indicate that the CSR activities do not have any (positive or negative) impact on the future operating performance of adopting firms.

## **6 Conclusions**

Using data compiled by KLD Research and published by the Business Ethics journal, we investigate whether being Corporate Socially Responsible affects the financial and operational performance of companies. We use the top 100 companies identified yearly by the KLD Research as CSR to study the performance of Corporate Socially Responsible companies. We discover no abnormal performance in stock returns due to the socially responsible activities. Studying the CSR companies over six years and applying different techniques, we show that those companies show positive and statistically significant abnormal returns pre-inclusion (to the list of top 100 companies) period, but no abnormal performance in the post-inclusion period. Also, exclusion from the list or consistently being on the list for many years has no impact on the future returns of stocks.

Thus, a strong past financial performance impacts positively the engagement in corporate socially responsible activities of companies, but the corporate social responsible activities

have no impact (not positive nor negative) on future financial performance of companies. Perhaps, the positive impact of the CSR activities (and the out performance of the adopting companies) would appear in a long run. This would be possible to test a few years later, when more time-series of data is available on those companies.

We also study the operational performance of the firms prior to and after the identification as corporate socially responsible. We discover no differences in the operational performances due to being identified as CSR and included in the list of top 100 CSR companies.

Some market participants consider the idea of companies being socially responsible useless and costly, believing that the only social mission of any business is to turn a profit for its shareholders. Our findings suggest that companies can incorporate social responsibility in their social mission, serve all of their stakeholders, perform well in maximizing their shareholder value and stay profitable. The fact, that it is “costly” for the companies to be socially responsible and it enhances value to vast group of stakeholders, implies that good corporate citizens do “outperform” the market, by performing just in line with market’s expectations.

Therefore, our findings suggest that it is worthwhile for companies to bear the cost of being socially responsible: the feedback effect helps them perform as well as otherwise similar companies that do not engage in corporate socially responsible activities.

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**Table 1**

Four-factor model parameters for portfolios of stocks identified as Best Corporate Citizens by KLD Research, January 1998–July 2006. In the time-series regressions using monthly returns, the dependent variable is  $R_t^P - R_t^f$ , the excess return over the risk-free rate of the value-weighted (VW) portfolio in time period t,  $R_t^M - R_t^f$  is the market risk premium in period t, where the market return is the value-weighted return of the NYSE, AMEX and NASDAQ stocks,  $SMB_t$  is the return on a portfolio of small stocks minus the return on a portfolio of big stocks in period t,  $HML_t$  is the return on a portfolio of high book-to-market (value stocks) stocks minus the return on a portfolio of low book-to-market (growth stocks) stocks in period t, and  $MOM_t$  is the return on a portfolio of prior winners minus the return on a portfolio of prior losers (Momentum). The monthly factor returns are provided by Kenneth French on his website. In Panels A and B, the  $P_1$  portfolio is the portfolio composed of the top 20% of BCC stocks,  $P_2$  is the next 20% of the BCC stocks, etc. The portfolios are formed the month after the release of the rankings by the KLD. The t-statistics are shown in parentheses.

$$R_t^P - R_t^f = \alpha + \beta_M (R_t^M - R_t^f) + \beta_S SMB_t + \beta_{BM} HML_t + \beta_{MOM} MOM_t + \varepsilon_t^P$$

**Panel A:** KLD BCC companies for 2001. Jan. 1998 – Mar. 2001

Port.	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
$P_1$	0.02 (3.56)	0.84 (7.09)	-0.12 (-1.12)	-0.39 (-2.72)	-0.16 (-2.29)	82%
$P_2$	0.01 (1.99)	1.20 (9.84)	-0.08 (-0.74)	0.18 (1.28)	-0.23 (-3.31)	81%
$P_3$	0.02 (2.01)	0.93 (4.23)	-0.19 (-0.94)	-0.67 (-2.48)	-0.15 (-1.21)	66%
$P_4$	0.02 (1.93)	0.66 (3.02)	-0.24 (-1.21)	-0.14 (-0.31)	-0.05 (-0.22)	67%
$P_5$	0.01 (1.66)	1.14 (9.94)	-0.17 (-1.71)	0.35 (2.55)	0.03 (0.43)	89%

**Panel B:** KLD BCC companies for 2001. Apr. 2001 – Apr. 2003

Port.	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
$P_1$	0.01 (1.53)	1.26 (5.90)	-0.34 (-1.49)	-0.57 (-1.91)	-0.16 (-0.87)	89%
$P_2$	0.00 (0.07)	1.03 (5.02)	0.19 (0.87)	0.15 (0.52)	-0.51 (-2.82)	91%
$P_3$	0.01 (0.98)	0.95 (2.12)	0.14 (0.37)	-0.07 (-0.14)	-0.46 (-1.12)	82%
$P_4$	0.01 (1.13)	0.86 (3.38)	-0.65 (-2.70)	-0.15 (-0.47)	-0.30 (-1.56)	80%
$P_5$	0.00 (1.07)	1.16 (8.13)	0.11 (0.73)	-0.23 (-1.15)	0.13 (1.04)	90%

**Table 2**

Four-factor model parameters for portfolios of stocks identified as Best Corporate Citizens by KLD Research, January 1998–July 2006. In the time-series regressions using monthly returns, the dependent variable is  $R_t^P - R_t^f$ , the excess return over the risk-free rate of the value-weighted (VW) portfolio in time period t,  $R_t^M - R_t^f$  is the market risk premium in period t, where the market return is the value-weighted return of the NYSE, AMEX and NASDAQ stocks,  $SMB_t$  is the return on a portfolio of small stocks minus the return on a portfolio of big stocks in period t,  $HML_t$  is the return on a portfolio of high book-to-market (value stocks) stocks minus the return on a portfolio of low book-to-market (growth stocks) stocks in period t, and  $MOM_t$  is the return on a portfolio of prior winners minus the return on a portfolio of prior losers (Momentum). The monthly factor returns are provided by Kenneth French on his website. In Panels A and B, the  $P_1$  portfolio is the portfolio composed of the top 20% of BCC stocks,  $P_2$  is the next 20% of the BCC stocks, etc. The portfolios are formed the month after the release of the rankings by the KLD. The t-statistics are shown in parentheses.

$$R_t^P - R_t^f = \alpha + \beta_M (R_t^M - R_t^f) + \beta_S SMB_t + \beta_{BM} HML_t + \beta_{MOM} MOM_t + \varepsilon_t^P$$

**Panel A:** KLD 100-BCC companies for 2002. Jan. 1998 – Mar. 2002

Port.	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
$P_1$	0.02 (3.88)	0.80 (7.27)	-0.09 (-0.96)	-0.31 (-2.30)	-0.27 (-4.23)	80%
$P_2$	0.01 (1.78)	1.16 (10.55)	-0.13 (-1.24)	0.08 (0.62)	-0.06 (-0.99)	81%
$P_3$	0.01 (1.79)	0.74 (4.67)	-0.36 (-2.44)	0.21 (1.09)	0.07 (0.71)	67%
$P_4$	0.02 (2.30)	1.03 (4.48)	-0.30 (-1.42)	-0.71 (-2.53)	-0.12 (-0.91)	64%
$P_5$	0.02 (3.06)	1.15 (7.85)	0.05 (0.38)	-0.17 (-0.96)	0.08 (0.97)	76%

**Panel B:** KLD 100-BCC companies for 2002. Apr. 2002 – Apr. 2006

Port.	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
$P_1$	0.01 (0.85)	1.14 (10.21)	-0.22 (-1.69)	-0.81 (-4.75)	-0.04 (-0.44)	85%
$P_2$	0.00 (1.33)	0.85 (9.07)	0.03 (0.27)	-0.13 (-0.90)	-0.29 (-3.64)	85%
$P_3$	0.00 (0.11)	0.86 (7.24)	-0.29 (-2.03)	-0.16 (-0.88)	-0.25 (-2.49)	87%
$P_4$	0.00 (-0.47)	0.98 (6.21)	0.01 (0.07)	-0.53 (-2.19)	-0.01 (-0.08)	65%
$P_5$	0.00 (0.20)	1.25 (12.34)	0.19 (1.56)	-0.61 (-3.93)	-0.03 (-0.37)	91%

**Table3**

Four-factor model parameters for portfolios of stocks that were added to or dropped from the list of companies identified as Best Corporate Citizens by the KLD Research in 2000-2005. In the time-series regressions using monthly returns, the dependent variable is  $R_t^P - R_t^f$ , the excess return over the risk-free rate of the value-weighted (VW) portfolio in time period t,  $R_t^M - R_t^f$  is the market risk premium in period t, where the market return is the value-weighted return of the NYSE, AMEX and NASDAQ stocks,  $SMB_t$  is the return on a portfolio of small stocks minus the return on a portfolio of big stocks in period t,  $HML_t$  is the return on a portfolio of high book-to-market (value stocks) stocks minus the return on a portfolio of low book-to-market (growth stocks) stocks in period t, and  $MOM_t$  is the return on a portfolio of prior winners minus the return on a portfolio of prior losers (Momentum). The t-statistics are shown in parentheses.

$$R_t^P - R_t^f = \alpha + \beta_M (R_t^M - R_t^f) + \beta_S SMB_t + \beta_{BM} HML_t + \beta_{MOM} MOM_t + \varepsilon_t^P$$

**Panel A: *Dropped*** from the list in 2001-2005. VW portfolios

Year	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
2001	0.01 (1.47)	1.21 (6.04)	-0.08 (-0.52)	-0.38 (-1.91)	0.21 (1.11)	88%
2002	0.00 (0.46)	1.26 (11.01)	0.01 (0.06)	-0.45 (-2.55)	0.02 (0.21)	94%
2003	-0.01 (-0.66)	1.33 (8.19)	0.08 (0.41)	-0.11 (-0.45)	0.00 (0.04)	88%
2004	0.01 (1.05)	0.62 (2.05)	-0.03 (-0.07)	-0.51 (-1.63)	-0.26 (-1.10)	50%
2005	-0.01 (-0.08)	0.90 (4.01)	-0.04 (-0.22)	-0.15 (-0.70)	-0.36 (-1.99)	83%

**Panel B: *Added*** to the list in 2001-05. VW Portfolios

Year	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
2001	0.01 (1.79)	0.82 (3.72)	-0.44 (-2.73)	-0.03 (-0.13)	-0.43 (-2.11)	89%
2002	0.01 (1.06)	0.90 (5.56)	-0.22 (-1.21)	-0.40 (-1.66)	0.02 (0.14)	80%
2003	0.01 (0.23)	0.67 (3.37)	0.59 (2.50)	0.09 (0.30)	-0.21 (-1.55)	77%
2004	0.02 (0.60)	1.31 (6.40)	-0.59 (-2.68)	-0.19 (-0.91)	0.23 (1.45)	79%
2005	0.01 (1.53)	1.03 (2.36)	-0.17 (-0.45)	-0.71 (-1.75)	-0.42 (-1.17)	70%

**Table 4**

Four-factor model parameters for portfolios of stocks that were added to or dropped from the list of companies identified as Best Corporate Citizens by the KLD Research in 2000-2005. In the time-series regressions using monthly returns, the dependent variable is  $R_t^P - R_t^f$ , the excess return over the risk-free rate of the Equally-Weighted (EW) portfolio in time period t,  $R_t^M - R_t^f$  is the market risk premium in period t, where the market return is the value-weighted return of the NYSE, AMEX and NASDAQ stocks,  $SMB_t$  is the return on a portfolio of small stocks minus the return on a portfolio of big stocks in period t,  $HML_t$  is the return on a portfolio of high book-to-market (value stocks) stocks minus the return on a portfolio of low book-to-market (growth stocks) stocks in period t, and  $MOM_t$  is the return on a portfolio of prior winners minus the return on a portfolio of prior losers (Momentum). The t-statistics are shown in parentheses.

$$R_t^P - R_t^f = \alpha + \beta_M (R_t^M - R_t^f) + \beta_S SMB_t + \beta_{BM} HML_t + \beta_{MOM} MOM_t + \varepsilon_t^P$$

**Panel A: *Dropped*** from the list in 2000-2005. EW portfolios

Year	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
2001	0.00 (-1.16)	1.19 (8.04)	-0.21 (-2.52)	-0.09 (-1.00)	-0.27 (-2.16)	92%
2002	0.00 (0.68)	1.23 (13.8)	0.48 (4.74)	0.03 (0.19)	-0.02 (-0.31)	96%
2003	-0.02 (-0.69)	1.16 (8.57)	0.50 (3.11)	0.16 (0.75)	-0.02 (-0.19)	92%
2004	0.00 (1.15)	0.95 (4.92)	0.24 (1.17)	-0.28 (-1.40)	-0.14 (-0.90)	85%
2005	-0.01 (-1.02)	1.04 (3.55)	0.11 (0.44)	0.00 (0.01)	-0.22 (-0.90)	84%

**Panel B: *Added*** to the list in 2000-05. EW Portfolios

Year	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
2001	0.01 (1.63)	0.82 (5.34)	0.19 (1.71)	0.41 (2.63)	-0.51 (-3.53)	95%
2002	0.01 (1.73)	1.03 (9.61)	0.22 (1.78)	-0.05 (-0.29)	-0.01 (-0.11)	92%
2003	0.00 (0.34)	1.01 (5.33)	0.34 (1.54)	0.24 (0.79)	-0.17 (-1.41)	83%
2004	-0.01 (-0.50)	0.97 (4.19)	0.07 (0.28)	0.29 (1.21)	0.01 (0.07)	74%
2005	0.00 (0.38)	1.40 (7.51)	0.38 (2.37)	-0.52 (-2.96)	0.04 (0.27)	98%

**Table 5**

Four-factor model parameters for a portfolio of stocks that were in the list of companies identified as Best Corporate Citizens by KLD Research for 6 years. There were 16 of these companies. In the time-series regressions using monthly returns, the dependent variable is  $R_t^P - R_t^f$ , the excess return over the risk-free rate of the Equally-Weighted (EW) portfolio in time period t,  $R_t^M - R_t^f$  is the market risk premium in period t, where the market return is the value-weighted return of the NYSE, AMEX and NASDAQ stocks,  $SMB_t$  is the return on a portfolio of small stocks minus the return on a portfolio of big stocks in period t,  $HML_t$  is the return on a portfolio of high book-to-market (value stocks) stocks minus the return on a portfolio of low book-to-market (growth stocks) stocks in period t, and  $MOM_t$  is the return on a portfolio of prior winners minus the return on a portfolio of prior losers (Momentum). The t-statistics are shown in parentheses.

$$R_t^P - R_t^f = \alpha + \beta_M (R_t^M - R_t^f) + \beta_S SMB_t + \beta_{BM} HML_t + \beta_{MOM} MOM_t + \varepsilon_t^P$$

**Panel A: Present in the list in all years from 2000 to 2005.**

Port.	$\alpha$	$\beta_M$	$\beta_S$	$\beta_{BM}$	$\beta_{MOM}$	$R^2$
VW	0.00 (0.27)	1.25 (5.62)	0.10 (0.37)	-0.56 (-2.18)	-0.46 (-3.35)	91%
EW	0.01 (1.13)	0.77 (8.86)	0.23 (2.31)	0.32 (3.26)	-0.17 (-3.28)	88%

**Table 6**

The measures of operating performance used in this analysis are: (a) return-on-assets (ROA), (b) return-on sales (ROS) and the book-to-market value ratios (B/M). The variables with (-) sign at the end of the name are the averages of the corresponding variable *before*, and the ones with (+) sign are the averages *after* the year in which firms were identified as CSR. The variables with  $\Delta$  at the end of the variable name are the differences between the average after and the average before. For variables with (-) and (+), the reported numbers are the means of those variables, and the numbers in the parenthesis are the variances. The numbers reported under the variables with  $\Delta$  are the differences in variables with (+) and with (-), and the numbers in parenthesis are the t-statistics for testing the hypothesis of the difference having a mean of zero. In Panel B we calculate the industry median performance measures for each firm and each measure and adjust each firm's measure of operating performance by subtracting the industry means from each firm's corresponding measure.

*Panel A: Unadjusted performance measures*

YEAR	ROA			ROS			B/M		
	ROA-	ROA+	ROA $\Delta$	ROS-	ROS+	ROS $\Delta$	B/M-	B/M+	B/M $\Delta$
2000	19.2 (0.009)	14.5 (0.008)	<b>(4.7)</b> <b>(-4.74***)</b>	23.6 (0.026)	21.7 (0.029)	<b>(1.9)</b> <b>(2.25**)</b>	0.264 (0.042)	0.381 (0.096)	<b>0.117</b> <b>(-4.78***)</b>
2001	19.4 (0.009)	14.3 (0.007)	<b>(5.1)</b> <b>(7.07***)</b>	24.7 (0.028)	22.7 (0.032)	<b>(2.0)</b> <b>(2.53**)</b>	0.283 (0.077)	0.378 (0.054)	<b>0.096</b> <b>(-3.61***)</b>
2002	16.7 (0.009)	14.4 (0.008)	<b>(2.3)</b> <b>(3.98***)</b>	20.6 (0.034)	21.1 (0.033)	<b>0.5</b> <b>(2.79**)</b>	0.326 (0.055)	0.383 (0.061)	<b>0.057</b> <b>(-2.84***)</b>
2003	16.6 (0.015)	15.3 (0.010)	(1.3) (1.45)	18.8 (0.044)	18.3 (0.051)	(0.5) (1.21)	0.476 (0.172)	0.393 (0.055)	<b>(0.083)</b> <b>(2.34**)</b>
2004	13.1 (0.010)	13.4 (0.014)	0.3 (-0.31)	24.0 (0.031)	24.2 (0.030)	0.2 (-0.26)	0.386 (0.056)	0.383 (0.061)	(0.003) (0.17)

*Panel B: Industry-adjusted performance measures*

YEAR	ROA			ROS			B/M		
	ROA-	ROA+	ROA $\Delta$	ROS-	ROS+	ROS $\Delta$	B/M-	B/M+	B/M $\Delta$
2000	0.17 (0.0028)	-0.88 (0.0008)	(0.29) (-0.89)	1.03 (0.0022)	0.76 (0.0083)	(0.27) (-1.03)	0.05 (0.0004)	0.05 (0.0021)	0.00 (-0.38)
2001	1.94 (0.0017)	1.10 (0.0016)	(0.84) (-1.20)	0.89 (0.0088)	0.87 (0.0012)	<b>(0.02)</b> <b>(-1.79*)</b>	0.10 (0.0012)	0.08 (0.0011)	<b>(-0.02)</b> <b>(-7.01***)</b>
2002	0.70 (0.0033)	0.89 (0.0013)	0.19 (1.18)	-0.2 (0.0132)	0.05 (0.0052)	<b>0.25</b> <b>(3.74***)</b>	0.003 (0.0009)	0.02 (0.0019)	0.017 (0.47)
2003	1.65 (0.0071)	2.13 (0.0055)	0.48 (1.15)	0.09 (0.0013)	0.23 (0.0081)	0.14 (1.00)	0.08 (0.0058)	0.02 (0.0046)	(0.06) (-0.97)
2004	0.02 (0.0008)	0.25 (0.0008)	<b>0.23</b> <b>(1.84**)</b>	0.56 (0.0118)	1.04 (0.0055)	0.48 (0.88)	0.02 (0.0008)	0.001 (0.0001)	<b>(0.019)</b> <b>(-5.84***)</b>

Note: The \*\*\*, \*\* and \* represent statistical significance at 1%, 5% or 10% levels correspondingly.