

## STRATEGIC USE OF CSR AS A SIGNAL FOR GOOD MANAGEMENT

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### ABSTRACT

More than thirty years of research exploring the link between corporate social responsibility (CSR) and corporate financial performance (CFP) could not provide a satisfying resolution to the tension exists between economic and social objectives. In this paper, we have contributed to the existing CSR literature both theoretically and empirically. On the theoretical side, we challenged the assumption that managers consider all stakeholders equally important and we contend that managers prioritize stakeholders instead. We also extend agency theory by suggesting that CSR may actually reduce monitoring costs since it has informative value about the quality of management. On the empirical side, we proposed a stakeholder-weighted CSR which will alleviate the ‘stakeholder misalignment’ problem which is articulated to be one of the reasons why there are inconclusive results about the relationship between CSR and CFP.

### Keywords:

Corporate social responsibility, corporate financial performance, stakeholder-agency theory



## INTRODUCTION

Although with all the pleasant voices saying that CSR is a way to improve reputation among customers, employees, and shareholders (Lev, Petrovits, & Radhakrishnan, 2006) or provide legitimacy for their actions (Berrone & Gomez-Mejia, 2006), corporate social activities are questioned by scholars as early as Dodd (1932). Perhaps one of the most famous criticism was made by Nobel laureate Milton Friedman who stated that the social responsibility of the firm is to maximize its shareholders' wealth. He further asserted that the resources of the firm otherwise go to owners, employees, customers, should not be 'wasted' in engaging such socially responsible actions. The thirty-year debate over the tension between economic and broader social objectives between proponents of CSR and its critics left the question whether engaging in socially responsible acts creates value for shareholders uncertain (Margolis & Walsh, 2003).

Unsatisfactorily, more than thirty years of research in management literature exploring the link between CSR and CFP only provided mixed results (Margolis & Walsh, 2003; McWilliams, Siegel, & Wright, 2006; Orlitzky, Schmidt, & Rynes, 2003). Studies that found positive relationship between CSR and corporate financial performance (Griffin & Mahon, 1997; Lev et al., 2006; McGuire et al., 1988; Waddock & Graves, 1997a) often used instrumental stakeholder theory (Donaldson & Preston, 1995; Jones, 1995) to explain such a relationship, whereas studies that found negative association (Graves & Waddock, 1994; McGuire et al., 1990) generally rooted their arguments in economics and shareholder wealth maximization.

Although stakeholder theory provides some insights about the relationship between CSR and CFP, with a few exceptions (Mitchell, Agle, & Wood, 1997) it failed to provide convincing arguments about which stakeholder groups matter most. Stakeholder theory argues that managers should make strategic decisions and allocate resources in the manner consistent with the claims of different stakeholder groups. However, there are some stakeholders who are more salient to managers than others (Mitchell et al., 1997). Drawing upon the stakeholder theory, this paper contributes to the understanding of the relationship between CSR and CFP both theoretically and empirically.

On the theoretical side, we contribute to the CSR literature by challenging the assumption that managers consider all stakeholders equally. Rather, we contend that managers prioritize stakeholders based on the industry they belong to. We also extend stakeholder-agency theory (Hill & Jones, 1995) by suggesting that CSR may actually reduce monitoring costs due to its informative value about the managers' performance.

On the empirical side, as literature named operationalization of CSR and CFP constructs as one of the potential reasons behind inconclusive findings about the link between CSR and CFP, we have proposed a new operationalization of CSR which prioritizes stakeholder groups with respect to their relative importance. This kind of a novel approach also provides a possible answer to the question of who or what really matters. Besides, it also alleviates the stakeholder misalignment problem (Wood & Jones, 1995) which has been articulated as another reason for inconclusive results about the relationship between CSR and CFP.

We empirically show that there is a significantly positive relationship between CSR and CFP using this new stakeholder-weighted CSR index, whereas this link is not significant when equal-weighted CSR index is used. Controlling other factors which may also signal good management, we have tested CSR index against market-based financial performance measures. What we have found is that CSR index constructed using equal weights for different stakeholders is not associated with market-based financial performance,

whereas once stakeholder-weighted approach is employed CSR can be used to signal good management. Therefore, this paper contributes to existing literature by disentangling the ambiguous link between CSR and CFP.

## **LITERATURE REVIEW**

In the literature there are significant amount of studies which explore the relationship between CSR and corporate financial performance, yet the sign and significance of this relationship are not well established (Orlitzky et al., 2003). One stream of research showed that socially responsible firms will perform better financially by attracting socially responsible consumers (Bagnoli & Watts, 2003), alleviating the threat of regulation (Lev et al., 2006), improving their reputation with consumers (Orlitzky et al., 2003) and soothing concerns from activists and non-governmental organizations (Baron, 2001). On the other hand, there is also another stream of research which questions whether there is a positive relationship between CSR and corporate financial performance since there is not any established theory explaining this type of a positive relationship (Jawahar & McLaughlin, 2001). Besides, it has been also argued that trying to satisfy conflicting objectives of different stakeholders might result in inefficient use of resources and might even deteriorate the financial performance (Aupperle, Carroll, & Hatfield, 1985) and costs incurred from socially responsible actions put the firms at an economic disadvantage compared to others (Ullman, 1985). Other than those, there is also a third stream of research which concluded that there is no relationship between CSR and corporate financial performance since there are so many intervening variables between CSR and CFP (Fombrun & Shanley, 1990).

The proponents of positive relationship between CSR and CFP basically rely on instrumental stakeholder theory (Donaldson & Preston, 1995; Freeman, 1984; Jones, 1995). The basic argument is that better socially performing firms enable a more efficient usage of its resources to satisfy diverse needs and expectations of its stakeholders which also allows them perform better financially (Surroca et al., 2007; Waddock & Graves, 1997b). This theory is instrumental in the sense that it proposes the usage of CSR to achieve better corporate financial performance (Jones, 1995; McGuire et al., 1988).

As instrumental stakeholder theory started to be used as the theoretical lens to explain the positive relationship between CSR and financial performance, it received criticism as being an ambiguous construct (Griffin & Mahon, 1997; Margolis & Walsh, 2003). Stakeholder theory (Freeman, 1984) states that management should take needs and inquiries of the “groups without whose support the organization would cease to exist” into account while managing the firm, yet the question of who matters remained unanswered (Wood & Jones, 1995).

Mixed results reported in the literature about the relationship between CSR and corporate financial performance may be attributed to the various ways CSR and corporate financial performance constructs have been operationally defined (Carroll, 1991; Orlitzky et al., 2003), to the lack of appropriate statistical controls, and to the possibly inappropriate combining of CSP subdimensions (Griffin & Mahon, 1997; Ullmann, 1985; Wood & Jones, 1995). For example Orlitzky et al. (2003) found that CSR appears to be less correlated with market-based financial performance indicators than accounting-based ones. They argued that since both CSR and financial performance are broad constructs, operationalization of each construct may act as a moderator variable. McGuire et al. (1988) also classified the studies into groups and stated that there is a positive relationship between CSR and accounting based financial performance measures, whereas mixed results have been reported in the studies where stock-based financial performance measures are used. Wood & Jones (1995) on the

other hand, discussed that so called ‘stakeholder misalignment’ – relating stakeholder specific variables to a set of aggregated stakeholder variables ignoring many differences that exist between different stakeholder groups – creates such inconsistent results. Furthermore, Griffin & Mahon (1997) questioned how appropriate to sum up subdimensions of CSR given all equal weight to have a composite CSR measure.

Another explanation for such inconclusive results is the argument that empirical studies so far have ignored some intervening variables which are acknowledged to be one of the determinants of financial performance or the missing link between CSR and corporate financial performance (Margolis & Walsh, 2003; Wood & Jones, 1995). McWilliams and Siegel (2000) showed that once R&D investment included in the equation, the positive relationship between CSR and financial performance is not significant anymore. Surroca et al. (2007) on the other hand argued that there is a missing link between CSR and corporate financial performance which is the intangible resources of the firm related to innovation, human capital and organizational resources.

However, even though there have been some studies explored the reason why there are inconsistent findings in the literature about the relationship between CSR and corporate financial performance (McWilliams & Siegel, 2000; Surroca et al., 2007), scholars still call for more fine grained ideas about how to resolve the inconsistent results in the literature (Harrison & Freeman, 1999; Margolis & Walsh, 2003). We respond to such a call by introducing stakeholder-weighted CSR instead of simply sum-up CSR subdimensions in the literature. By using this innovative CSR index, we take into account of stakeholder conflicts and their varying importances in different industries, and accordingly treat stakeholders more fairly. This creative CSR index not only mitigates the ‘stakeholder misalignment’ problem’ in the literature, but also decodes the mix-results between CSR and market based financial performance.

An emerging stream of research started to become prominent in the literature about CSR which posits the strategic implications of CSR (McWilliams et al., 2006). Baron (2001) referred the use of CSR to capture value as strategic CSR and discussed that even though socially responsible actions might benefit society as a whole, the basic motivation to engage in such activities might be driven by strategic concerns that managers have. He gave the example of providing day care and articulated the benefits of such an activity to society (lower juvenile crimes) and strategic implications (increased availability of workers and lower cost of absenteeism). This kind of a strategic approach to CSR is also eminent in the work of McWilliams and Siegel (2001) which defined CSR to be engaging into ‘actions that appear to further some social good, beyond the interest of the firm and that which is required by law’. However, their definition lacks an economical reasoning perspective since they do not provide an answer to the question of why firms should engage in actions beyond the interest of the firm.

More recently, Husted and de Jesus Salazar (2006) differentiated between strategic vs. coerced CSR and defined coerced CSR as firms engaging socially responsible activities only when they are compelled by regulation to do so. Moreover, they have demonstrated that both society and firms are better off when firms use CSR strategically (i.e., use CSR to capture value) than when they are coerced into making such investments.

In this study we are also approaching CSR from a strategic perspective and articulating it as a means for companies to signal their managerial qualities. As Hill and Jones (1992) discussed, there is an analogy between the general class of stakeholder-agent relationships and the principal-agent relationships considered by agency theory. Building on their stakeholder-agent theory (Hill & Jones, 1992), we bring in another motivation for firms to engage in CSR

activities as CSR may help to decrease the monitoring costs associated with the information asymmetry embedded in such stakeholder-agency relationship. This kind of an approach might also provide an answer to Friedman (1962) since, used as a signal for good management, CSR might create value for stockholders in terms of reduced monitoring costs.

## **HYPOTHESES**

### **CSR and Stock Market Returns**

The theoretical base for the CSP-CFP relationship is still to be identified unambiguously (Jawahar & Mclaughlin, 2001). To account for the inconsistent findings in the literature, a variety of causal mechanisms have been proposed (Orlitzky et al., 2003). In this paper we focus on good management theory (Waddock & Graves, 1997b) which basically argues that if management is focused clearly and directly on external demands coming from its different stakeholders, a fairer and more rational assessment of competing demands will result in good management (Jones, 1995). Moreover, it has been also discussed that good management team who is capable of managing the resources of the firm in such a way that multilateral stakeholder interests are satisfied and good relations with different stakeholders is maintained will also make the company perform good in social dimensions (Berman, Wicks, Kotha, & Jones, 1999; Waddock & Graves, 1997b).

While the neo-classical stockholder is interested in only financial performance, there has been an increase in stockholder groups interested in social performance (Shapiro, 1992). For example, Graves and Waddock (1994) and Teoh and Shiu (1990) both discussed that institutional investors are favorably inclined toward companies with better social performance when other factors held constant and independent information on social performance is available. Stockholders started to evaluate social performance of the firms they hold shares of since it gives hints about the future performance of the company. For example, a bad pollution rating means expensive clean up operations and possible loss of good will resulting in lower profit potential. Owners and their broker-agents will take these future cost possibilities into account when valuing the firm's worth and establish a price for its stock. Frooman's (1994) finding that event studies produce a consistent relationship between irresponsible acts and negative stock returns reflects a good theoretical match between measures. It makes sense, in market terms, that owners would evaluate the long-term financial implications (liability payouts and litigation costs, future cost of insurance, additional regulatory constraints, possible consumer boycotts, etc.) and adjust the price of the stock accordingly. Furthermore Ullmann (1985) considered CSR as a means to reduce the security's risk associated with expensive social performance improvement programs, potential fines or social sanctions.

In the editorial of the special issue of AMJ, Harrison and Freeman (1999) called for papers which will introduce "fine-grained ideas about each stakeholder group" in order to cope with stakeholder misalignment problem in empirical studies concerning the link between CSR and financial performance. We respond their call by including a better grained CSR operationalization which takes into account that a company should weight which subdimensions of social performance is perceived to be important by its stakeholders. For example, a firm operating in mining industry should perceive employee relationship subdimension more important compared to other subdimensions since the labor unions and community will force them to beat the standard levels set by government regulations regarding retirement benefits and/or safety precautions. Therefore, it is important for the firm to realize that which aspects of social responsibility is more important to its primary stakeholders who set expectations, experience and evaluate the firm's actions (Ruf et al. 2001; Wood & Jones, 1995).

In Wood and Jones' (1995) own terms, this kind of a 'stakeholder misalignment' problem in empirical research conducted to explore the relationship between CSR and corporate financial performance might be one of the reasons why there are mixed results about such a relationship in the literature (Griffin & Mahon, 1997; Orlitzky et al., 2003). In order to cope with such an ambiguity that stakeholder approach brings in, Collins (1992) tried to show explicitly how stakeholder theory can be utilized to explore CSR. Arguing that CSR can only be defined only in relation to some specific stakeholder groups, he constructed a matrix with various CSR dimensions (environmental, customer related, etc.) down the column and various critical stakeholder categories (customers, shareholders, employees, etc) across the rows. He then assessed the corporate performance on each CSR subdimension with respect to each stakeholder group in order to align specific stakeholders with specific subdimensions of CSR. On the other hand, Carroll (1979) approached the issue from another perspective and tried to give weights to different subdimensions of CSR so that social performance of the firm can be measured with respect to what its stakeholders actually care. Recently, Lev et al. (2006) empirically showed that firms that produce goods and services purchased by individual consumers are more likely to enhance revenue from having a reputation as a good corporate citizen than firms that produce goods and services for industrial or government use. They used industry to classify firms into two groups where first group of firms operating in industries where sensitivity to consumer perception is high (such as consumer goods and finance industries) and second group having the firms operating in industries where sensitivity to consumer perception is low.

*Hypothesis 1a. There is no relationship between CSR and market-based financial performance when stakeholders are not prioritized.*

*Hypothesis 1b. There is a positive relationship between CSR and market-based financial performance when stakeholders are prioritized.*

### **CSR as a signal for Good Management**

In the literature, good management hypothesis is used to explain why better social performance will lead to better financial performance (Alexander & Bucholz, 1978; Berman et al., 1999; Bowman & Haire, 1975; Margolis & Walsh, 2003; McGuire et al. 1988; Waddock & Graves, 1997a). Alexander and Bucholz (1978) suggested that good corporate social performance makes firms an attractive investment since investors evaluate a socially aware and concerned management will also possess the requisite skills to run a superior company. Bowman and Haire (1975) also discussed that stakeholders and stock and bondholders may see corporate social responsibility as indicating management skill. Moreover, Spicer (1978) found a positive correlation between investment value of a firm and its social performance. He explained such a relationship by arguing social performance disclosures give information about management competence which supplements or complements information which already appears in financial statements and other corporate disclosures.

Along same lines, Ullmann (1985) hypothesized that social disclosures reduce investors' informational uncertainty, but he specifically mentions this type of a social disclosure is made by the company on a voluntary basis since company is convinced that the value of this information is not zero. Recently, Waddock and Graves (1997a) found a link between social performance and the quality of management, where quality of management is defined using the Fortune reputation survey rankings, but, however, Fryxell and Wang (1994) note that the reputation measure that Fortune provides is biased by a financial performance "halo".

When used as the theoretical lens to explain the relationship between CSR and corporate financial performance, we can use instrumental stakeholder theory to make the argument that certain types of corporate social performance are manifestations of attempts to establish trusting, cooperative firm/stakeholder relationships and should be positively linked to a company's financial performance (Donaldson & Preston, 1995; Jones, 1995). Taking the firm as a nexus of contracts, instrumental stakeholder theory basically focuses on the dyadic relationship between managers and other stakeholders and offers contracts as the best mean to cope with the opportunistic behaviors that managers can pursue. Since the costs of opportunism and of preventing or reducing opportunism are significant, firms that contract on the basis of trust and cooperation will have a better corporate financial performance compared to the ones which do not have such contracts.

In this paper we borrowed stakeholder-agency theory (Hill & Jones, 1992) from literature and assert that CSR might be perceived to be a signal for investors about the quality of management team which will decrease the monitoring costs embedded in such a relationship. Just as in agency theory, one of the main problems in stakeholder-agency theory is that there is an information asymmetry between stakeholders and agent which makes it expensive for the stakeholders to verify the agent's activities (Hill & Jones, 1992; Jensen & Meckling, 1976; Ross, 1973). Since it is difficult for stakeholders to identify if management is acting in favor of their interests, stakeholders should gather more information about management activities in order to monitor them. As CSR signals the quality of management skills to stakeholders, the necessity to collect more information will become obsolete making the monitoring cost also decrease since the cost of gathering and analyzing additional information will be decreased.

However it should be noted that this type of a strategic usage of CSR still suffers from stakeholder misalignment (Wood & Jones, 1995) problem. If a firm decides to make use of CSR in a strategic way to signal good management, it should determine the relative importance of each of the stakeholder groups. Only when stakeholders are prioritized in a proper way, firms can make use of strategic CSR to convey good quality of management.

*Hypothesis 2a: If stakeholders are not prioritized, CSR is not perceived as a signal for good management.*

*Hypothesis 2b: If stakeholders are prioritized, CSR is perceived as a signal for good management.*

## **METHODS**

### **Data**

In this study we use KLD database which is already acknowledged to be the largest multidimensional corporate social performance database available to public (Deckop et al., 2006) and have recently been referred to as the de facto standard in CSR research at the moment (Waddock, 2003). The firm Kinder, Lydenberg, Domini (KLD) is an independent rating service that focuses particularly on evaluation of corporate social performance across a range of dimensions related to stakeholders' interests. KLD rates companies' strengths and concerns on several attributes of social performance providing a multidimensional assessment. Six of the rated dimensions (namely community relations, treatment of women, minorities and disabled, employee relations, environmental performance, respect to human rights and product characteristics) concentrate on relationship with key stakeholders which is articulated to be one of the factors that influence corporate strategy (Prahalad & Hamel, 1994). One of the attributes is less related to stakeholder groups but includes areas in which companies have received significant external pressures in recent years (Waddock & Graves,



1997b). This ‘involvement in controversial business activities’ dimension includes only concern ratings for alcohol, gambling, firearms, military, nuclear power and tobacco, and KLD assess these dimensions under ‘exclusionary screens’.

In each of the areas, KLD examines a range of sources to find out, for example, whether the company has paid penalties in a particular area (for concerns) or has major strengths in the area (e.g., strong retirement benefits policies for the Employee Relations category). Where possible, KLD uses quantitative criteria to determine the rating (e.g., dollar amount paid in fines or penalties; percentage of employees receiving certain kinds of benefits) but it also relies on qualitative data. For each company included in the list for any particular year, KLD utilizes a range of sources to obtain social performance data. These sources include self reported survey data obtained by the yearly questionnaires filled out by investor relations office, corporate data drawn from different sources like annual reports, 10K forms, proxy statements, and quarterly reports, as well as reports issued for specific CSP arenas, such as environment and community, and external data sources which include articles about a company in the general business press (e.g. *Fortune*, *Business Week*, *Wall Street Journal*), trade magazines, and general media. KLD staffers also draw on relevant articles on companies from periodicals such as the *Chronicle of Philanthropy*, Regional Environmental Protection Agency newsletters, academic journals, and the *National Law Journal* for legal or regulatory issues. External surveys and ratings are also used, where appropriate, for instance *Working Mother's* listing of the 100 best companies for women to work for.

## Measures

**Equal-weighted CSR.** In literature CSR has been operationalized using different data sources (Orlitzky et al., 2003). There have been a considerable amount of research used Fortune’s reputation index to measure corporate social performance (Brown & Perry, 1994; Griffin & Mahon, 1997; Herremans et al., 1993; McGuire et al., 1988; Simerly, 1994; Spencer & Taylor, 1987), yet it has shortcomings since Fortune’s ‘responsibility to community/environment’ scale is unidimensional and is not capable of capturing the multidimensional nature of CSR. As new databases like KLD, IRRC, SiRi, etc. became available, research have moved away from Fortune’s index and started to make use of these datasets which draw scores from different dimensions of social performance (Brown and Perry, 1994; Graves & Waddock, 1994; Griffin & Mahon, 1997; Surroca et al., 2007).

In this study we have used KLD ratings to measure corporate social responsibility. In the dataset provided by KLD, strength ratings are signified by a number “1” and we have codified concern ratings by “-1”. The absence of ratings, signified by a “0” indicates that a company did not meet the criteria for the strength or concern. In order to obtain an equal-weighted CSR Index for every firm-year in our sample, we have summed up the binary values for ratings for thirteen dimensions (6 strengths, 7 concerns). Equal-weighted CSR Index is constructed for every firm-year as follows;

$$CSRIndex(EW)_{it} = \sum_{k=1}^{13} x_{ikt} \quad \text{for every } i \text{ and } t$$

$x_{ikt}$ : sum of binary ratings for firm  $i$ , social dimension  $k$ , year  $t$

**Stakeholder Weighted CSR.** The KLD social index is a commonly used measure of corporate social performance, because it provides a multidimensional appraisal of a firm’s corporate social performance by referring to a consistent, largely objective, set of screening criteria (Graves & Waddock, 1994; Griffin & Mahon, 1997; Rowley & Berman, 2000). However, there is one important limitation of this index: the lack of a weighting scheme for

the different dimensions of CSP (Graves & Waddock, 1994). A common approach in the previous literature is to sum all KLD stakeholder scores. However, this strategy implies an assumption that requires all dimensions to be treated as equally important (Griffin & Mahon, 1997). As intensively explored in the literature of stakeholder theory, firms need to attend to different stakeholders differently according to the various interests (Wood & Jones, 1995).

In order to alleviate the stakeholder misalignment problem in the literature, we propose a stakeholder weighted CSR which will account for the relative importance of each stakeholder group. McWilliams, Siegel and Wright (2006) discussed that business norms and standards, regulatory frameworks, and stakeholder demand for CSR can vary substantially across lines of business, so we have decided to use industry as the classification variable to group the sample companies. We expected different industries attributed different levels of importance to these 13 dimensions respectively. Since the equal-weighted CSR index we have constructed does not have any prioritization of social dimensions, in order to mitigate this industry level effect we have decided to construct another CSR Index where the prioritization of social dimensions is achieved by computing weights for thirteen (6 dimensions for strength, 7 dimensions for concerns) of the dimensions for each industry.

The industries are defined by following Sharpe (1982) using firm level SIC codes. These 9 industries include basic industries, capital goods, construction, consumer goods, energy, finance, transportation, utilities and others. After categorizing the firms into the 9 industries for each year, binary KLD strength/concern ratings for each of the thirteen dimensions is summed up to get a overall score of social performance for that particular industry-year. Then individual sums for each of the thirteen dimensions are divided by this overall sum to get the weights for each of the thirteen dimensions for every industry-year. After having the weights for every industry-year, we have multiplied the raw binary rating values with associated weights to get new stakeholder weighted CSR Index for every firm-year.

$$Average_{jkt} = \sum_i x_{ijkt} \quad \text{for every } j, k \text{ and } t$$

$$Weight_{jkt} = \frac{Average_{jkt}}{\sum_{k=1}^{13} Average_{jkt}} \quad \text{for every } j, k \text{ and } t$$

$$CSRIndex(SW)_{it} = \sum_{k=1}^{13} x_{ijkt} \times Weight_{jkt} \quad \text{for every } i \text{ and } t$$

$x_{ijkt}$ : sum of binary ratings for firm  $i$  operating in industry  $j$  for social dimension  $k$  for year  $t$

$Average_{jkt}$ : average rating for industry  $j$  for social dimension  $k$  for year  $t$

$Weight_{jkt}$ : weight of social rating for industry  $j$ , social dimension  $k$  for year  $t$

$CSRIndex(SW)_{it}$ : Stakeholder weighted CSR Index for firm  $i$ , year  $t$

**Corporate Financial Performance.** Literature examining the link between CSR and CFP used both accounting based (Brown & Perry, 1994; Dooley & Lerner, 1994; Graves & Waddock, 1994; Griffin & Mahon, 1997; Russo & Fouts, 1997) and market based (Anderson & Frankle, 1980; Herremans et al., 1993; Patten, 1990) financial performance measures (Orlitzky et al., 2003). In this study we use market based financial performance measures since they have several advantages over accounting based ones. First of all, accounting-based measures are subject to bias from managerial manipulation and differences in accounting procedures (Branch, 1983; Brilloff, 1976) whereas market-based ones are less susceptible to differential accounting procedures and managerial manipulation. Secondly, market-based measures represent investors' evaluations of a firm's ability to generate future economic

earnings rather than past performance (McGuire et al., 1988). Thirdly, accounting-based performance measures are not appropriate for cross industry comparison (Griffin & Mahon, 1997).

In this study we have utilized two types of market-based financial performance measures, first one being monthly stock returns and second one as Tobin's Q. Monthly stock return is the change in stock price between the last day of the month and the first day of next month and reflects almost instantaneously how market values the firm. Tobin's Q is also appropriate for our purposes since it reflects the market value of the firm over its assets. As market value reflects some unmeasured or unrecorded assets of the company (Hayashi, 1982), Tobin's Q enable us to capture an intangible asset of the company which is quality of management. Moreover it has the advantage over accounting measures of minimizing distortions caused by tax laws and accounting conventions. Data on both of the market-based financial performance measure are downloaded from COMPUSTAT. The construction of each variable is described in Appendix A.

***Other Signals for Good Management.*** In this study in order to control for other factors which might also indicate good management, we used other signals as one market based and two accounting based. As market based signal we picked up S&P 500 inclusion. In the literature there have been empirical evidence proving that inclusion in S&P 500 index will cause a permanent increase in stock price (Beneish & Whaley, 1996; Denis et al., 2003; Dhillon & Johnson, 1991; Harris & Gurel, 1986; Jain, 1987; Lynch & Mendenhall, 1997; Shleifer, 1986; Wurgler & Zhuravskaya, 2002;). Although Standard and Poor's claim that "Company additions to and deletions from an S&P equity index do not in any way reflect an opinion on the investment merits of the company" (Standard and Poor's, 2002: p1), there are considerable amount of studies showing that inclusion to S&P 500 Index is not an information-free event but, indeed, conveys information about the managerial quality of the newly added firms (Shleifer, 1986; Wurgler & Zhuravskaya, 2002). S&P 500 inclusion is a binary variable which is 1 if the firm is included in the S&P 500 index for that particular year, 0 if it is not included. We took data about S&P 500 inclusion from COMPUSTAT.

To provide a comprehensive set of factors which might signal good management to the market, we also included two accounting-based signals. First one is return on assets (ROA) which is an indicator of how profitable a company is relative to its total assets. ROA gives an idea about how efficient management is at using its assets to generate earnings and, clearly, a sign for good management not only to investors but also to other stakeholders since it conveys information about how profitable the company was using resources provided by suppliers, banks, or shareholders. ROA is calculated by dividing sum of net income (COMPUSTAT item 172) and interest expense (COMPUSTAT item 15) by average total assets.

Second accounting based signal is 'organization capital' which is defined to be the knowledge used to combine human skills and physical capital into systems for producing and delivering want-satisfying products (Lev et al., 2006). Since organization capital is acknowledged to reflect the sum total of managerial decisions and activities (Lev and Radhakrishnan, 2005; Prescott & Visscher, 1980), firms with higher organization capital is perceived to have a better management. We followed Lev and Radhakrishnan (2005) to compute organization capital for firm-years included in the sample. The required accounting data to compute organization capital include sales (COMPUSTAT item 12); Plant, property and equipment (COMPUSTAT item 8); number of employees (COMPUSTAT item 29); annual R&D expense (COMPUSTAT item 46); and selling, general and administrative (COMPUSTAT item 132). Since there are missing values for R&D expenditures we omitted

those firm-years without R&D expenditures and computed organization capital for the firm-years where R&D expenditures data is available.

**Control Variables.** Several control variables which may influence financial performance (particularly Tobin's Q) are included in the model. These control variables can be classified into two groups as organizational characteristics and management preferences. Organizational characteristics are size (Arlow & Gannon, 1982; Shin & Stulz, 2000; Waddock & Graves, 1997a) and sales growth (De, 1992). To account for the past performance, we have also lagged sales growth one year and included as a control. For size we have included logarithm of total assets (COMPUSTAT item 6). We took data on annual sales from COMPUSTAT (item 12) and computed sales growth for year  $t$  using log of sales year  $t$  divided by sales year  $t-1$  and also included lagged sales growth for year  $t$  which is sales year  $t-1$  divided by sales year  $t-2$ .

Management preferences include R&D expenditures over total assets (Lang & Stulz, 1994; McWilliams & Siegel, 2000; Morck, Shleifer, Vishny, 1988) and long-term debts over assets to account for the risk (McWilliams & Siegel, 2000; Morck et al., 1988; Waddock & Graves, 1997a). Risk is proxied by dividing long term debts (COMPUSTAT item 9) by total assets. We included R&D per dollar of assets by computing the ratio of R&D investment expenses (COMPUSTAT item 46) over total assets.

Lastly, we have also controlled for industry (Arlow & Gannon, 1982; McGuire et al., 1988) and year effects. We used Sharpe (1982) industry as defined above to classify firms into nine industries using SIC codes and also included year as a dummy variable to control for any year effect.

## ANALYSIS

### 4 factor model

If CSR matters for firm performance and this relationship is fully incorporated by the market, then a stock price should quickly adjust to any relevant change in the firm's social performance. In order to test whether market immediately reacts to positive corporate social performance, we have ranked firms according to their CSR index (both according to equal-weighted and stakeholder weighted CSR index) and constructed two portfolios as having the firms from first decile in top portfolio and from tenth decile in bottom portfolio. For every year from 1991 to 2006, we have constructed four portfolios in total; one top and one bottom for every year using equal-weighted CSR index and one top and one bottom for every year using stakeholder weighted CSR index. Descriptive data on top and bottom portfolios using equal-weighted CSR and stakeholder-weighted CSR is presented in Table 1. When equal-weighted approach is used to compute CSR, there are firms with same CSR levels making it impossible to have a cut-off point at exactly 10%. Since we did not want to have exact deciles by arbitrarily including firms which has same levels of CSR into one of the portfolios, the total percentage of the firm included in one of the portfolios varies between 14.65% and 27.15% for years 1991 to 2006. Such a problem does not occur when stakeholder weighted CSR is used since such an approach makes it impossible to have same CSR levels for any of the two firm-years.

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Insert Table 1 around here  
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Previous research has acknowledged a number of equity characteristics that elucidate disparities in realized returns. In addition to differences in exposure to the market factor (“beta”), a firm’s market capitalization (or size), book-to-market ratio (or other value characteristics), and immediate past returns (momentum) have all been shown to significantly forecast future returns. (see Banz, 1981 for size, Fama and French, 1993 for size and book-to-market, Jegadeesh & Titman, 1993 for momentum).

We employed Carhart’s (1997) four factor model to see if the performance difference between two portfolios can be attributed solely to market risk, size, book-to-market ratio or momentum. The model which is going to be estimated is;

$$R_t = \alpha + \beta_1 * RMRF_t + \beta_2 * SMB_t + \beta_3 * HML_t + \beta_4 * Momentum_t + \varepsilon_t$$

where  $R_t$  represents the monthly return difference in basis points between top and bottom portfolios,  $RMRF_t$  is the month  $t$  value-weighted market return minus the risk-free rate, and the terms  $SMB_t$  (small minus big),  $HML_t$  (high minus low), and  $Momentum_t$  are the month  $t$  returns on zero-investment factor-mimicking portfolios designed to capture size, book-to-market, and momentum effects, respectively. Although there is ongoing debate about whether these factors are proxies for risk, we simply consider the four-factor model as a method of performance attribution. We took the monthly values of  $RMRF$ ,  $SMB$ ,  $HML$ , and  $Momentum$  from Kenneth R. French - Data Library website. Our sample consists of 192 monthly return differences between firms for years between 1991 and 2006.

## Regression

In order to test whether CSR signals good management we have regressed industry adjusted Tobin’s Q (firm specific Tobin’s Q minus industry-median Tobin’s Q) over equal-weighted / stakeholder-weighted CSR index, S&P 500 inclusion, ROA and Organization capital (other two control signals for good management) and, control variables. Since stakeholder weighted CSR index changes over time, we have decided to pool the data and estimate a hierarchical OLS regression. We have utilized fixed-effects estimation model where first fixed effects for every firm is computed as taking the average over all years from 1991 to 2006, and then this firm-fixed effect is subtracted from individual observations for that specific firm before estimating the model. Using a fixed effects estimation model we eliminated any unobserved heterogeneity caused by firm itself. The resulting regression equation is;

$$Q_{it} = a_i + b_i X_{it} + c_i W_{it} + e_{it}$$

where  $Q_{it}$  is industry adjusted Tobin’s Q,  $a_i$  is the fixed effect of the firm,  $X_{it}$  is a vector of signals for good management (including equal-weighted / stakeholder-weighted CSR, S&P 500 inclusion, ROA and organization capital) and  $W_{it}$  is a vector of control variables. We have included the firm-years for which there is R&D expenditures data available for the time period between 1991 and 2006.

## RESULTS

### 4 factor model

Table 2 show the results of estimating 4 factor model where dependent variable  $R_t$  is the monthly return difference between top and bottom portfolios. Thus the alpha in this estimation is the abnormal return on a zero-investment strategy that buys top portfolio and sells short the bottom portfolio. We estimated two models, for the first model we used equal-weighted CSR index to rank the firms while constructing the top and bottom portfolios whereas for the second model we used stakeholder weighted CSR index to rank the firms.

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Insert Table 2 around here  
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If high CSR drives market-based financial returns, what we expect to find is a significant  $\alpha$ , which is the abnormal return in excess of what could have been achieved by passive investments in the factors. As can be also seen in Table 2, constant is positive and significantly different from zero (0.473,  $p = 0.024$ ) for the 4 factor model where stakeholder weighted CSR index is used to rank the firms. The 47.3 basis points (bp) per month difference between portfolios mean that top portfolio earns about 5.8 % more per year compared to bottom portfolio. Thus, although risk, size and book-to-market ratio explain considerable amount of differences between returns of two portfolios, there is a significant 5.8 % per year difference remained unexplained by the style differences between two portfolios.

On the other hand results presented in Table 2 indicate that when equal-weighted CSR index is used this significant constant term disappears and there is no significant difference between the returns of the two portfolios (0.232,  $p = 0.275$ ). In this case size, book-to-market ratio and momentum effects explain the difference in returns for these two portfolios.

### Regression Analysis

Table 3 gives the correlation matrix. As can be seen at  $p < 0.01$  significance value, equal-weighted CSR correlates strongly with stakeholder weighted CSR ( $r = 0.10$ ), S&P 500 inclusion ( $r = 0.18$ ), organization capital ( $r = 0.16$ ) whereas stakeholder weighted CSR correlates with S&P 500 inclusion ( $r = 0.08$ ) and  $\ln(\text{Assets})$  ( $r = 0.13$ ). Firms included in S&P 500 tend to be bigger firms ( $r = 0.41$ ) with higher financial risk ( $r = 0.07$ ) and have relatively higher CSR (equal-weighted and stakeholder weighted terms).

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Insert Table 3 around here  
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Results of regression where equal-weighted / stakeholder-weighted CSR along with other signals for good management and control variables are used to estimate Tobin's Q appear in Table 4. In model 1 and 2, we included equal-weighted CSR with ROA and OC respectively, whereas in model 3 and 4, we estimated the regression using stakeholder weighted CSR with ROA and OC respectively. Significant and positive coefficients for stakeholder weighted CSR in model 3 ( $\beta = 0.08$ ,  $p < 0.05$ ) and in model 4 ( $\beta = 0.08$ ,  $p < 0.05$ ) compared with the statistically insignificant coefficients of equal-weighted CSR in models 1 and 2 supports Hypothesis 2a and 2b. We have also included interactions among the signals for good management to see if there is any interaction among those signals. Among the interactions of CSR with other signals included, only CSR\*ROA appears significant at 10% significance value in Model 1. It should be noted that none of the control signals (i.e., S&P 500 inclusion, ROA, Organization capital) moderate the relationship between CSR and market-based financial performance.

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Insert Table 4 around here  
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## DISCUSSION AND CONCLUSIONS

In this study we have investigated the relation between corporate social responsibility (CSR) and corporate financial performance (CFP). We challenged the assumption that managers consider all stakeholder groups of equal importance. Besides, we also contribute to agency theory by asserting that CSR can be used strategically to reduce monitoring costs as it provides information about the quality of management. Drawing upon our theoretical arguments, we demonstrated empirical evidence which shows that once stakeholders are prioritized CSR has a positive impact on market-based financial performance whereas this kind of an impact does not exist when stakeholders are given equal weights. Moreover, by controlling other factors which might affect financial performance or can be used as signals for good management, we have also showed empirically that only when stakeholders are prioritized CSR can be used as a signal for good management.

Margolis and Walsh (2003) stated that corporate involvement in wider social life creates a tension between economic and social objectives of the firm. Dated as old as Dodd (1932), economists argue that the social responsibility of the firm should be maximizing profits (Freidman, 1962). In this paper we have shown that economic and social objectives are not substitutes, rather, they complement each other indeed. This conclusion provides companies with a traditional mindset the motivation to engage in social actions since investment made in CSR will pay-off. October 2002 Ethics Newsletter, published by Institute for Global Ethics, reported that 68% of large companies globally and 41% of US companies produce some form of triple bottom in report that addresses overall corporate social performance also provides the evidence that more and more companies are realizing the complementary role of CSR.

As we have discussed CSR can be used strategically by managers to signal their quality, an immediate extension is to include corporate social performance in the compensation plans for managers, particularly for CEO. Although Berrone and Gomez-Mejia (2006) and Deckop et al. (2006) discussed that social performance can be an important non-financial determinant of CEO pay, including corporate social performance in compensation schemes received criticism (Jensen, 2002; Tirole, 2001). In this study we introduce the stakeholder-weighted CSR index which might address the criticism by Jensen (2002) who stated that it is impossible to maximize more than one objective simultaneously. As we prioritize stakeholders and give weights to them regarding their relative importance, we have introduced a single social performance equation which is expected to be maximized by the managers. Our stakeholder-weighted CSR index overcomes the criticism raised up by Jensen (2002), yet, there is still the question whether the measure of managerial effort based on stakeholder satisfaction is less accurate in comparison with that based on shareholder value creation remains to be addressed.

At least three limitations in our study could be rectified in future research. First of all our results showed that when used as a signal for good management, stakeholder-weighted CSR may reduce the monitoring costs since it has the informative value about the managers' performance. However, this is only true when the cost of gathering information about management activities is higher than the investment made in CSR. Since it cannot be clearly identified which other mechanisms can be used by stakeholders to monitor managers and their associated cost structures, we cannot draw conclusions on this issue. Although McWilliams and Siegel (2001) and Husted and de Jesus Salazar (2006) tried to provide a benefit/cost analysis associated with engaging in CSR activities, further study is needed to elaborate on specific costs structures.

Secondly, a very promising avenue for future research is called as we have not included any governance structure while discussing how CSR helps to reduce monitoring costs associated with stakeholder-agent relationship. These governance structures such as proportion of outside directors, director ownership, CEO duality might moderate the relationship between CSR and CFP as they affect the monitoring costs. For example, for the companies where proportion of outside directors is low (i.e., board independence is low), CSR might provide much more valuable information about the quality of management.

Thirdly, there are some issues about the data and sample we have used in this study. Although have particular strengths, KLD data received criticism regarding its reliability and validity (e.g. Entine, 2003). Also our sample is consisted of only US public firms, which might be considered as a limitation. Future research can extend the analysis to other contexts using other data sources on social responsibility.



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**APPENDIX A****Definitions of the market-based financial performance measures used**

This list explains the calculations of all the variables in the regressions. All components are drawn from COMPUSTAT.

Tobin's Q – The market value of assets divided by the book value of assets (Compustat item 6), where the market value of assets is computed as book value of the assets plus the market value of common stock less the sum of the total common equity (Compustat item 60) and balance sheet deferred taxes (Compustat item 74).

Monthly stock returns – The monthly stock prices are obtained from Compustat. Stock returns are adjusted by dividends and stock splits.

Table 1: Portfolio Descriptives

Year	Equal-Weighted CSR				Stakeholder-Weighted CSR			
	Top Portfolio		Bottom Portfolio		Top Portfolio		Bottom Portfolio	
	# firms	of percentage*	# firms	of percentage*	# firms	of percentage*	# firms	of percentage*
1991	36	9.81%	37	10.08%	37	10.08%	37	10.08%
1992	46	12.23%	42	11.17%	38	10.35%	38	10.35%
1993	31	8.07%	46	11.98%	38	9.90%	38	9.90%
1994	43	10.97%	28	7.14%	39	9.95%	39	9.95%
1995	30	7.30%	42	10.22%	41	9.98%	41	9.98%
1996	52	12.24%	63	14.82%	42	9.98%	42	9.98%
1997	32	6.99%	43	9.39%	46	10.09%	46	10.09%
1998	40	9.35%	38	8.88%	43	10.09%	43	10.09%
1999	40	8.21%	49	10.06%	49	10.06%	49	10.06%
2000	38	7.17%	55	10.38%	53	10.08%	53	10.08%
2001	128	13.57%	128	13.57%	81	10.06%	81	10.06%
2002	88	8.88%	69	6.96%	99	10.00%	99	10.00%
2003	252	9.40%	159	5.93%	267	10.00%	267	10.00%
2004	290	10.75%	236	8.75%	269	9.99%	269	9.99%
2005	174	6.31%	230	8.34%	276	10.02%	276	10.02%
2006	183	6.55%	268	9.60%	279	10.01%	279	10.01%

\* percentage of the number of firms included in the portfolios with respect to the total number of firms included in the sample

Table 2: Results of Four Factor Model

Variables	Equal-Weighted CSR Index		Stakeholder- Weighted Index		CSR Index
	$\beta$	s.e.	$\beta$	s.e.	
$\alpha$	0.23	0.21	0.47	*	0.21
Risk	-0.04	0.06	-0.16	**	0.06
Size	-0.17	** 0.06	-0.17	**	0.06
Market-to-book	-0.54	*** 0.07	-0.60	***	0.07
Momentum	0.08	* 0.04	0.01		0.04
N	192		192		
R <sup>2</sup>	27.6%		27.8%		
F-value	17.82	***	17.99	***	

N=192

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001



Table 3: Correlations and Summary Statistics

<b>Variables</b>	<b>Mean</b>	<b>s.d.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
1. Equal weighted CSR	-0.13	2.02									
2. Stakeholder weighted CSR	0.01	0.54	0.10								
3. S&P500 Inclusion	0.21	0.40	0.18	0.08							
4. ROA	-0.04	10.52	0.00	-0.02	0.00						
5. Organization Capital	1.13	3.18	0.16	0.01	0.26	0.04					
6. Long-term Assets	Debt/Total -0.05	0.17	0.01	0.01	0.07	-0.05	0.07				
7. Ln(Assets)	0.00	1.17	0.02	0.13	0.41	0.02	0.02	0.19			
8. R&D Expenses/Total Assets	-0.01	0.08	0.00	0.02	-0.04	0.08	0.02	-0.07	-0.28		
9. Sales Growth	0.00	0.67	0.00	-0.03	-0.02	0.02	0.04	-0.03	-0.05	0.03	
10. Sales Growth Lagged (1yr)	-0.02	0.54	-0.03	0.00	-0.03	-0.01	-0.01	-0.04	0.00	-0.02	-0.08

\*r's > 0.04 are significant at  $p < 0.05$ ; r's > 0.07 is significant at  $p < 0.01$

Table 4: Results of Regression  
 Dependent Variable: Industry adjusted Tobin's Q

Variables	Model 1		Model 2		Model 3		Model 4	
	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.	$\beta$	s.e.
CSR								
Equal-weighted	0.05	0.07	0.06	0.08				
Stakeholder-weighted					0.08 *	0.17	0.08 *	0.16
Other Signals for Good Management								
S&P500 Inclusion	0.09 *	0.20	0.07 +	0.14	0.09 *	0.22	0.08 +	0.13
Return on Assets	0.14 ***	0.48			0.15 ***	0.53		
Organization Capital			0.09 +	0.15			0.09 +	0.15
Interactions								
CSR*SP	-0.05	0.05	-0.06	0.08	-0.04	0.04	-0.04	0.04
CSR*ROA	-0.06 +	0.12			0.01	0.00		
CSR*OC			0.01	0.00			0.02	0.01
SP*ROA	-0.10 **	0.28			-0.13 **	0.39		
SP*OC			-0.09	0.14			-0.08	0.11
Control Variables								
Long-term Debt/Total Assets	0.24 ***	1.78	0.18 ***	1.04	0.22 ***	1.49	0.17 ***	0.91
Ln(Assets)	-0.03	0.02	0.03	0.02	-0.02	0.01	0.03	0.02
R&D Expenses/Total Assets	0.04	0.04	0.03	0.02	0.04	0.04	0.03	0.02
Sales Growth	0.01	0.00	0.03	0.02	0.01	0.01	0.03	0.02
Sales Growth Lagged (1yr)	0.04	0.05	0.03	0.02	0.03	0.03	0.02	0.02
N	967		1092		904		1013	
R <sup>2</sup>	12.9%		8.9%		12.7%		9.3%	
F-value	4.946***		3.71***		4.571***		3.59***	

Table contains standardized regression coefficients. All the models include controls for year and industry that are not shown because of space constraints.

+p<0.1      \*p<0.05      \*\*p<0.01      \*\*\*p<0.001

NOTAS

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## NOTAS

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