

The Causal Effect of Corporate Governance on Corporate Social Responsibility

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Abstract In this article, we examine the empirical association between corporate governance (CG) and corporate social responsibility (CSR) engagement by investigating their causal effects. Employing a large and extensive US sample, we first find that while the lag of CSR does not affect CG variables, the lag of CG variables positively affects firms' CSR engagement, after controlling for various firm characteristics. In addition, to examine the relative importance of stakeholder theory and agency theory regarding the associations among CSR, CG, and corporate financial performance (CFP), we also examine the relation between CSR and CFP. After correcting for endogeneity bias, our results show that CSR engagement positively influences CFP, supporting the conflict-resolution hypothesis based on stakeholder theory, but not the CSR overinvestment argument based on agency theory. Furthermore, firms' CSR engagement with the community, environment, diversity, and employees plays a significantly positive role in enhancing CFP.

Keywords Corporate social responsibility · Corporate governance · Corporate financial performance · Conflict resolution

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Introduction

There has been a remarkable discussion over the last two decades among scholars and practitioners on what constitutes the best corporate governance (CG) practices and why firms engage in corporate social responsibility (CSR).¹ The relations between CSR and CG, between CG and corporate financial performance (CFP), and between CSR and CFP have been important topics since at least 1960. Previous studies suggest that empirical relations between CG and CSR, between CSR and CFP, and the interrelations among CSR, CG, and CFP are largely inconclusive (see, for e.g., Margolis and Walsh 2003; Beurden and Gössling 2008; Jamali et al. 2008; Baron et al. 2011; Garcia-Castro et al. 2010, among others). According to Beurden and Gössling (2008), in particular, the answer to the question of whether it is worthwhile for firms to engage in CSR has not yet been found. Furthermore, most previous empirical studies control for neither endogeneity nor causality, and thus empirical research on the relation between CG and CSR is typically silent about the direction of causation.

In this article, we first examine the association between US firms' CG and CSR involvement by investigating their causal effects, which previous literature has not investigated. Once we establish the causality between CG and CSR, we can properly address the empirical associations

¹ Baron (2010) distinguishes between corporate social performance (CSP) and CSR, where the latter involves a moral duty to undertake social activities. In contrast, CSP need not arise from moral duties. CSP pertains to social activities that satisfy two conditions. First, the activities are beyond the requirements of the law and regulation. Second, the activities involve the private provision of public goods or private redistribution. Consistent with Baron (2010), our CSR implies CSP, but CSP need not be morally motivated, because CSP could be strategically chosen to serve the firm's interests.

among CSR, CG, and CFP. Next, we explore how CSR engagement affects CFP, measured by firm value and operating performance after correcting for endogeneity and dealing with causality issues. We examine two categories of CG devices: internal (ownership concentration and board structure) and external (takeover pressures and external monitoring by institutional investors and security analysts). Well-designed CG systems can align managers' incentives with those of shareholders, according to Jensen and Meckling's (1976) agency theory and many other following studies (see, e.g., Bebchuk et al. 2009). This agency literature typically suggests that effective CG enhances CFP. Recently, however, CG systems also require managers to serve their stakeholders (Ricart et al. 2005; Spitzeck 2009). Freeman (1984) suggests that executives should be considered as spokesmen for broader participants in social and political processes and as builders of coalitions among external stakeholders. In addition, Freeman (1984) maintains that managers must understand the firms' rationale, the organizational process used to manage relationships with stakeholders, and the set of transactions that takes place among the organizations and their stakeholders. Furthermore, Freeman (1984) outlines that from the firm's perspective, a firm has relationships with a broad variety of stakeholders, including governments, competitors, consumer, and environmental advocates, the media, and others. Wood (1991) explains that, at the individual level, managers are obliged to exercise discretion toward socially responsible outcomes within every domain of CSR. Hence, given the growing importance of stakeholder theory in CSR literature, to determine the relative importance of agency theory and stakeholder theory regarding the associations among CSR, CG, and CFP, we first examine the causal impact of CG on CSR as well as the causal impact of CSR on CG, and then the effect of CSR on CFP.

CSR continues to be a highly topical subject regarding whether investments in CSR are value-enhancing, value-destroying, or even value-irrelevant. Debates about CSR continue to grow without a clear consensus on its meaning or value. In essence, CSR can be viewed as an extension of firms' efforts to foster effective CG, ensuring firms' sustainability via sound business practices that promote accountability and transparency not only to shareholders, but also to the greater society. There are various definitions of CSR, however. Friedman (1970) first defines CSR as follows: "CSR is to conduct the business in accordance with shareholders' desires, which generally will be to make as much money as possible while conforming to the basic rules of society, both those embodied in law and those embodied in ethical custom." Carroll (1979, 1991, 1999), Gatewood and Carroll (1991), and Hill et al. (2007) propose four characteristics of CSR: economic, legal, ethical,

and discretionary (later referred to as philanthropic). Carroll (2000), in particular, argues that businesses can not only be profitable and ethical; they also should fulfill these obligations simultaneously, although other previous studies claim that business can focus either on profits or social concerns, but not both. McWilliams and Siegel (2001) define CSR as actions that appear to further some social good beyond the firm's interests and that is required by law. Subsequently, most CSR definitions emphasize CSR's orientation toward the social context beyond the technical, economic, and legal activities of business (Carroll 2008). Although, there are various definitions of CSR, it generally refers to serving people, communities, and the environment in ways that go above and beyond what is legally required.

Based on Jensen and Meckling's (1976) agency theory, Barnea and Rubin (2010) propose the overinvestment hypothesis, which suggests that if CSR initiatives do not maximize firm value, such initiatives are a waste of valuable resources and a potentially value-destroying proposition. Barnea and Rubin (2010) empirically examine the relation between firms' CSR ratings and their ownership and capital structures and argue that insiders tend to overinvest in CSR. Because effective CG prevents overinvestment, the overinvestment explanation predicts an inverse association between CSR engagement and CG. In addition, because overinvestment will reduce CFP, we expect a negative relation between CSR and CFP.

At the same time, however, there is a growing literature on the conflict resolution hypothesis (e.g., Jensen 2002; Calton and Payne 2003; Scherer et al. 2006; Cespa and Cestone 2007; Harjoto and Jo 2011). Freeman's (1984) stakeholder theory states that firms should use CSR as an extension of effective CG mechanisms to resolve conflicts between managers and non-investing stakeholders. Similarly, Donaldson and Preston (1995) describe an instrumental aspect out of descriptive, instrumental, and normative stakeholder concepts. If the conflict-resolution explanation is valid, then effective CG mechanisms should be positively related to CSR engagement, and there should also be a positive association between CSR and CFP, because CSR engagement will mitigate conflicts of interest between managers (who are typically shareholders as well) and other stakeholders, and the reduced conflicts of interest will enhance CFP.²

² Another related study is Baron et al. (2011) that describe three measurable markets in which firms operate: a product market, a capital market, and a market for social responsibility, as urged by shareholders, government, NGOs, and social activists. They suggest that consumer industries evidence a positive relationship between financial performance and social performance, while industrial firms have a negative relationship. That differs from overall corporations, which exhibit no strong empirical relationship between their social activities and their financial performance. They show that in the consumer sphere, at least, companies can get a financial edge by behaving socially responsibly.

Although, these studies enhance our understanding of the important benefits and costs of CSR engagement, in our view, research on this issue is still at a relatively early stage and thus cannot provide any definitive conclusions regarding CG's causal effect on CSR or vice versa and regarding the impact of CSR engagement on CFP. In addition, without using apposite conditioning variables, or considering endogenous treatment effects in which better-quality firms tend to choose CSR engagement to begin with, the contribution of CSR engagement to firm value and operating performance will be overstated or attributed incorrectly (Greene 1993). To properly address these issues, we proceed in two stages.

Based upon a large sample of 12,527 firm-year (2,952 firms) observations, including both CSR and no-CSR firms during the 1993–2004 period, we initially examine the causal effect of lagged CSR on CG as well as a causal effect of lagged CG on CSR. Our results show that the lagged value of CG positively influences CSR, while the lagged value of CSR does not influence CG, after controlling for various firm characteristics, supporting the conflict-resolution hypothesis, as opposed to the CSR overinvestment argument. We consider this evidence important because the causality between CG and CSR is unclear in the prior literature.

In addition, we find that CFP is positively related to the CSR choice or the CSR combined scores after correcting for the endogenous treatment effect, suggesting that CSR engagement positively influences firm value. The results also support the conflict-resolution hypothesis, and therefore stakeholder theory, as opposed to the overinvestment explanation. The results remain robust under various specifications, including the OLS, the Heckman two-stage regressions, and the instrumental-variables approach. Our results further suggest that the value enhancement of firms' CSR engagement comes from firms' internal social enhancement, such as diversity and employee relations issues, along with their CSR involvement in broader external enhancement, such as activities related to community and environmental issues.

The contributions of this article are twofold. First, we examine the previously untested causal effect in the CG–CSR sphere and find that CG has a causal effect on CSR, but not the other way around. Second, after controlling for the endogeneity issue, the article finds a positive CSR–CFP relation, supporting the conflict-resolution hypothesis that is based on stakeholder theory, as opposed to the overinvestment explanation based on agency theory. Overall, our results suggest that firms' engagement in CSR activities is value enhancing. The positive impact of CSR activities on firm value implies that US firms do not overinvest in CSR activities in the sample period.

Our article proceeds as follows. Next section presents literature review and our hypotheses, and “Data and

Measurement” section discusses our sample data and the measurement of variables. The proceeding section explains our research methodology. “Results” section presents the empirical results, with discussions and conclusions following in last section.

Hypotheses

CG and CSR

The existence and scope of CG and CSR have been important issues for decades (Donham 1927; Bowen 1953; Whetten et al. 2002; Beurden and Gössling 2008; Jamali et al. 2008; Baron et al. 2011; Garcia-Castro et al. 2010 among others). Cadbury (2000) defines CG as “the system by which companies are directed and controlled,” and Jamali (2006) considers CSR as a concept that attracts worldwide attention and acquires a new resonance in the global market. Jamali et al. (2008), for instance, provide a thorough literature review of CG and CSR, and the links between CG and CSR. They suggest that there is a discernable overlap between CG and CSR. In particular, Jamali et al. (2008) review three models that posit a relation between CG and CSR, including (1) CG as a pillar for CSR, (2) CSR as a dimension of CG, and (3) CG and CSR as part of a continuum. Bhimani and Soonawalla (2005) view that all corporate financial reporting, CG, CSR, and stakeholder value creation are part of a corporate-responsibility continuum. Similarly, Jensen (2002) and Aguilera et al. (2007) assert that both CG and CSR are manifestations of firms' fiduciary and moral responsibilities toward stakeholders.

Although, there is no universally agreed-upon rationale behind the relation between CG and CSR engagement, we take two representative, but competing explanations, agency theory versus stakeholder theory, to determine their relative importance regarding the CG–CSR nexus. First, based on Jensen and Meckling's (1976) agency theory, Barnea and Rubin (2010) consider CSR engagement as a principal–agent relation between managers and shareholders. They argue that affiliated insiders have an interest in overinvesting in CSR if doing so provides private benefits of reputation building as good social citizens, possibly at a cost to shareholders. In a related vein, Bertrand and Mullainathan (2003) argue that when managers are not closely monitored and insulated from takeovers, active empire building may not be the norm and managers may prefer to enjoy a quiet life. Malmendier and Tate (2005) suggest that there is some evidence of overinvestment by overconfident CEOs. Goel and Thakor's (2008) theoretical model also shows that overconfident managers sometimes make value-destroying investments. If overconfident CEOs tend to

overinvest to build their reputations as good social citizens, we expect an inverse association between CG and CSR choice because the higher internal and external monitoring through various CG mechanisms should reduce the insiders' incentive and opportunities for CSR overinvestment.

Second, stakeholder theory indicates that corporations conduct CSR not only because their purpose is to generate profits and abide by laws, but also because they are required to be ethical and socially supportive (Carroll 1979, 1991, 1999). Freeman (1984) defines stakeholder-management capability as managers' understanding of conceptual mapping among their stakeholders, the organizational process for dealing with these stakeholders, and carrying out the transactions with their stakeholders that are necessary to achieve the organization's purpose. Managers need to manage conflicting and competing roles among stakeholders. Wood (1991) goes one step further and argues that the principle of managerial discretion recognizes managers as moral actors who are obliged to exercise their actions toward socially responsible outcomes. According to Donaldson and Preston (1995), the descriptive, instrumental, and normative aspects of stakeholder theory suggest that managers should take into account stakeholders' interests as well as achieving conventional corporate performance (profit, growth, stability, etc.). Similar to Donaldson and Preston (1995), Freeman (1994) unpacks the stakeholder theory into descriptive, instrumental, and normative dimensions, but he adds a fourth dimension as metaphorical dimension as "a genre of stories about how we could live" (p. 413). In summary, stakeholder theory predicts that managers conduct CSR to fulfill their moral, ethical, and social duties for their stakeholders and strategically achieve corporate goals for their shareholders.

Cespa and Cestone (2007) propose a theoretical model investigating the conflicts of interest among managers, shareholders, and other non-investing stakeholders, even when managers are not performing. Although, it may not be possible to completely satisfy all related stakeholders, there is a growing literature on conflict resolution based on stakeholder theory (e.g., Jensen 2002; Calton and Payne 2003; Scherer et al. 2006; Harjoto and Jo 2011, Jo and Harjoto 2011), in which the role of the corporation is subject to discursive scrutiny by non-investing stakeholders in addition to shareholders. Also, management considers firms' fiduciary and moral responsibilities toward stakeholders (Jensen 2002; Aguilera et al. 2007).

Gompers et al. (2003, 2010) suggest a positive impact of CG on CFP, and Aguilera et al. (2007) argue that CSR increases the firm's reputation and strengthens relationships with core stakeholders. If managers can use effective CG mechanisms together with CSR engagement to resolve conflicts among stakeholders, then CSR engagement should be positively related to effective CG mechanisms.

Also, if various CG mechanisms view the firm's CSR engagement as an effort to potentially resolve conflict among various stakeholders, then we would expect a positive association between CG and CSR engagement.

Hypothesis 1(a) If the overinvestment hypothesis (based on agency theory) is correct, then we expect that the CSR engagement is inversely associated with CG mechanisms after controlling for confounding factors.

Hypothesis 1(b) If the conflict-resolution hypothesis (based on stakeholder theory) is correct, then we expect a positive association between the CSR engagement and CG mechanisms.

Clearly, the null hypothesis for hypotheses 1(a) and 1(b) is that CSR engagement is not associated with CG mechanisms.

CSR, CG, and CFP

Previous literature on the empirical relation between CSR and CFP is complex, and the conclusions are at best mixed. The impact of CSR engagement on CFP through firm value (i.e., widely measured by Tobin's q) and/or through accounting performance [i.e., return on assets (ROA)], is a long-standing, but still unresolved question.³ Jensen (2002) asserts that the best strategy to advance social welfare is to maximize the firm's long-term value. Specifically, Jensen (2002) proposes to include social responsibility aspects in the hitherto strict focus on shareholder wealth maximization. This proposed augmentation of the shareholder-value concept came to be known as the enlightened shareholder maximization or the enlightened stakeholder theory. He states that as long as the firm's objective function remains value maximization, financial economists have no problem with accepting CSR. Fuller and Jensen (2002) emphasize that companies do not have to follow or collude with analysts' unrealistic expectations. They show that managers must confront capital markets with courage and truth

³ According to the management literature summarized by Margolis and Walsh (2003), over 120 studies between 1971 and 2001 examine the empirical relation between CSR and CFP, and the results are largely inconclusive. They suggest that assessments of previous studies are complicated because of the studies' various imperfections, such as measurement problems related to both CSR and CFP, omitted variable problems, a lack of necessary analyses of causality and/or endogeneity, a lack of methodological rigor, and a lack of theory. Nonetheless, these studies stress that bad social performance is detrimental to a firm's financial performance. Although, it would be abstruse to draw a definite conclusion because of the imperfect nature of many studies, the review of the empirical CSR literature conducted by Margolis and Walsh (2003) indicates a positive relation between CSR and CFP, and Baron et al. (2011) suggest that consumer industries evidence a positive association between CFP and CSR, while industrial firms have an inverse association.

conviction. Managers must not collude with analysts or bow to analysts' demands. Managers also must be forthright and promise only those results they have a legitimate prospect of delivering, and state the risk and uncertainties involved. More importantly, managers should be far more transparent to their investors and to the markets. Managers should also address the unexplained part of their firm share price that is not related to observable cash flows, while they should be willing to tell the markets when they see their stock price as overvalued. While Fuller and Jensen's (2002) study is consistent with maximizing long-term shareholders wealth, they go one step further to emphasize morality and transparency.⁴ Recently, in a related context, Jo and Kim (2007, 2008) also assert the importance of information transparency and ethics on CFP.

There are generally three alternative predictions about the relation between CSR engagement and firm value. The first prediction is that the value of firms engaging in CSR activities is equal to that of firms ignoring CSR issues. This is consistent with a world in which the CSR feature is not priced, and the CSR factors that are not proxies for risk do not affect firm value. This view is derived from the Modigliani and Miller's (1958) irrelevance theory of capital structure. Likewise, CSR engagement should be irrelevant in determining firm value. The second view is that if other things are equal, the value of firms engaging in CSR activities is lower than that of firms refraining from CSR activities. This view implies that CSR engagements are costly activities and a waste of scarce resources, and therefore have an adverse impact on firm value. This also implies that the financial market penalizes firms for overinvesting in CSR activities. This view is consistent with the agency theory-based overinvestment hypothesis. The third prediction is that the firm value of socially responsible firms engaging in CSR activities is higher than that of socially irresponsible firms ignoring CSR activities, because CSR engagement reduces conflict of interest between managers and non-investing stakeholders. This is the case of "doing well while doing good" (Hamilton et al. 1993; Fisman et al. 2005) and is consistent with the stakeholder theory-based conflict-resolution explanation. This indicates that firms still under-invest (i.e., less than optimal investment point) in CSR activities and that the financial market values investment in such activities.

Although, extensive studies examine whether the effectiveness of CG affects firm value, there is less evidence regarding how CG and CSR engagement jointly influence CFP. If the overinvestment hypothesis is valid,

insiders such as the CEO and the board have a motivation to overinvest in CSR activities if doing so improves their reputations as good global citizens (Barnea and Rubin 2010). Then, firm value will be adversely affected by CSR engagement. In contrast, according to the conflict-resolution hypothesis, if managers use effective monitoring/governance mechanisms together with CSR engagement to resolve conflicts among stakeholders, then firm value could be positively related to CSR engagement and effective governance mechanisms through reduced conflict of interest among the various stakeholders.⁵

Hypothesis 2(a) If the overinvestment hypothesis is correct, then CFP through firm value measured by Tobin's q and operating performance measured by ROA are inversely associated with the choice of CSR engagement or investing in CSR activities after correcting for endogeneity.

Hypothesis 2(b) If the conflict-resolution hypothesis is correct, then CFP through firm value measured by Tobin's q and operating performance measured by ROA are positively associated with the choice of CSR engagement or investing in CSR activities after correcting for endogeneity.

The null hypothesis for both hypotheses 2(a) and 2(b) is that CFP is not significantly affected by choice of CSR engagement or investing in CSR activities.

Data and Measurement

Data

We use an extensive combined data set from the Kinder, Lydenberg, and Domini's (KLD's) Stats database, the Investor Responsibility Research Center, Inc's. (IRRC's) governance and director database, CDA/Spectrum 13(f) filings, and the institutional brokers estimation services (*I/B/E/S*) database during the period from 1993 to 2004. KLD's Stats database includes more than 3,000 companies containing various CSR characteristics. In particular, KLD's inclusive social-rating criteria contain strength ratings and concern ratings for community, diversity, employee relations, environment, and product. KLD also has exclusionary screens, such as alcohol, gambling, military, nuclear power, and tobacco. Because KLD's exclusionary screens differ from the inclusive screens in that only concern ratings, but no strength ratings, are assigned, we only use the inclusive

⁴ Prior et al. (2008) interpret Jensen's (2002) and Fuller and Jensen's (2002) view as an adoption of a compromised stakeholder-agency perspective, where a firm is conceived not only as a bilateral relation between managers and shareholders, but also as a multilateral set of relations among stakeholders.

⁵ CSR could increase firm value through other channels. For instance, having loyal shareholders who prefer to invest in socially responsible firms might lead a firm to have small volatility and stable share prices. Or if CSR engagement lowers the firm's borrowing costs, CSR engagement enhances firm value.

screens in our main tests.⁶ Before 2001, KLD contains data from ~650 firms listed on the S&P 500 or the Domini 400 Social Indexes as of August of each year. For 2001 and 2002 (2003 and 2004), KLD's ratings are a summary of strengths and concerns assigned to ~1,100 (3,100) firms listed on the S&P 500, the Domini 400 Social Indexes, or the Russell 1,000 (Russell 3,000) Indexes as of December 31 of each year. A list of strength and concern items in the KLD social ratings database is reported in Table 8 in Appendix. In 2002, KLD renamed the other category as CG. KLD's definition of CG, which includes compensation, ownership, tax disputes, and other issues, is quite different from that of conventional CG in finance, and therefore, we do not include KLD's corporate-governance dimension.

Instead, we use the IRRC governance database, the IRRC director database, CDA/Spectrum 13(f) filings, and the *I/B/E/S* database to obtain CG and monitoring characteristics that include the proportion of outside independent directors, the proportion of institutional holdings, the proportion of blockholdings, and the number of security analysts following the firm. Specifically, (i) our sample firm must be available from the IRRC director database; (ii) insider blockholder data must be available; (iii) the data for outside institutional holdings must be available from CDA/Spectrum 13(f) filings. These filings contain quarterly information on common-stock positions >10,000 shares or \$200,000 for each institution with more than \$100 million in securities under management; and (iv) the number of analysts following a firm must be available from the *I/B/E/S* database. We also require that sufficient COMPUSTAT and the Center for Research in Security Prices (CRSP) data are available for our tests. This sample procedure produces a combined sample of 12,527 firm-year (2,952 firms) observations from 1993 to 2004. If there are any (no) observations in the KLD ratings, then we view them as firms with (no) CSR engagement. We also verify our results based on the sample containing only positive CSR scores. Actual samples used in the analyses are slightly different because the data availability is different for each regression analysis.

Tables 8 and 9 in Appendix list the definitions and measurement of the variables. KLD strength and concern activities are 0–1 variables, and the number of measures

⁶ In fact, the KLD database has few firms that actually have exclusionary items. We find only 756 firm-year observations that report exclusionary items. The rest have zero exclusionary items. For the KLD strength scores, we find 4,174 firm-year observations. For the combined strength and concern scores, we have 6,479 firm-year observations. In addition, while the KLD database reflects whether a company is engaged in CSR activities and includes a list of the types of activities, it does not report how much each firm invests in CSR activities. Although, we are not aware of the existence of CSR investment data, the availability of such data could provide additional benefits.

varies across the years, so an index is used to aggregate the individual activities, following Hillman and Keim (2001) and Baron et al. (2011). Letting C^{ijt} denote an indicator variable of CSR for firm i with strength j for year t from Table 8 in Appendix and C^t the maximum number of KLD strengths in year t for any firm, the index C^{it} of CSR composite for firm-year observation it is

$$C^{it} = \frac{\sum_j C^{ijt}}{C^t}.$$

The IRRC does not publish volumes every year, but only in the years of 1993, 1995, 1998, 2000, 2002, and 2004. Following Bebchuk and Cohen (2005) and Gompers et al. (hereafter, GIM) (2003, 2010), we fill in the missing years by assuming that the governance provisions reported in any given year are also in place in the year preceding the volume's publication. For instance, in the case of 1999, for which there is no IRRC volume in the subsequent year, we assume that the governance provisions are the same as those reported in the IRRC volume published in 1998. We also verify whether using a different method based on the arithmetic average of 1998 and 2000 to assume the case of 1999 does not change the results. To conduct the robustness test, we also examine firms containing various pieces of CSR information from the KLD, governance characteristics from the IRRC, and analyst following from the *I/B/E/S* (3,209 firm-year observations) from only the IRRC's published years of 1993, 1995, 1998, 2000, 2002, and 2004 in the additional test section.

Measurement

In our empirical analysis, all financial variables are taken from COMPUSTAT. In addition, we use four variables measuring the quality of CG systems—insider blockholder ownership, board independence, outside institutional ownership, and the number of analysts following a firm—and collect the other governance data from the IRRC.

We measure external monitoring by the equity ownership of outside institutional holders, which we identify as the sum of the greater-than-five-percent owners that are unaffiliated with the firm (PCTINSTI). We also measure external analyst monitoring by the number of analysts who follow the firm from the *I/B/E/S* database. Since, the number of analysts is highly skewed to the right (Lim 2001; Bushman et al. 2005), we measure analyst coverage with the natural logarithm of one plus the number of analysts following the firm (LOGANAL).

We construct several structural measures of CG from the IRRC Director Database (e.g., board characteristics such as independent outside board proportion, board ownership, board leadership, etc.). With these corporate board variables, we compare and contrast effective versus ineffective CG.

We first focus on effective CG, using an independent outside director because the rise of such directors has been a major trend over the last two decades (Hermalin and Weisbach 1998, 2003; Raheja 2005; Harris and Raviv 2008). Our definition of an independent director follows that of the IRRC, which defines an independent outside director as a director elected by shareholders who is not affiliated with the company. Since, Linck et al. (2008) also suggest that board independence and board leadership are important determinants of board structure, we use board independence measured by the proportion of outside independent directors (PCTINDEP), and board leadership by a dummy variable of one if the CEO is the chair of the board (DUALITY) and another dummy variable if the CEO is the chair or a member of the nomination committee (CEONOM).

Our main proxy for managerial entrenchment is the governance index (GINDEX) developed by GIM (2003). As the basic ingredients for the GINDEX are anti-takeover provisions (ATPs) and the IRRC reports 24 ATPs at the firm level, the GINDEX ranges from 0 to 24. A high value indicates stronger managerial power (less takeover pressure), and therefore a greater potential for managerial entrenchment.

Based on the GINDEX, Bebchuk et al. (2009) examine which provisions, among a set of 24 governance provisions followed by the IRRC, are highly correlated with firm value and stockholder returns. They then create an entrenchment index (ENTINDEX) based on six provisions—four constitutional provisions that prevent a majority of shareholders from having their way (e.g., staggered boards, limits to shareholder bylaw amendments, supermajority requirements for mergers, and supermajority requirements for charter amendments), and two takeover-readiness provisions that boards establish to be ready for a hostile takeover (i.e., poison pills and golden parachutes). Bebchuk et al. (2009) argue that these six ATPs are the most responsible for managerial entrenchment and show that the ENTINDEX drives the main results of firm valuation. This ENTINDEX ranges from 0 to 6, with a higher value indicating stronger managerial entrenchment. Thus, we also use Bebchuk et al.'s (2009) ENTINDEX to measure managerial entrenchment. See the definitions of governance, monitoring, and other control variables in Table 9 in Appendix.

Following extant finance and accounting literature, we measure firm value with Tobin's q .⁷ In particular, we use

⁷ Tobin's q is widely used as a measure of firm value in accounting, finance, and economics. See, for e.g., Chung and Jo (1996), among others. Following Chung and Jo (1996), Tobin's q is calculated as: $\{[\text{market value of common stock} + \text{book value of preferred stock} + \text{book value of long-term debt} + \text{book value of current liabilities} - (\text{book value of current assets} - \text{book value of Inventories})] / \text{book value of total assets}\}$. Thus, we use Tobin's q to measure firm value. Accounting and finance literature typically uses ROA to measure firm's operating performance. Thus, we examine this operating performance as well.

industry-adjusted Tobin's q (the natural log of firm's q divided by the median q in the firm's industry) instead of levels of Tobin's q as a measure of firm value (Campbell 1996). The advantage of using industry-adjusted Tobin's q (ADJTOBINQ) is that it neutralizes the effect of specific industries on Tobin's q . Similarly, we measure firm operating performance with industry-adjusted ROA (ADJROA).

Research Methodology

Endogenous Treatment Effects

Firm value could come from two broad sources of unique features: the choice of CSR engagement and CG. To address this issue properly, we conduct an endogeneity correction for the treatment effects. Without correcting the endogeneity problem in which firms with a certain governance structure choose to invest in CSR to begin with, the CSR involvement's contribution to firm value will be overstated (Greene 1993). *First*, the choice of CSR engagement is related to certain corporate-governance mechanisms. Of two firms that appear a priori similar in prospects, the fact that one of them is involved in CSR activities is evidence that the firm has a unique governance quality, because the CSR involvement may directly influence firm value. *Second*, firms engaging in various CSR activities may need effective internal and external monitoring because there is no clearly known effective monitoring mechanism to prevent the potential managerial entrenchment of firms engaging in CSR activities.

A regression of Tobin's q on various governance and firm characteristics and a dummy variable for the choice of CSR allows a first-pass estimate of whether CSR involvement impacts firm value. It may be, however, that firms engaging into CSR activities are simply of higher (or lower) quality and deliver better (or worse) performance, regardless of whether they choose to become involved in CSR. In this case, the coefficient on the CSR dummy variable might reveal a value-add from CSR engagement, when indeed there is none.

This endogeneity problem was first acknowledged by Tobin (1958), who shows that if this is not taken into consideration in the estimation procedure, an ordinary least-square estimation (OLS) will produce biased parameter estimates. With censored-dependent variables, there is a violation of the Gauss–Markov assumption of a zero correlation between independent variables and the error term. Heckman (1976, 1979) proposed a two-stage estimation procedure using the inverse Mills' ratio to take the endogeneity bias into account. In the first step, a regression for observing a positive outcome of the dependent variable is modeled with a probit (or logit) model. The estimated

parameters are used to calculate the inverse Mills' ratio, which is then included as an additional explanatory variable in the OLS estimation (see Greene 1993). Using Heckman's two-stage estimation, we correct the specification for endogeneity and examine whether CSR activities enhance firm value.

Instrumental Variable Methods

Another approach is to use the instrumental variable (IV) method that Gompers et al. (2010) and Garcia-Castro et al. (2010) employ. Gompers et al. (2010) also distinguish endogeneity problems from sample-selection problems. Selection bias may arise even if the error terms are not correlated with the explanatory variables. CSR firms that are identified in our sample may not be representative of all firms for the relation between governance structure and firm value.⁸ Although, it is not possible to correct for both endogenous treatment effects and selection bias at the same time, to solve the selection-bias problem, Heckman and Robb (1985) and Moffitt (1999) suggest using the IV method, which focuses on finding a variable (or variables) that influences the CSR choice, but does not influence Tobin's q (and thus is not correlated with the random error term in the Tobin's q equation).

Angrist (2000) asserts that the IV method works even when the second-stage model is nonlinear, if the researcher focuses on the causal effects. Moffitt (1999) further suggests that each IV that is indeed uncorrelated with the random error term in the Tobin's q equation will yield unbiased estimates. Certain IVs will yield more precise estimates, however. The more highly correlated the IV is with the choice of CSR engagement, the more precise the estimates of performance impact will be. Thus, the challenge in IV estimation is to find an appropriate instrumental variable that is highly correlated with the first-pass choice, but uncorrelated with the second-pass performance. Unfortunately, it is often hard to find variables that meet both of these requirements, and therefore it is difficult to find good IVs among the many potential IVs. In our case, our choice of an instrumental variable is FIRMAGE, which is highly correlated with CSR DUMMY, but is uncorrelated with industry-adjusted Tobin's q (see Table 2). Economically, older firms can afford CSR engagement, but that may not necessarily lead to higher firm value.

⁸ Sample-selection bias and endogeneity bias refer to two distinct problems, both entailing distinct solutions. In general, sample-selection bias refers to problems in which the dependent variable is observed only for a restricted, nonrandom sample. Endogeneity arises when an independent variable included in the model is potentially a choice variable, correlated with unobservables relegated to the error term. The dependent variable, however, is observed for all observations in the data (see Millimet 2001).

Results

Univariate Tests

To examine the potential difference between CSR firms and no-CSR firms, we compare and contrast firm and governance characteristics. In Table 1, we present the means and medians of the control and governance variables. CSR involvement is, on average, more common among larger firms, highly leveraged firms, profitable firms, diversified firms, older firms, firms belonging to the S&P 500, firms using a higher advertising expense ratio, and firms with a higher Tobin's q . CSR also is adopted by firms with a lower R&D expenditure ratio.

Causal Effect of CSR and CG

Here, we first describe a detailed empirical model to understand the causal effect of lagged CSR on CG, and vice versa. Table 2 reports the coefficients of estimates from the panel data regression model using fixed effects to examine whether CG in period t is influenced by the firm's CSR activities in period $t - 1$. The results reported in Models (1)–(5) suggest that CSR composite scores (lagged 1 year) do not affect CG (in the current period). Therefore, we fail to reject the null hypothesis of no relation between CG and CSR. The dependent variables are five CG measures, log of analysts following the firm (LOGANAL), percentage of institutional shareholding (PCTINSTI), percentage of independent board members (PCTINDEP), the GIM Index (GINDEX), and the entrenchment index (ENTINDEX). T -Statistics are adjusted for robust and clustered (by firm) standard errors, and they are all insignificant, suggesting that CSR activities do not cause CG. Other control variables include firm size measured by the natural log of total assets (LOGTA), R&D expenditures divided by sales revenue (RNDR), total debt divided by total assets (DEBTR), and the Fama–French (FF) (1997) 48-industry classification.

In Table 3, we report the coefficients of estimates from the panel data regression model using fixed effects to examine whether firm CSR activities in period t are influenced by the firm's CG measures in period $t - 1$. The results reported in Models (1)–(5) suggest that CG (lagged 1 year) positively influences CSR Composite Scores (in the current period). The dependent variable is the CSR Composite scores and T -statistics are adjusted for robustness and clustered (by firm) standard errors and reported in parentheses. The FF 48 industry classification is included in all models.

Consistent with intuition, Models (1)–(5) show that all of our chosen CG variables are significant in explaining the CSR engagement at the one-percent level. These findings

Table 1 Univariate tests

	All sample Mean	Below CSR median Mean	Above CSR median Mean	T-stat
<i>CSR and CG measures</i>				
CSR	0.2657	0.0918	0.4529	15.2**
COMMUNITY	0.2291	0.0795	0.3901	13.2**
ENVIRONMENT	0.3172	0.1162	0.5337	13.01**
DIVERSITY	0.1965	0.0616	0.3417	12.02**
EMPLOYEE	0.2981	0.1005	0.5109	14.02**
PRODUCT	0.2874	0.1012	0.4880	13.02**
LAG(LOGANAL)	2.2610	2.0683	2.4686	29.55**
LAG(PCTINSTI)	60.4160	57.8188	63.2132	14.27**
LAG(PCTINDEP)	63.0171	60.7316	65.4785	12.61**
LAG(GINDEX)	9.2626	8.8908	9.6630	13.69**
LAG(ENTINDEX)	2.1958	2.0948	2.3046	7.78**
<i>Firm characteristics</i>				
ADJTOBINQ	-0.2114	-0.2926	-0.1241	13.47**
ADJROA	1.0076	0.0271	2.0635	8.14**
LOGTA	7.7230	7.2408	8.2424	31.19**
DEBTR	0.2418	0.2515	0.2312	5.42**
RNDR	0.0337	0.0321	0.0354	2.05*
ADVR	0.0090	0.0067	0.0114	9.06**
DEVRET	11.7444	12.0985	11.3630	6.03**
ROA	3.6713	2.6644	4.7558	8.31**
CAPXR	0.0691	0.0713	0.0667	2.18*
SALEG	10.8553	11.2315	10.4501	1.33
DIVR	0.0394	0.0328	0.0465	1.66
FIRMAGE	25.5490	23.0728	28.2189	13.26**
Observation (N)	9,410	4,705	4,705	
Number of firms	2,039	1,504	1,330	

Notes This table displays descriptive statistics for the 9,410 firm-year observations of CSR firms from 1993 to 2004 based on all sample and two samples with CSR above and below the median value of CSR index. Difference in mean (*T*-statistics) is reported in *T*-stat. The definitions of variables are provided in Tables 8, 9, and 10 in Appendix

** , * are statistically significant at the 1 and 5% levels, respectively

suggest that internal and external monitoring by board leadership, independent boards, institutional investors, and security analysts are positively related to CSR activities, supporting the conflict-resolution hypothesis 1(b) as opposed to the overinvestment hypothesis 1(a), and rejecting the null hypothesis of no relation. Taken together, our combined results indicate that CG causes CSR, while CSR does not cause CG.

Results of CSR, CG, and CFP

In this section, we examine the effect of CSR on CFP. If we do not have a conflict of interest between stakeholders and managers, CG should directly influence CFP. Because, we have a conflict of interest between the two, however, CSR is acting as a conflict-resolution device between stakeholders and managers. Our finding provides supporting evidence that corporations that practice stakeholder management, in fact, perform better on their conventional corporate performance (profitability and maximizing

shareholders wealth). This is consistent with the descriptive and instrumental aspects of stakeholder theory (Donaldson and Preston 1995).

Table 4 reports the coefficient of estimates from the second-stage regression. In the first stage, we run the probit model. We include Lambda (inverse Mills' ratio) in the second stage with control variables. The dependent variable is firm value measured by industry-adjusted Tobin's *q* (ADJTOBINQ). In all models, we do not include CG variables as independent variables because we treat CSR as a missing link between CG and CFP as shown in Fig. 1. Models (1) and (2) of this table report the coefficients of estimates from Heckman two-stage treatment effect models. Models (3) and (4) of this table report the coefficients on the estimates from the second-stage instrumental variable method. Models (1) and (3) present the results based on CSR dummy (1 if firm engages in CSR and 0 otherwise), while Models (2) and (4) present the results using CSR Composite scores. Our choice of instrumental variable is FIRMAGE, which is highly correlated with CSR,

Table 2 The impact of lagged CSR on CG

	Model (1) LOGANAL	Model (2) PCTINSTI	Model (3) PCTINDEP	Model (4) GINDEX	Model (5) ENTINDEX
LAG(CSR)	0.0372 (0.81)	5.9980 (1.18)	0.1417 (1.60)	-0.2443 (1.36)	-1.4053 (1.59)
<i>Control variables</i>					
LOGTA	0.2681 (22.21)***	1.8610 (2.16)**	0.0363 (1.58)	0.0517 (1.11)	0.2895 (1.50)
DEBTR	-0.2962 (8.44)***	-2.4686 (1.18)	-0.0880 (1.48)	0.0326 (0.29)	-0.7899 (1.68)*
RNDR	0.6198 (12.11)***	5.3889 (1.98)**	0.1414 (1.94)*	-0.2165 (1.46)	0.7404 (1.21)
ADVR	1.1723 (7.77)***	10.4360 (1.32)	0.2506 (1.19)	-0.6691 (1.56)	2.1482 (1.12)
DEVRET	0.0077 (7.28)***	0.0661 (0.93)	0.0024 (1.28)	-0.0063 (1.61)	0.0331 (2.06)**
ROA	0.0026 (1.86)*	0.0059 (0.33)	0.0005 (1.01)	-0.0013 (1.32)	0.0022 (0.56)
Intercept	-0.0153 (0.07)	-18.9765 (1.26)	-0.5530 (1.37)	0.6173 (0.75)	-7.1315 (2.10)**
FF 48 industry	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.5930	0.2319	0.2311	0.1632	0.2726
Observations	9,410	9,410	9,410	9,410	9,410
Number of firms	2,039	2,039	2,039	2,039	2,039

Notes This table reports the coefficient of estimates from the panel data regression model using fixed effects to examine whether CG in period t is influenced by the firm CSR activities in period $t - 1$. The results suggest that CSR Composite Scores (lagged 1 year) does not affect CG (in current period). The dependent variables are five CG measures, log of analysts following (LOGANAL), percentage of institutional shareholding (PCTINSTI), percentage of independent board members (PCTINDEP), Gomper, Ishii, Metrick Index (GINDEX), and entrenchment index (ENTINDEX). T -Statistics are adjusted for robust and clustered (by firm) standard errors and reported in parentheses. The FF 48 industry classification is included all Models. Table 9 in Appendix provides variable definitions

**, * represents statistically significant at the 1 and 5% levels, respectively

but is uncorrelated with industry-adjusted Tobin's q . The CSR composite scores are from the KLD Stats database. T -Statistics are reported in parentheses.

The evidence from the Heckman two-stage treatment effect models reported in Models (1) and (2) suggests that CSR engagement positively affects industry-adjusted Tobin's q . Regardless of the usage of CSR dummies or CSR composite scores, the positive association between CSR and ADJTOBINQ remain unchanged. We also include growth options measured by R&D expenditure divided by sales (RNDR), capital expenditures divided by total sales (CAPXR), the ratio of advertising to sales (ADVR), and sales growth (SGROWTH) following Shin and Stulz (2000), Morck and Yang (2001), and GIM (2010).

To solve the selection-bias problem, we also report the results based on the IV approach in Models (3) and (4). Our choice of an instrumental variable is FIRMAGE, which is highly correlated with CSR, but is uncorrelated with industry-adjusted Tobin's q . The results of a positive

association between CSR and CFP remain robust under various specifications using the Heckman two-stage, OLS (unreported), and the IV approach, supporting our hypothesis 2(b) of CSR as a conflict-resolution as opposed to the overinvestment hypothesis 2(a) and rejecting the null hypothesis of no relation. Thus, our results strengthen a view that sees CSR as an extension of effective CG.

Table 5 reports the coefficients of estimates from the Heckman two-stage method and the IV method. The dependent variable in the second stage is industry-adjusted Tobin's q (ADJTOBINQ) and industry-adjusted ROA (ADJROA). In Table 5, we only include the sample that has positive scores of each category of the CSR activities: COMMUNITY, ENVIRONMENT, DIVERSITY, EMPLOYEE RELATIONS, and PRODUCT. For the IV method, the community is instrumented by firm age, environment is instrumented by whether firms are in S&P500 Index or not, diversity is instrumented by the size of the board of directors, employee is instrumented by state laws, and

Table 3 The impact of lagged CG on CSR

	Model (1) CSR	Model (2) CSR	Model (3) CSR	Model (4) CSR	Model (5) CSR
<i>Independent variables</i>					
LAG(LOGANAL)	0.0136 (13.75)**				
LAG(PCTINSTI)		0.0017 (15.55)**			
LAG(PCTINDEP)			0.0712 (6.56)**		
LAG(GINDEX)				0.0053 (7.50)**	
LAG(ENTINDEX)					0.0093 (6.68)**
<i>Control variables</i>					
LOGTA	0.0282 (14.52)**	0.0288 (15.29)**	0.0313 (16.44)**	0.0320 (17.00)**	0.0325 (17.17)**
DEBTR	-0.0720 (6.20)**	-0.1042 (9.47)**	-0.0958 (8.45)**	-0.0983 (8.65)**	-0.0989 (8.70)**
RNDR	-0.0373 (1.38)	-0.0008 (0.03)	-0.0160 (0.48)	0.0029 (0.09)	-0.0004 (0.01)
ADVR	0.1364 (1.77)	0.2748 (3.08)**	0.2436 (2.65)**	0.2689 (2.94)**	0.2615 (2.84)**
DEVRET	0.0027 (4.81)**	0.0035 (5.05)**	0.0032 (4.51)**	0.0028 (3.91)**	0.0029 (4.09)**
HHI	-0.0162 (0.49)	0.0271 (0.61)	0.0303 (0.67)	0.0360 (0.81)	0.0324 (0.73)
Intercept	-0.1347 (2.93)**	-0.2582 (4.00)**	-0.2058 (3.40)**	-0.2125 (3.54)**	-0.1956 (3.25)**
FF 48 industry	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.3791	0.3757	0.3612	0.3620	0.3611
Observations	9,410	9,410	9,410	9,410	9,410
Number of firms	2,039	2,039	2,039	2,039	2,039

Notes This table reports the coefficient of estimates from the panel data regression model using fixed effects to examine whether firm CSR activities in period t is influenced by the firm CG measures in period $t - 1$. The results suggest that CG (lagged 1 year) positively influences CSR Composite Scores (in current period), indicating that CG influences CSR, while CSR does not influence CG. The dependent variable is the CSR Composite scores (see Table 10 in Appendix). *T*-Statistics are adjusted for robust and clustered (by firm) standard errors and reported in parentheses. The FF 48 industry classification is included in all Models. Table 9 in Appendix provides variable definitions

**, * represents statistically significant at the 1 and 5% levels, respectively

product is instrumented by the number of business segments. Each of these components is endogenously determined by the CG variables that we use (loganalyst, pct institutional, pct independent, and GINDEX). Then, we use the estimated CSR composite scores on CFP. We find that each component has a strong impact on CFP. This shows that CSR from the results of effective CG positively influence CFP.

The results indicate that the coefficients on Community and Employee Relations are positive and significant at least at the five-percent level, and the coefficients on Diversity and Environment also are, in general, significant,

suggesting that firms' CSR engagement directly related to their firms' internal and external social enhancement improves firm value.⁹ The above findings also might be affected by multicollinearity. Thus, to check the individual impact of the various governance variables, we run the regressions for each category of CSR variable with control

⁹ We also examine the association between the KLD exclusionary scores and ADJTOBINQ. Our untabulated results suggest that as anticipated, the KLD exclusionary scores from alcohol, tobacco, military, and nuclear-related revenues are inversely associated with CFP.

Table 4 The impact of CSR on firm value (ADJTOBINQ) based on the Heckman two-stage treatment effect model and instrumental variable (IV) method

	Heckman: Model (1) ADJTOBINQ	Heckman: Model (2) ADJTOBINQ	IV Method: Model (3) ADJTOBINQ	IV Method: Model (4) ADJTOBINQ
<i>Dependent variable</i>				
INTERCEPT	3.115 (15.63)***	2.963 (13.89)***	0.119 (3.26)***	0.151 (4.22)***
CSR dummy	0.091 (7.46)***		0.007 (10.10)***	
CSRCOMPOSITE		0.087 (7.57)***		0.493 (3.32)***
<i>Control variables</i>				
LOGTA	-0.367 (21.61)***	-0.389 (28.13)***	-0.078 (14.19)***	-0.078 (14.19)***
DEBTR	0.216 (4.50)***	0.306 (6.80)***	0.028 (0.78)	0.028 (0.78)
RNDR	0.290 (2.62)***	0.145 (1.46)	0.238 (2.91)***	0.238 (2.91)***
CAPXR	0.479 (8.87)***	0.211 (4.17)***	0.436 (9.77)***	0.436 (9.77)***
ADVR	1.373 (4.72)***	0.847 (3.20)***	0.525 (1.85)	0.525 (1.85)
SGROWTH	0.321 (8.86)***	0.265 (9.00)***	0.341 (9.09)***	0.341 (9.09)***
LAMBDA (inverse Mills' ratio)	-0.657 (14.75)***	-0.499 (11.70)***		
FF 48 industry	Yes	Yes		
Wald χ^2	4594.23	5876.81		
Adjusted R^2			0.0440	0.0802
Observations	11,741	11,741	11,741	11,741
Number of firms	2,463	2,463	2,463	2,463

Notes The dependent variable in the second-stage regression is firm value measured by industry-adjusted Tobin's q (ADJTOBINQ). Models (1) and (2) of this table report the coefficients of estimates from Heckman two-stage treatment effect models. In the first stage, we run the probit model. We include Lambda (inverse Mills' ratio) in the second stage with control variables. Models (3) and (4) of this table report the coefficients on the estimates from the second-stage instrumental variable method. Models (1) and (3) present the results based on CSR dummy (1 if firm engages in CSR and 0 otherwise) while Models (2) and (4) present the results using CSR Composite scores. Our choice of instrumental variable is FIRMAGE that is highly correlated with CSR, but is uncorrelated with industry-adjusted Tobin's q . The CSR composite scores are from the KLD Stats database. T -statistics are reported in parentheses. See Table 9 in Appendix for variable definitions

***, **, * are statistically significant at the 1, 5, and 10% levels, respectively

variables separately. Our unreported results suggest that the main results do not change.

Additional Tests

Next, we also recognize a potential simultaneity bias between CSR and ADJTOBINQ because both variables can be endogenous. While CSR engagement may lead to higher firm value, firms with higher firm value are more likely to engage in CSR activities because they have more resources. Such firms are also likely to be followed by

more analysts because of better performance. To adjust for a potential simultaneity bias, we estimate the regressions in a simultaneous equation framework similar to Cheung et al. (2010), where CSR is specified as a function of firm size, ADJTOBINQ, advertising expenditure divided by sales, the R&D expenditure ratio, and leverage, following Table 4. See the calculation procedures of the composite strength scores and the combined strength and composite scores in Table 10 in Appendix.

Results reported in Table 6 are qualitatively similar to those reported in Table 4. Overall, a potential simultaneity

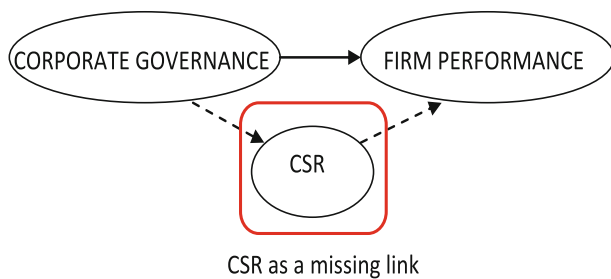


Fig. 1 CSR as a missing link between CG and firm performance. If we do not have conflict of interest between stakeholders and shareholders, CG should directly influence firm performance. Since, we have a conflict of interest between the two, however, CSR is acting as a conflict-resolution device between stakeholders and shareholders

bias does not appear to change our inferences concerning the positive association between CSR and CFP. Even after controlling for reverse causality of ADJTOBINQ affecting CSR, a positive association between CSR and ADJTOBINQ remains intact. These results should be interpreted with caution, however. These results do not preclude the possibility that one firm overinvests sometimes and attempts to reduce conflicts of interest among various stakeholders at other times. Our results simply suggest that, on average and in general, CSR engagement contributes to adding CFP in our sample.

We also conduct the Heckman two-stage regressions, the IV approach, and the OLS regressions based on only the IRRC available year observations of 1993, 1995, 1998, 2000, 2002, and 2004 to check the robustness of our results. Our unreported results suggest that the overall results are essentially identical and that the main results of the positive associations between CSR and ADJTOBINQ remain unchanged.

To further check the robustness of our results, we also conduct analyses based on the change of ADJTOBINQ as a function of the change in CSRCOMPOSITE. Results reported in Table 7 suggest that the change in CSRCOMPOSITE has a positive impact on the change in ADJTOBINQ, with a t value of 5.96 (all significant at the one-percent level) in various samples with and without the Fama and French (1997) 48-industry adjustment, again supporting CSR engagement as a form of conflict resolution.

Utilizing the updated data from 1993 through 2009, we further conduct a 2SLS regression of simultaneous equations and find that our results remain robust. Comparing the results from Tables 6 and 7, our untabulated results using simultaneous regressions of both level and change in ADJTOBINQ and level and change in the CSR composite score suggest that the impact (magnitude of slope coefficients) of CSR on ADJTOBINQ increases over time.¹⁰

¹⁰ This result is available upon request.

This finding is consistent with Spitzbeck (2009), which finds that CSR performance has improved since 2005. Although, we acknowledge shifts in CSR activities since 2005 and in the relationships among CG, CSR, and CFP, this matter is beyond the scope of our study.

Discussion

As the amelioration of CSR into the CG system in corporations continues, we expect that a future study that examines the evolution of the CSR and CG relation over time would significantly contribute to our understanding of the causality and relations among CG, CSR, and CFP from survey data based on managers' and participants' responses and aggregate firm-level data. In that regard, Ricart et al. (2005) show some preliminary evidence that companies have started to incorporate CSR (corporate responsibility and sustainable development) into their governance structure based upon survey responses from companies in the Dow Jones Sustainability Index. Spitzbeck (2009) further indicates that there is an increasing trend of forming corporate-responsibility committees within the boards of directors of 51 surveyed firms in the CSR Index (CRI) in the UK. Thus, some future study of the CG–CSR–CFP nexus using large-scale survey data should be worthwhile.

Further study also needs to take into account the impact of CSR on long-term financial performance across nations. Research on why and how firms' engagement in CSR differs across nations may provide additional understanding regarding the complex relations among CSR, CG, socially responsible investing, stock price, and firm value. Future research should also examine the contextual determinants of ethical decision making and moral reasoning of CSR across cultures.

Despite these limitations, our findings contribute to managerial practice by providing evidence on the causal effect of CG on CSR. In addition, by treating CSR as a missing link between CG and CFP, this article provides additional insight on CSR's positive impact on CFP after controlling for both causality and endogeneity issues. We also provide empirical evidence that CSR engagement is consistent with stakeholder theory rather than agency theory based on both descriptive and instrumental aspects.

Conclusions

Despite the important roles of CG and CSR and their effect on CFP, only limited empirical evidence examines the causality and endogeneity issues between CG and CSR. To fill that void and to determine the relative importance of stakeholder theory and agency theory regarding the

Table 5 The impact of each CSR criteria on CFP

CSR criteria	Heckman ADJTOBINQ	IV Method ADJTOBINQ	Heckman ADJROA	IV Method ADJROA
COMMUNITY	0.4391 (4.77)**	0.0157 (2.76)**	3.8755 (3.54)**	0.0725 (2.19)*
ENVIRONMENT	0.0896 (2.10)*	1.4230 (6.46)**	2.3200 (1.98)*	1.7737 (5.40)**
DIVERSITY	0.3448 (4.79)**	0.2732 (2.02)*	4.3194 (4.30)**	1.4609 (2.10)*
EMPLOYEE	0.7504 (10.57)**	0.4367 (3.24)**	11.0355 (9.90)**	2.7325 (2.06)*
PRODUCT	0.3121 (3.67)**	0.8568 (1.60)	0.3894 (0.36)	13.5002 (2.59)**
<i>Control variables</i>				
LOGTA	-0.1934 (14.49)**	-0.6173 (3.99)**	-3.4482 (12.88)**	-4.4879 (2.94)**
DEBTR	-0.2376 (4.01)**	-0.0273 (0.18)	-8.6048 (9.51)**	-9.6812 (6.40)**
RNDR	-35.2135 (7.96)**	-20.7831 (2.10)*	-38.5148 (8.83)**	-29.6460 (5.07)**
CAPXR	0.3946 (5.36)**	0.1428 (0.57)	2.7613 (2.73)**	5.6086 (2.55)*
SALEGR	0.2910 (5.59)**	0.2392 (3.15)**	3.4411 (3.75)**	4.0790 (3.90)**
DIVR	0.0396 (2.14)*	-0.0011 (0.07)	0.6148 (1.64)	0.3626 (0.92)
DEVRET	-0.0091 (5.25)**	-0.0335 (2.86)**	-0.2614 (7.02)**	-0.5915 (4.55)**
INVERSEMILL	-0.3830 (11.00)**		-10.1114 (11.10)**	
Constant	1.1107 (5.15)**	0.9789 (4.59)**	36.7512 (9.78)**	33.9061 (9.57)**
Adjusted R^2	0.2254	0.1839	0.3361	0.2134
Observations	4,820	4,820	4,820	4,820
Number of firms	1,678	1,678	1,678	1,678

Notes This table reports the coefficients of estimates from Heckman two-stage method and Instrumental Variable (IV) method. In these regressions, we only include the sample that has positive scores of each category of the CSR activities: COMMUNITY, ENVIRONMENT, DIVERSITY, EMPLOYEE RELATIONS, and PRODUCT. For Instrumental Variable (IV) method, the community is instrumented by firm age, environment is instrumented by whether firms are in S&P500 ***Index or not, diversity is instrumented by the size of board of director, employee is instrumented by state laws, and product is instrumented by the number of business segments. The FF 48 industry classification is included in all Models. *T*-statistics are reported in parentheses

**, * are statistically significant at the 1 and 5% levels, respectively

relations among CG, CSR, and CFP, we first examine whether CG is causing CSR or CSR is causing CG. Based on the overinvestment hypothesis stemming from agency theory, we expect managers to overinvest in CSR and therefore a negative relation between CG and CSR. Based on the conflict-resolution hypothesis derived from stakeholder theory, however, we expect a positive relation between CG and CSR. Second, we also examine whether CSR engagement enhances CFP after controlling for

causality and endogeneity. According to the overinvestment hypothesis, we expect that CSR negatively affects CFP. In contrast, the conflict-resolution hypothesis predicts that CSR positively affects CFP.

We analyze a comprehensive sample of firms with CSR engagement in the United States during the 1993–2004 period. We find that while CSR measures do not affect CG, a lagged measure of CG has a positive effect on CSR, supporting the stakeholder theory-based conflict resolution

Table 6 Simultaneous regressions of industry-adjusted Tobin's q and the CSR composite score

Simultaneous method	Model (1)		Model (2)	
	ADJTOBINQ	CSR	ADJTOBINQ	CSR
<i>Dependent variable</i>				
INTERCEPT	-0.387 (4.28)***	0.411 (83.48)***	-1.927 (8.87)***	0.386 (26.95)***
CSR	2.356 (15.52)***		5.920 (12.23)***	
ADJTOBINQ		0.013 (11.42)***		0.026 (4.27)***
<i>Control variables</i>				
LOGTA	-0.169 (26.37)***	0.003 (6.67)***	-0.167 (24.58)***	0.004 (3.65)***
DEBTR	0.204 (4.62)***	-0.016 (4.45)***	0.243 (5.08)***	-0.003 (0.58)
RNDR	0.764 (8.02)***	0.063 (7.68)***	0.879 (8.52)***	0.092 (6.08)***
CAPXR	-0.070 (0.97)		0.172 (2.49)**	
ADVR	0.762 (2.89)***		0.548 (2.02)**	
SGROWTH	0.248 (10.33)***		0.200 (8.60)***	
FF 48 industry	No	No	Yes	Yes
Adjusted R^2	0.1690	0.0845	0.2290	0.1716
Observations	6,479	6,479	6,479	6,479

Notes This table shows the results from the two-stage estimation method in which one of the dependent variables is industry-adjusted Tobin's q and the other dependent variable is the CSR composite scores. In these regressions, we only include the sample that has positive CSR scores. The CSR scores are from the KLD Stats database. T -Statistics are adjusted for robust and clustered (by firm) standard errors and reported in parentheses. See Table 9 in Appendix for variable definitions

***, **, * are statistically significant at the 1, 5, and 10% levels, respectively

Table 7 Simultaneous regressions of change in industry-adjusted Tobin's q (Δ ADJTOBINQ) and change in CSR composite score (Δ CSR)

Simultaneous method	Model (1)		Model (2)	
	Δ ADJTOBINQ	Δ CSR	Δ ADJTOBINQ	Δ CSR
<i>Dependent variable</i>				
INTERCEPT	-0.050 (3.70)***	0.046 (18.52)***	-0.090 (0.48)	0.087 (1.10)
Δ CSR	1.451 (5.96)***		1.524 (5.96)***	
Δ ADJTOBINQ		0.096 (2.59)***		0.085 (2.39)**
<i>Control variables</i>				
Δ LOGTA	-0.466 (13.35)***	0.057 (2.83)***	-0.471 (13.35)***	0.057 (2.75)***
Δ DEBTR	0.046 (0.65)	-0.056 (1.81)*	0.058 (0.80)	-0.048 (1.55)
Δ RNDR	0.142 (0.89)	0.013 (0.19)	0.147 (0.91)	0.015 (0.21)

Table 7 continued

Simultaneous method	Model (1)		Model (2)	
	Δ ADJTOBINQ	Δ CSR	Δ ADJTOBINQ	Δ CSR
Δ CAPXR	0.160 (1.69)*		0.117 (1.21)	
Δ ADVR	1.083 (1.80)*		1.193 (1.94)*	
Δ SGROWTH	0.120 (8.19)***		0.117 (7.85)***	
FF 48 industry	No	No	Yes	Yes
Adjusted R^2	0.1415	0.0525	0.1690	0.0535
Observations	5,735	5,735	5,735	5,735

Notes This table shows the results from the two-stage estimation method in which one of the dependent variables is change in industry-adjusted Tobin's q (Δ ADJTOBINQ) and the other dependent variable is the change in CSR composite scores (Δ CSR). Independent variables are also stated in their changes (Δ LOGTA change in LOGTA, Δ DEBTR change in DEBTR, Δ RNDR change in RNDR, Δ CAPXR change in CAPXR, Δ ADVR change in ADVR, and Δ SGROWTH change in SGROWTH) instead of the levels. In these regressions, we only include the sample that has positive CSR scores. The CSR scores are from the KLD Stats database. T -Statistics are adjusted for robust and clustered (by firm) standard errors and reported in parentheses. See Table 9 in Appendix for variable definitions

***, **, * are statistically significant at the 1, 5, and 10% levels, respectively

hypothesis as opposed to the agency theory-based overinvestment hypothesis. Furthermore, we find that by using the two-stage approach, the firm's CSR engagement is value enhancing, supporting the conflict-resolution explanation. Moreover, firms' CSR engagement in community, environment, diversity, and employee positively enhances CFP. We further find that even after considering a potential simultaneity bias between CSR and CFP through firm value, both levels and changes of CSR are positively associated with both levels and changes of CFP.

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Appendix

See Tables 8, 9, and 10.

Table 8 List of the strength, concern, and exclusionary items in the KLD database

KLD inclusive social ratings		
Category	Strength items	Concern items
Community	Generous giving Innovative giving Support for housing Support for education (added '94) Indigenous peoples relations (added '00, moved '02) Non-US charitable giving Other strength	Investment controversies Negative economic impact Indigenous peoples relations ('00-'01) Other concern
Environment	Beneficial products and services Pollution prevention Recycling Alternative fuels Communications (added '96) Property, plant, and equipment (ended '95) Other strength	Hazardous waste Regulatory problems Ozone depleting chemicals Substantial emissions Agricultural chemicals Climate change (added '99) Other concern

Table 8 continued

KLD inclusive social ratings		
Category	Strength items	Concern items
Diversity	CEO Promotion Board of directors Family benefits Women/minority contracting Employment of the disabled Progressive Gay & Lesbian Policies Other strength	Controversies Non-representation Other concern
Employee relations	Strong union relations No layoff policy (ended '94) Cash profit sharing Employee involvement Strong retirement benefits Health and safety strength (added '03) Other strength	Poor union relations Health safety concern Workforce reductions Pension/benefits (added '92) Other concern
Product quality and safety	Quality R&D/innovation Benefits to economically disadvantaged Other strength	Product safety Marketing/contracting controversy Antitrust Other concern

Notes All items are listed in their corresponding category. Unless otherwise indicated, the item has been included in the data from 1994 to 2004. Items that were added to the data or discontinued (i.e., ended) in intermediate years are indicated, as are the cases in which an item was moved from one category to another. Further details on the definition of each indicator are available from KLD Research & Analytics, Inc. at http://www.kld.com/research/ratings_indicators.html

Table 9 Variable definitions and measures

	[Name]	Variable definitions
<i>Variable</i>		
CSR Index	[CSR]	An index variable from zero to one that is constructed to measure firm's involvement in CSR (see Table 10 in Appendix)
Industry-adjusted Tobin's q	[ADJTOBINQ]	Our measure of firm value by the natural log of firm's Tobin's q divided by the median q in the firm's industry [Campbell 1996]
Industry-adjusted ROA (%)	[ADJROA]	Our measure of operating performance by the industry-adjusted return on asset (source: COMPUSTAT)
Log total asset	[LOGTA]	Log of total asset (data 6) (source: COMPUSTAT)
Debt/total asset	[DEBTR]	Long-term debt divided by total asset (source: COMPUSTAT)
R&D expenditure ratio	[RNDR]	Research and development expense divided by total sales (source: COMPUSTAT)
Advertising exp. ratio	[ADVR]	Advertising expense divided by total sales (source: COMPUSTAT)
Capital expenditure ratio	[CAPXR]	Capital expenditure expense divided by total sales (source: COMPUSTAT)
Sales growth	[SGROWTH]	Sales growth rate from $t - 1$ to t . (source: COMPUSTAT)
Dividend/book equity	[DIVR]	Dividend divided by book value of equity (data21/data60) (source: COMPUSTAT)
Deviation of stock returns (%)	[DEVRET]	Standard deviation of monthly stock returns during 5 years before current year (source: CRSP)
<i>Governance variables</i>		
GINDEX	[GINDEX]	Gompers, Ishii and Metrick index (source: IRRC data)
Entrenchment index	[ENTINDEX]	Bebchuk et al. (2009) entrenchment index (source: IRRC data)
% of independent directors	[PCTINDEP]	Number of independent outside directors/number of total directors (source: IRRC data)

Table 9 continued

	[Name]	Variable definitions
% of director share	[PCTDIRSHR]	Percentage of director shares (source: IRRC director data)
% of CEO share	[PCTCEOSHR]	Percentage of CEO shares (source: Execucomp and IRRC)
Log of blockholdings	[LOGBLKS]	Log of sum of total blockholdings (5% or more)
% of institutional ownership	[PCTINSTI]	Percentage of institutional share ownerships (CDA/spectrum 13(f) filing)
Log (number of analysts + 1)	[LOGANAL]	Log of (number of analysts + 1) (source: I/B/E/S database)

Table 10 Calculation of the CSR composite index

Combined strength and concern scores

COMMUNITY (i, t) = (sum of all community strength items for firm i at year t minus the sum of all community concern items for firm i at year t) divided by (total maximum possible number of community strength items during year plus total maximum possible number of community concern items at year t)

ENVIRONMENT (i, t) = (sum of all environment strength items for firm i at year t minus the sum of all environment concern items for firm i at year t) divided by (total maximum possible number of environment strength items during year plus total maximum possible number of environment concern items at year t)

DIVERSITY (i, t) = (sum of all diversity strength items for firm i at year t minus the sum of all diversity concern items for firm i at year t) divided by (total maximum possible number of diversity strength items during year plus total maximum possible number of diversity concern items at year t)

EMPLOYEE RELATIONS (i, t) = (sum of all employee strength items for firm i at year t minus the sum of all employee concern items for firm i at year t) divided by (total maximum possible number of employee strength items during year plus total maximum possible number of employee concern items at year t)

PRODUCT (i, t) = (sum of all product strength items for firm i at year t minus the sum of all product concern items for firm i at year t) divided by (total maximum possible number of product strength items during year plus total maximum possible number of product concern items at year t)

CSR composite index = (COMMUNITY + ENVIRONMENT + DIVERSITY + EMPLOYEE + PRODUCT)/5

Notes This calculation is following Hillman and Keim (2001) and Baron et al. (2011)

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