The Effect of Lead Directors on Corporate Social Responsibility

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ABSTRACT

Drawing on insights from the compromise board leadership structure theory, which posits that the presence of a lead independent director on corporate boards enables management to maintain unity of command through consolidated leadership and autonomy while also ensuring effective oversight, we theorize that this balance creates an equilibrium in which the firm is more likely to achieve stronger corporate social responsibility (CSR) performance. We further propose that improved financial flexibility serves as the economic mechanism through which the main effect operates. We also posit that these collaborative efforts are expected to contribute to superior long-term firm performance. Additionally, we argue that women in the influential role of lead independent director bring distinctive qualities to the board that further enhance firm outcomes in this context. Our findings, robust to potential endogeneity concerns, are consistent with these propositions, underscoring the significant impact of board structure and female leadership in a key position on advancing CSR performance and firm profitability.

Keywords: Corporate Social Responsibility; Lead Directors; Board Structure; Gender Diversity.

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INTRODUCTION

Global challenges such as climate change, resource sustainability, and inclusive development have renewed scholarly and policy interest in the factors that influence a firm's CSR performance. This issue is particularly important because CSR and sustainability practices have significant strategic implications for firms and involve substantial resource commitments (McWilliams et al., 2006; Hong et al., 2012), with direct consequences for shareholder wealth.

In this study, we examine how and why the presence of a lead independent director (LID), or just lead director for short, influences CSR performance. Despite the growing literature on board of directors and CSR (Harjoto and Jo, 2011; Byron and Post, 2016), this key aspect of board structure has been largely absent from academic discourse on corporate sustainability. Our study addresses the gap by offering a novel perspective on how this top-tier board leadership influences firms' CSR performance.

We argue that, based on the compromise board leadership structure theory introduced by Krause et al. (2017), having a lead director could improve corporate CSR performance. Without proper oversight, powerful CEOs might become entrenched, creating obstacles to stronger CSR performance. Entrenched CEOs may resist implementing CSR practices that require changes to established business norms and may feel less pressure to meet stakeholder expectations regarding CSR performance.[1] Conversely, excessive oversight can dilute the CEO's authority, reducing their motivation to take decisive action on CSR performance they believe would benefit shareholders and other stakeholders. The appointment of a LID serves as a compromise solution, offering greater managerial autonomy while maintaining appropriate oversight (Krause et al., 2017; Rajkovic, 2020). This structure maintains unity of command while promoting governance balance. Firms that achieve this equilibrium are better positioned to address competing stakeholder interests and are more likely to implement effective CSR policies (Benson et al., 2011; Harjoto et al., 2015). Prior research directly indicates that balanced CEO power positively affects CSR performance within the context of compensation arrangements. Jiraporn and Chintrakarn (2013) employ the CEO Pay Slice introduced by Bebchuk et al. (2011) to quantify CEO power and reveal its non-linear relation with CSR performance: when CEO power is lower, increasing it enhances corporate engagement in CSR. Conversely, with a substantial increase in power, CEOs tend to become more entrenched, resulting in reduced investment in CSR performance. A compromised board structure, with a lead independent director present on the board, provides an effective power-balancing mechanism. Therefore, the presence of a LID is expected to support stronger CSR performance.

Next, we propose that the gender of LID could shape their judgment and perspectives, potentially leading to higher CSR performance. Our motivation for exploring the gender issue arises from the spate of political and media attention on CSR and diversity, as well as a recent strand of research aiming to better understand the value relevance and efficiency of these initiatives (Zhang et al., 2013; Dai et al., 2021; Giannetti and Wang, 2023). Our research uniquely positions itself

[1] Morck et al. (1990), Bertrand and Mullainathan (2003), and others show that powerful CEOs often implement inefficient corporate policies to gain personal benefits.

by examining the role of the LID, a position held by a single individual in each firm, and focusing on the impact of that individual's gender, areas that no previous research has scrutinized to date. Our analysis offers new, critical insights into how a single woman in this high-leverage role can elevate crucial CSR issues, effectively making her opinions and perspectives heard and profoundly influencing a firm's approach to sustainability initiatives.

The literature on board gender diversity and its impact on governance and CSR performance (Post et al., 2011; Adams et al., 2015; Shi and Connelly, 2018; Francoeur et al., 2019; Atif et al., 2021) has seen substantial development. There are several arguments from psychology and other social sciences suggesting that female LIDs may advocate for superior CSR performance. First, inherent altruism may impact CSR performance (Marra et al., 2022). Females tend to exhibit more altruistic tendencies (Chodorow, 1974) and place less emphasis on self-interest (Arlow, 1991). Second, females are more likely to possess prior involvement in community service activities and hold advanced degrees, both of which are related to increased CSR performance (Elm et al., 2001; Hillman et al., 2002; Singh et al., 2008). Third, due to their heightened interest in philanthropy, female LIDs are inclined to offer a non-commercial perspective on social and environmental issues (Williams, 2003; Terjesen and Singh, 2008; Liao et al., 2015). Fourth, females demonstrate greater sensitivity to ethical considerations in decision-making processes (Bernardi and Arnold, 1997). Additionally, given their minority status, females have more significant reputational capital at stake (Gilson, 1990), which positively influences CSR performance (Khoo et al., 2022).

Our empirical analysis reveals that the presence of a LID significantly enhances CSR performance, with an increase of approximately 27% relative to the cross-sectional mean. Moreover, the presence of a female LID is linked to an economically meaningful increase in corporate CSR performance, compared with firms lacking lead directors or those with male LIDs (2.43 times greater than the cross-sectional average of CSR performance). Additionally, the presence of a female LID is associated with a 2.10 times increase in CSR performance compared with the full-sample cross-sectional average, in the subset of firms with lead directors.

We deploy a battery of tests to mitigate potential endogeneity and further substantiate our main findings. We address concerns related to selection bias using a Heckman (1979) two-stage approach with instruments grounded in director familiarity and validated by prior studies (Faccio et al., 2016; Lamoreaux et al., 2019). We further exploit plausibly exogenous variation in LID adoption arising from regulatory and governance shocks in 2004 within a difference-in-differences framework (Chen and Ma, 2017; Shi and Connelly, 2018), yielding evidence consistent with a causal interpretation of the increase in CSR performance associated with the broader implementation of LIDs. In addition, we apply entropy balancing (Hainmueller, 2012) to improve covariate comparability between treated and control firms. Finally, we implement more stringent fixed-effects specifications, estimate hybrid models that decompose within- and between-firm effects (Allison, 2009), and employ alternative measures of CSR.

We next develop and empirically test the underlying mechanism. Prior research shows that the presence of a LID enhances information flow and board monitoring (Chen and Ma, 2017;

Lamoreaux et al., 2019), while board gender diversity improves the information environment (Gul et al., 2011; Lai et al., 2017). These governance improvements reduce financing costs and ease access to external capital, increasing financial flexibility. Attig (2024) provides causal evidence that easing financial constraints and greater financial flexibility promote CSR performance. Consistent with these mechanisms, our empirical results show that the presence of a LID, and especially a female LID, improves CSR performance, potentially through increased financial flexibility.

This paper makes several important contributions to the literature. First, we contribute to the ongoing debate over what drives corporate CSR performance. While some recent studies emphasize the role of executive characteristics (Davidson et al., 2019; Hegde and Mishra, 2019; Wang and Yan, 2023; Chang et al., 2025), others focus on board-level attributes such as independence, size, or overall diversity (Harjoto and Jo, 2011; Harjoto et al., 2015; Jain and Zaman, 2020; Mustafa and Khatri, 2025). However, the influence of LID has been largely overlooked. We directly apply the theory of compromise board leadership structure (Krause et al., 2017) into the CSR context and show how the presence of a LID, a previously unexamined attribute, affects CSR performance. We further show that the gender of the LID matters, offering new insights into how individual-level board features influence firms' social responsibility initiatives and performance. Importantly, this is not merely an application of an existing theoretical framework to a new empirical setting. By demonstrating that the governance equilibrium created by the LID role, which balances CEO authority with independent oversight, has direct implications for how firms weigh and act upon stakeholder interests, we extend the compromise board leadership structure theory beyond its original domain into the stakeholder management and sustainability literature. In doing so, we establish a new theoretical link between board structure and CSR performance.

Second, we contribute to the literature on board diversity and leadership structure as determinants of corporate outcomes (Goyal and Park, 2002; Harris and Raviv, 2008; Guo and Masulis, 2015; Harjoto et al., 2015; Field et al., 2020). The impact of various aspects of board diversity on firm outcomes remains contested: while some studies report no significant effects (Guest, 2019), others find either positive (Miller and Triana, 2009) or negative effects (Carter et al., 2010). In this study, we specifically focus on gender diversity aspect, an area that has received heightened scrutiny in both academic and policy discussions and contributes to the growing body of work on its implications (Bernile et al., 2018; Field et al., 2020; Schoonjans et al., 2023; Bao and Li, 2024). Prior findings on the influence of gender diversity are mixed. Some studies even suggest that gender diversity can negatively affect corporate outcomes (Farrell and Hersch, 2005; Ahern and Dittmar, 2012; Pathan and Faff, 2013; Owen and Temesvary, 2018). In contrast, others argue that female directors bring stronger managerial skills and enhance governance by improving board oversight and the information environment (Adams and Ferreira, 2009; García-Meca et al., 2015). Terjesen et al. (2009), in an interdisciplinary review, conclude that gender diversity strengthens corporate governance by broadening the director talent pool. Our study advances this ongoing debate by examining the role of a previously overlooked leadership position: the female LID.

Finally, we contribute the governance literature on the real effects of lead directors. Building

upon the initial studies of Chen and Ma (2017) and Lamoreaux et al. (2019) we propose, substantiate, and demonstrate that the presence of a LID holds relevance for CSR performance. In doing so, we expand the understanding of the multifaceted roles that LIDs can play, shedding light on their potential influence on CSR performance.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Lead directors

The board structure including a lead director began to gain prominence in the U.S. in the early 2000s, particularly following the Sarbanes-Oxley Act (SOX) of 2002, and became more widespread in the following decades. The idea that independent directors need leadership, formalized through the role of a lead director, originates from Lipton and Lorsch (1992). These authors recommend that when the CEO also serves as chairperson, the lead director should be consulted on various matters related to board effectiveness and governance. Following the adoption of SOX, the New York Stock Exchange (NYSE) has exerted regulatory pressure on firms, requiring that a non-management director preside over executive sessions and that the company disclose the name of the lead director.

From the classical organizational theory perspective (Boyd, 1995), CEO duality, where the CEO also serves as the board chair, is seen as advantageous for the firm, as it ensures the unity of command in the form of strong and clear leadership. In contrast, agency theory (Fama and Jensen, 1983) advocates for separating the CEO and board chair roles to improve independent oversight, strengthen monitoring, reduce the risk of CEO entrenchment, and ultimately lower agency costs. This creates a trade-off between maintaining the unity of command through CEO duality and achieving effective board oversight through the separation of the chair position. To address this issue, a compromise has emerged in the form of a lead director board structure, which helps to combine the benefits of CEO duality with the need to prevent CEO entrenchment (Finkelstein and D'Aveni, 1994), thus introducing mechanisms to balance power. Krause et al. (2017) formalize this solution by developing the theory of a compromise board leadership structure, which integrates CEO duality to maintain unity of command with the appointment of a LID to ensure more effective monitoring.

The lead independent director board structure is regarded as a key mechanism for enhancing corporate governance by mitigating potential agency conflicts that arise when the CEO also serves as Chairman of the board. The key responsibilities of these directors involve overseeing and approving board meeting agendas, facilitating communication between independent directors and management, and chairing meetings of outside directors (Penbera, 2009). These duties are crucial because outside directors often have limited access to information beyond that provided by the management team (Duchin et al., 2010), and corporate executives may have incentives to withhold key information (Jensen, 1993; Adams and Ferreira, 2007). Oversight of board agendas limits executives' ability to introduce self-serving issues into meeting discussions, thereby reinforcing the independent directors' capacity to effectively advise and monitor management. In addition, survey

evidence (PWC, 2010) suggests greater involvement of LIDs in board and corporate functions, including managerial remuneration arrangements, CEO turnover and succession, investment and risk management decisions, as well as a broader evaluation of the managerial team's performance.

Consistent with this analysis, Lamoreaux et al. (2019) show that firms expecting greater benefits from monitoring are more likely to adopt a lead director board structure. These authors also show that investors respond positively to this structural change in the board and firms with a LID are more likely to replace underperforming CEOs, concluding that the lead director role enhances corporate governance standards. The presence of a lead director on corporate boards results in stronger management oversight (Chen and Ma, 2017) and helps to maintain a cohesive chain of command by empowering the internal chair with increased autonomy. The presence of a lead director matters for the efficiency of corporate policies and the firm's performance (Richardson, 2006; Larcker et al., 2007). Rajkovic (2020) finds that having a lead independent director on the corporate board is positively linked to investment efficiency. This effect is particularly strong in firms with weaker corporate governance, less transparent financial disclosures, and more significant financial constraints. Owusu et al. (2023), provide evidence on the effectiveness of lead directors using UK firms, demonstrating that the adoption of a lead independent director serves as an effective governance mechanisms. This adoption results in a lower cost of debt by reducing managerial risk-taking incentives. Further, Hsu et al. (2024) analyze the role of LIDs in earnings management and find that firms with such directors are less likely to manipulate earnings. Moreover, they show that the documented effect is more pronounced in firms with weaker governance and higher risk, suggesting that enhanced monitoring by lead directors improves firm value.

Gender diversity

A large literature examines the link between board gender diversity and various corporate policy outcomes (Adams et al., 2015). Srinidhi et al. (2011) investigate the relationship between female representation on corporate boards and earnings quality, finding that companies with greater participation of women in board roles tend to demonstrate improved earnings quality. Further, female directors significantly contribute to the efficiency of corporate governance and reduce corporate misconduct (Terjesen et al., 2009; Carter et al., 2024). Saeed and Riaz (2023) find that, following financial misconduct, women directors are more likely to be removed from boards, suggesting that gender bias influences turnover decisions.

In a meta-analysis of the relationship between women directors and firms' engagement in socially responsible business practices, Byron and Post (2016) find evidence supporting a generally positive link. McGuinness et al. (2017) show that CSR ratings are increasing in Chinese-listed firms with greater board gender diversity and Liu (2018) examines the relationship between board gender diversity and corporate environmental violations, discovering that firms with more female board members experience fewer environmental lawsuits. Francoeur et al. (2008) demonstrate that board gender diversity is positively associated with environmental responsibility as well as with other CSR dimensions involving less powerful stakeholders, such as contractors and the community. The

empirical study of Atif et al. (2021) finds a positive relationship between board gender diversity and renewable energy consumption, along with a positive impact of the interaction between renewable energy consumption and board gender diversity on firm financial performance. Overall, the evidence across these studies shows a consistent positive relationship between board gender diversity and various aspects of corporate CSR, including reduced environmental violations, better engagement with less powerful stakeholders, and increased renewable energy consumption.

Hypothesis development

The research reviewed in previous sections establishes both the theoretical framework and empirical basis for our main hypothesis. A lack of proper oversight could result in excessive CEO power and entrenchment, which may impede the implementation of CSR practices that challenge long-established business norms and reduce the CEO's motivation to take into consideration stakeholders' interests. Consistent with this view, prior research argues that CEO-chairman duality, as reflective of CEO power, is negatively related to CSR (Deng et al., 2013; Endrikat et al., 2021). However, excessive board monitoring can limit managerial freedom and induce managerial short-termism, stifling efforts to implement CSR strategies. For example, prior research argues that intense monitoring by the board and equity-based governance tools can induce managerial myopia (Faleye et al., 2011). CSR is a long-term investment (Orlitzky et al., 2003), and literature shows that managerial short-termism negatively influences corporate CSR performance (Efendi et al., 2007; Smulowitz et al., 2023).

The lead director board structure provides a balanced approach, offering the necessary oversight while preserving managerial autonomy (Krause et al., 2017; Rajkovic, 2020). This structure maintains leadership authority with the CEO, ensuring they retain decision-making power while benefiting from a well-calibrated level of monitoring. Jiraporn and Chintrakarn (2013) use the CEO-pay slice concept as a measure of CEO power and highlight its complex relationship with CSR. Their findings suggest that when CEO power is relatively low, increasing it encourages greater CSR involvement. However, as CEO power grows significantly, it leads to greater entrenchment, which in turn reduces CSR investments. A balanced board structure, in the form of a lead director, ensures the optimal equilibrium between unity of command and oversight, fostering a system that could support positive CSR performance.

Taken together, the preceding analysis suggests that lead directors offer a compromise by balancing managerial autonomy with the necessary oversight. This equitable distribution of power has been linked to increased CSR performance, implying that the presence of a lead director may positively influence CSR performance. Based on this reasoning, we propose the following hypothesis:

H1: The presence of a lead director on the board is positively associated with CSR performance.

Next, we propose that the gender of the LID can influence their judgment and perspectives, potentially driving higher CSR performance. Several psychological and social science theories as well as multidisciplinary empirical evidence suggest that female lead directors may promote superior

CSR compared to their male counterparts.

First, from the perspective of social role theory (Eagly, 1987) societal expectations and perception about gender roles shape how women could behave in different contexts. For example, women are expected to be nurturing, cooperative, and relationship-oriented. Further, evidence across various cultures has linked women to psychological characteristics such as empathy, care, a strong concern for others, and a focus on realizing values in relationships that are vital to the community. These attributes could lead to greater consideration of stakeholders' interests and to high CSR. Second, women's educational backgrounds and expertise, often reflected in their attainment of board membership through community service or academia (Hillman et al., 2002; Terjesen et al., 2009), contribute to their heightened sensitivity to CSR-related decisions. Third, research indicates that women exhibit higher levels of moral reasoning, a cognitive skill for resolving ethical dilemmas, and are less tolerant of unethical practices compared to men (Elm et al., 2001; Yarram and Adapa, 2021). Consequently, they may be more inclined to uphold values and principles that drive CSR performance aimed at benefiting diverse stakeholders. Finally, as a minority group on corporate boards, women have a higher level of reputational capital at risk, a factor that could positively influence CSR performance (Khoo et al., 2022).

In summary, women's distinctive psychological traits, diverse backgrounds and experiences, and core values, along with their minority status, may enhance their ability to recognize and prioritize the interests of various stakeholders, ultimately driving stronger CSR performance. Accordingly, we propose the following hypothesis:

H2: The presence of a female lead director on the board is positively associated with CSR performance.

Further, prior research also shows that financial flexibility matters for corporate CSR performance. That is, firms with easier access to cheaper capital have more financial flexibility to invest in sustainability and social programs because they can afford long-term CSR strategies without worrying about immediate financial strain. Attig (2024) provides direct causal evidence of the impact of relaxing financial constraints and improved financial flexibility on CSR documenting that easing access to external finance drives corporate goodness.

In frictionless capital markets, firms would enjoy unlimited access to external financing. In practice, however, information asymmetry and agency problems create financing frictions that constrain firms' access to capital and limit their financial flexibility. Mechanisms that reduce these frictions can lower the cost of capital and expand firms' capacity to fund discretionary capital flows, including CSR investments. Prior research shows that stronger corporate governance and higher financial reporting quality reduce financing costs and improve access to external capital, thereby enhancing financial flexibility (Francis et al., 2005; Bharath et al., 2008; Chen et al., 2009).

Building on this logic, we argue that the presence of a LID enhances CSR primarily through a financial flexibility mechanism. As discussed above, LID presence is associated with lower earnings management, which reduces information asymmetry and due-diligence costs (Hsu et al., 2024). At the same time, lead independent directors strengthen corporate governance and oversight, lowering

monitoring costs and improving creditor and shareholder trust (Lamont et al., 2001; Attig, 2024). These improvements in governance and disclosure quality facilitate financial flexibility by easing capital market frictions. Moreover, prior research links female board representation to higher earnings quality and stronger governance practices (Srinidhi et al., 2011; Carter et al., 2024), suggesting that these effects may be particularly pronounced when the lead independent director role is held by a woman. Taken together, this reasoning implies that the presence of a LID, especially when the role is held by a woman, enhances firms' financial flexibility by improving governance and disclosure quality, thereby freeing up resources for CSR investments, hence improving CSR performance. This motivates:

H3: Corporate financial flexibility serves as a channel of influence for CSR performance.

SAMPLE SELECTION, VARIABLES, AND SUMMARY STATISTICS

Data

Our initial sample consists of all public U.S. firms listed in the Morgan Stanley Capital International (MSCI) Environment, Social, and Governance (ESG) statistics database, formally known as Kinder, Lyndenberg, and Domini (KLD). Our sample spans the period from 1998 to 2019, after which CSR data were no longer reported in the KLD statistics available on WRDS. Using the BoardEx database we identify the firms having lead directors on the board, the gender of the lead director and other lead director characteristics relevant to our study, and various attributes of the board and diversity measures. Additionally, for each firm we gather accounting and financial data from Compustat and its daily stock returns from the Center for Research in Security Prices (CRSP) database. To address outliers, we apply winsorization to all continuous variables at the 1st and 99th percentiles. The final sample is an unbalanced panel consisting of 34,306 firm-year observations.

Variable definitions

We measure a firm's CSR score as the total number of strengths minus the total number of concerns in each year. CSR strengths reflect positive actions such as pollution prevention, while concerns capture negative behaviors, such as producing hazardous waste. Appendix A provides a detailed description of these CSR dimensions. Following Servaes and Tamayo (2013), and consistent with other studies, we exclude corporate governance from the CSR estimation. This is because CSR focuses on broader societal objectives and external stakeholders, whereas corporate governance primarily aims to help shareholders secure a return on their investment (Shleifer and Vishny, 1997).

To identify the presence of a lead independent director on the board we follow the methodology established in prior studies such as Lamoreaux et al. (2019). Using the BoardEx database, we search for specific board roles assigned to each director, including "facilitating director," "LID," "lead independent director," "lead independent trustee," "lead outside director," "lead trustee," "presiding director," and "presiding trustee." If any of these titles are present, we classify the firm

as having a lead independent director. We note that our results remain robust regardless of whether we include or exclude non-executive board chairs from this classification.

We include a range of control variables that prior research has shown to significantly influence CSR behaviour (detailed definitions are provided in Appendix B). Specifically, we control for firm size (LNA), measured by the logarithm of total assets; capital expenditures (EXP); and research and development expenditures (RDS). Following McWilliams and Siegel (2001), we expect all three variables to positively affect CSR performance. Firm profitability (ROA) is also expected to be positively associated with CSR performance. In contrast, leverage (LEV) and stock price volatility (VOL), both proxies for risk, are anticipated to have negative effects on CSR performance, consistent with the findings of Hillman and Keim (2001) and Campbell (2007), among others. Firm age (AGE), which also serves as a proxy for risk, is expected to have a positive effect on CSR performance, as older firms are generally viewed as less risky. Prior research (Fisman et al., 2006; Dupire and M'Zali, 2018) also finds that competitive pressure can positively influence CSR performance. Accordingly, we include the Herfindahl-Hirschman Index (HHI) to proxy for market concentration, as well as advertising expenditures (ADV). Following Harjoto et al. (2015), Harjoto and Jo (2011), and others, we control for board characteristics that may influence CSR, including board size (DIR), board independence (IND), board diversity (DIV), analyst following (LNF). We also control for institutional ownership (INS), as it can influence the extent of agency issues within the firm (Klettner, 2021). We expect board attributes to be positively associated with CSR performance, and institutional ownership to exhibit a negative relationship with CSR performance. Lastly, we include fixed effects for industry and year: industry fixed effects are defined using two-digit SIC codes, and year fixed effects control for temporal shocks. These fixed effects account for time-invariant heterogeneity across industries and years.

To examine the channel of influence, we employ two variables: the cost of equity (EQC), estimated using the four-factor model of Carhart (1997), and covenant restrictions in debt contracts (COV). Finally, we proxy for the firm's long-term performance using the average return on assets (ROA) over the subsequent three- and five-year periods. ROA is defined as earnings before interest, taxes, depreciation, and amortization (EBITDA) divided by the sum of the firm's total debt and the market value of its equity. Inspired by Chen et al. (2007), we estimate these models while controlling for capital constraints using the KZ index (KZI) from Farre-Mensa and Ljungqvist (2016), annual sales revenue (SLS), and Tobin's Q (TBQ), calculated as the market value of equity minus the book value of equity plus the book value of total assets, scaled by the book value of total assets. We also include board characteristics and governance metrics as additional controls.

Descriptive statistics

Table 1, Panel A presents descriptive statistics for the full sample of 34,306 firm-year observations. The average CSR score is 0.246 with a standard deviation of 2.046. Panel B reports statistics for a sub-sample of firms with lead directors, comprising 14,012 firm-year observations. In this sub-sample, the mean CSR score is 0.512, with a standard deviation of 2.215. These figures suggest a

wide distribution of CSR scores in both samples. Regarding the binary indicators for lead directors, the mean value of the LID variable in Panel A is 0.408, implying that approximately 40.8% of firm-year observations include a lead director. In Panel B, the FLD variable has a mean of 0.073, indicating that among firms with a lead director, 7.3% have a female lead director.

The next set of variables, capturing board characteristics and governance features, are also reported in Table 1. The average board diversity score (DIV) is comparable across samples (3.201 in the full sample vs. 3.337 in the sub-sample). Similarly, other board-level variables such as board size (DIR), board independence (IND), analyst following (LNF), and institutional ownership (INS) exhibit only minor differences. Most firms have 10 directors (DIR). Institutional ownership (INS) averages around 74%. The sample exhibits substantial variation in firm characteristics. The average firm size (LNA) is 7.58, and profitability (ROA) averages 8.3%. Capital expenditure (EXP) and market concentration (HHI) vary significantly, with standard deviations of 0.165 and 0.065, respectively. Firm age (AGE) averages 21 years, and stock price volatility (VOL) is moderate at 2.5%. Across both the full and subsamples, variables show moderate dispersion but broadly similar means, indicating comparable firm-level characteristics. Finally, for firms with lead directors, Table 1 also reports statistics on lead director characteristics. The average tenure is 3.2 years, the average age is 65, and most lead directors serve on more than one board. Approximately 70% are U.S. nationals.

MAIN RESULTS

Univariate analysis

Table 2 partitions the full sample on LID (Panel A) and the sub-sample of firms with a lead director on FLD (Panel B). Comparing the CSR means for the partition of the full sample into observations with LID = 1 vs. those with LID = 0, the average CSR score over firms with a lead director is 8.13 times greater than it is for firms without a lead director. Among the sub-sample of firms with lead directors, in Panel B, those with female lead directors have an average CSR score that is 3.35 times higher than that for firms with male lead directors. These results provide the strong suggestive evidence of a positive association between the firm having a (female) lead director and its CSR performance.

We also compare the characteristics of female and male lead directors. The average tenure of a male lead director is 3.29 years and the average tenure of a female director is 2.92 years and the difference is very highly significant, as are the differences for all the other characteristics except that female and male lead directors are equally likely to be U.S. nationals. On average, female lead directors are not only younger, they also hold more board positions and are better qualified than male lead directors.

Multivariate results

Next, we examine the effect of lead directors on CSR, as well as the role of female lead directors, using multivariate regressions. Table 3 reports the results. The models in Columns (1) and (4) in

Panel A and column (1) in Panel B are estimated without any controls or fixed effects, while models (2) and (5) in Panel A and model (2) in Panel B are estimated with firm-level controls as well as industry and year fixed effects. Models (3) and (6) in Panel A and model (3) in Panel B are estimated with additional controls for board characteristics, board diversity, institutional ownership, analyst following, and advertising expenditures. Standard errors are adjusted for heteroskedasticity and clustered at the firm level.

We find that the coefficient estimates for LID are positive and statistically significant in all specifications, so having a LID on the board is positively associated with corporate CSR performance. Also, firms with a female LID tend to exhibit higher CSR performance than firms without a LID or firms with a male LID. These effects are also economically meaningful: Column (3) of Panel A shows that having a LID is associated with a 27% increase (viz. 0.067/0.246) in the CSR score, relative to the cross-sectional mean; column (6) of Panel A shows that having a female LID is associated with a 2.43 times increase (0.599/0.246) in the CSR score; and Panel B, column (3) shows that the presence of a female LID is associated with a 2.1 times increase (0.518/0.246) in the CSR score relative to the cross-sectional mean.[2]

Overall, the results suggest that the presence of a lead director, particularly a female lead director, is positively associated with corporate CSR performance, providing strong support for Hypotheses 1 and 2.

Alleviating endogeneity and further robustness checks

An endogeneity problem could arise if there is a selection bias. It is possible that firms with high CSR happen to adopt LID board structures and also appoint female LIDs. Female LIDs might gravitate towards high-CSR firms. To address this potential selection bias, we implement the Heckman (1979) two-stage procedure. Specifically, we employ its variation, the treatment effect model. Inspired by prior research (Faccio et al., 2016; Lamoreaux et al., 2019) and based on the notion of familiarity in an investment setting (Grinblatt and Keloharju, 2001; Huberman, 2001; Seasholes and Zhu, 2010), we construct two variables PLD (the proportion of firms having a LID, within all the other firms where firm i's directors also serve as directors in year t) and PFLD (the proportion of firms with a female LID, among all the other firms in which firm i's male directors also serve as directors in year t) to use as instruments. The rationale for using these instruments is as follows: board members with experience on other boards that have LIDs may be more familiar with the dynamics and advantages of this structure. As a result, they are likely to advocate for adopting a similar structure in their focal firms. Similarly, male board members who have worked with female LIDs on other boards may become more comfortable with women in leadership roles. This increased familiarity could make them more inclined to support the appointment of a female

[2]Because the relatively small number of firms with female LIDs may raise concerns about statistical power and sensitivity to influential observations, we also implement firm-level resampling procedures, including cluster bootstrap and wild bootstrap methods (Cameron et al., 2008; Roodman et al., 2019). Across both approaches (results untabulated for brevity), the coefficient of interest and its statistical significance remain stable.

LID in their own firm.

Furthermore, consistent with the insights of Faccio et al. (2016) and to enhance the validity of the exclusion restriction, we introduce two additional instruments, namely: PLD_{low}, the proportion of firms with a LID and below average CSR, among all the other firms in which firm i's directors also serve as directors in year t; and PFLD_{low}, the proportion of firms with a female LID and below average CSR, within all the other firms in which firm i's male directors also serve as directors.

Table 4 present the results of this analysis. Columns (1), (3), and (5) report the results of the selection models. We find that the exogenous variables are positive and significant in all models. From the first stage we obtain the inverse Mills ratio and then include it as an additional regressor in the second stage. Columns (2), (4), and (6) report the second stage results. We observe that, even after incorporating the inverse Mills ratio to account for self-selection, the estimates of the variables of interest remain positive and statistically significant.

Next, we leverage a quasi-natural experiment within a difference-in-difference (DID) framework exploiting the two significant shocks: an increase in NYSE regulatory pressure and a significant shift in ISS vote recommendation policies. Both events contribute to the adoption of lead director board structures (Chen and Ma, 2017; Shi and Connelly, 2018). The sample period is limited to the four years before and the four years after the shock, i.e., 2000-2008 (as in Chen and Ma (2017)). Extending the sample too far from the shock year could dilute its observable impact. We employ the DID analysis using a propensity-score matching (PSM) approach. Specifically, we estimate a logit model in the pre-shock year to obtain propensity scores and match each treated firm to a control firm using nearest-neighbor matching. Table 5 reports the results. The coefficient estimate for the DID estimator is positive and significant indicating that, following the shock, treatment firms that did not have a lead independent director in the pre-shock period experience an increase in CSR performance. Overall, the results align with our main findings, highlighting the positive role of a LID board structure in advancing corporate CSR performance.[3]

To supplement the DID analysis, we employ a recently developed econometric framework that provides a formal assessment of potential endogeneity concerns arising from unobserved confounders (Oster, 2019; Fu and Sun, 2024). We estimate Oster's δ using the fully specified model with the complete set of controls and fixed effects (Model 5), following Oster (2019), and find that the estimated absolute value of δ equals 9.12, which is well above the benchmark value of 1, implying that selection on unobservables would need to be more than nine times as strong as selection on observables to fully attenuate the estimated DID coefficient. Further, we assess coefficient stability by constructing the bounded set implied by Oster (2019). We obtain a bias-adjusted coefficient Treatment $\times$ Post of 0.135. Because zero lies outside the bounded set defined by the bias-adjusted coefficient and the baseline DID estimate, the estimated effect is unlikely to be driven by omitted-variable bias. Taken together, these diagnostics indicate that unobservable factors are

[3]Because NYSE governance recommendations apply mainly to NYSE-listed firms, while ISS voting policy changes likely affect firms across exchanges, we estimate separate DiD models by listing venue (Panels B and C of Table 5), finding relatively stronger effects for NYSE-listed firms.

highly unlikely to account for our estimated results.

Table 6 reports the results obtained by applying the entropy balancing estimator of Hainmueller (2012), Hainmueller and Xu (2013) and McMullin and Schonberger (2020) which enables optimal weighted matching of treatment firms (those having a (female) LID) and control firms (those without a LID, or with a male LID). We observe the benefit of using balancing, as it eliminates all observable differences in mean firm characteristics between the treatment and control groups. Similar to the main DID regressions, the coefficients in Table 6 remain significant in all models.

Next, we include additional controls for personal characteristics of the lead independent director (LID) in our multiple regression analysis. Table 7 reports the results after controlling for several LID-specific variables: TEN_{DIR} (tenure), AGE_{DIR} (age), NUM_{DIR} (number of other directorships), LOC_{DIR} (a binary indicator for local LIDs), and QLF_{DIR} (a qualification index). We restrict the sample to firms with LIDs, as our objective is to test the robustness of the finding that female LIDs have a stronger positive impact on CSR scores than their male counterparts. Across all model specifications, the coefficient on LID gender remains positive and statistically significant, indicating that the documented gender effect is not driven by other observable attributes of the LID.[4]

The effect of a LID on CSR is likely to vary with CEO power, CEO characteristics, and managerial entrenchment, as argued in our first hypothesis. Prior research documents a complex and often negative association between CEO power and CSR, as powerful CEOs may prioritize self-interest and control over stakeholder concerns (Bhaskar et al., 2023, 2024). From an agency perspective, managerial entrenchment weakens accountability and external discipline, potentially shaping CSR-related decisions. In addition, older executives may be less engaged in CSR due to shorter career horizons and reduced responsiveness to stakeholders (Oh et al., 2016; Le et al., 2024; Lee et al., 2024; Yousaf and Nguyen, 2025). CEO gender may further influence CSR, because female CEOs are generally more inclined to invest in CSR performance (Lim and Chung, 2021; Gala et al., 2024; Dah et al., 2025). Finally, CEO compensation structure can influence CSR performance (Ikram et al., 2020). Motivated by this literature, we introduce interaction terms into the main model. We construct a comprehensive CEO power index following Lisic et al. (2016). We also include CEO age, a binary indicator for CEO gender, incentive-based compensation measures (Vega and Delta) estimated following Coles et al. (2006), and the managerial entrenchment index of Bebchuk et al. (2009). These variables are interacted with LID presence, and the results are reported in Table 8.

Consistent with prior research, we document that CEO power is negatively associated with CSR, while its interaction with LID presence is positive, supporting a power-balancing mechanism

[4]We perform a series of additional robustness tests incorporating more board-level controls and various fixed effects. The results, presented in Appendix C, remain qualitatively consistent with our main findings. We further validate robustness using alternative CSR measures (Lins et al., 2017) and industry-adjusted CSR scores, with consistent results shown in Appendix D. Finally, building on the broader framework of CSR taxonomies in prior research (Hillman and Keim, 2001; Mattingly and Berman, 2006) and motivated by our compromise board leadership theory, we categorize CSR into operational (Diversity, Employee Relations, and Environment) and relational (Community, Human Rights, and Product) pillars. The effect is primarily driven by operational strengths (Appendix E).

whereby the presence of a LID mitigates excessive CEO influence and facilitates CSR performance. The interaction between CEO age and LID presence is negative, indicating that LIDs are more effective in firms led by younger CEOs. CEO gender is positively associated with CSR, though its interaction with LID presence is insignificant. We also find a positive and significant interaction between CEO Vega and LID presence, while interactions involving CEO Delta and managerial entrenchment are insignificant. Importantly, across all specifications, our main variable of interest, the presence of a lead independent director, remains positive and statistically significant. Overall, these results provide additional support for our core arguments and the proposed mechanism.

ECONOMIC MECHANISM

In this section, we test Hypothesis H3 that financial flexibility serves as potential channel of influence. High financing costs and restrictive covenants can significantly constrain financial and operational flexibility. Table 9 examines the influence of a (female) LID on financial flexibility by analyzing the cost of equity and covenant restrictions in debt contracts. As shown in Columns (1)-(3), the presence of a (female) LID is associated with a lower cost of equity capital.

Enhanced transparency and stronger governance standards reduce perceived risk for creditors lessening the need for restrictive covenants (Mansi et al., 2011; Chava et al., 2019). Building on prior studies (Smith and Warner, 1979; Reisel, 2014), we focus on covenants limiting financing, investment, and payout activities. Using data from Mergent FISD, we identify such covenants with indicator variables, then sum these for all outstanding bonds of a firm in a given year. Taking the natural logarithm of this sum, we create the variable COV. Columns (4)–(6) show that firms with a LID, and especially a female LID, tend to have fewer restrictive covenants. However, the results in the final column are more suggestive than conclusive.

To summarize, the results in Table 9 suggest that a firm's financial flexibility is an important economic mechanism that explains the main effects of having a LID board structure on CSR performance, and that female LIDs tend to be more effective than male LIDs in achieving these outcomes. While these findings are consistent with the financial flexibility channel, the full causal chain is not directly identified within a unified empirical framework and partly relies on prior literature. Accordingly, our findings should be interpreted as supportive, rather than definitive evidence of the proposed mechanism.

FIRM PERFORMANCE IMPLICATIONS

Prior research suggests that CSR may affect firm performance by aligning managerial focus with financially material stakeholders over the long term (Flammer et al., 2019; Al-Shammari et al., 2022; Siddiqui et al., 2023). In this supplementary analysis we examine the impact of LID presence, and in particular female LID presence, on a firm's operating performance over the subsequent three- and five-year horizons.

The results, presented in Table 10, focus on the three-year average return on assets (ROA) in Panel A and the five-year average ROA in Panel B. Columns (1)–(4) include the full sample,

while Columns (5)–(6) are limited to firms with LIDs. Our findings indicate that the presence of a LID, especially a female LID, is positively associated with long-term operating performance, with economically meaningful effects. Specifically, firms with a LID have an average ROA that is 0.5 percentage points higher than firms without a LID (Panel A, Column 2). Moreover, firms with a female LID exhibit a three-year average ROA that is 0.7 percentage points higher than firms without a LID or with a male LID (Panel A, Column 4). Among firms with LIDs, those led by a female LID outperform those with a male LID by 0.6 percentage points in average ROA (Panel A, Column 6). The results for the five-year period in Panel B are qualitatively similar.

CONCLUSION

Motivated by recent policy recommendations to strengthen regulations on CSR and boardroom diversity, as well as an inconclusive and relatively limited literature debating whether females in a board leadership role could meaningfully influence corporate policies, we examine the association between the presence of a LID and corporate CSR performance, with a special emphasis on the lead director's gender. A recently developed theory on balanced board leadership structure suggests that appointing a LID strikes an optimal balance between having an independent leadership authority and effective board oversight, combining the benefits of independent governance while ensuring strong supervisory mechanisms remain in place. On the one hand, balancing CSR performance that could benefit multiple stakeholders requires decisive actions. On the other hand, without proper oversight these actions could lead to an escalation of agency-related concerns. Implementing a board structure that has a LID allows a compromise solution of the above dilemma and thus could lead to a better CSR performance.

We present robust empirical evidence indicating that the presence of a LID is associated with improved CSR performance. Our findings further indicate that female LIDs exert a stronger positive influence on a firm's CSR performance than their male counterparts. Our results remain robust to potential endogeneity concerns. In examining the potential channel of influence, we find that improvements in financial flexibility play a significant role. Finally, we demonstrate that the presence of a LID, particularly a female LID, has a significant impact on the firm's financial performance.

A limitation of our study concerns the identification of underlying behavioral mechanisms. Although theory suggests that female LIDs exhibit stronger altruistic preferences, ethical sensitivity, and reputational concerns that promote CSR, such traits cannot be directly observed using archival data. Future research could build on our findings by employing mixed-method approaches, to more directly examine the behavioral foundations of board leadership and CSR. Another limitation concerns the identification of the financial flexibility mechanism. Our results show that LID presence is associated with lower equity financing costs and fewer restrictive covenants, consistent with improved financial flexibility. However, the full causal path from LID-induced governance improvements through reduced information asymmetry and financing frictions to CSR performance is identified only partially. The intermediate links in this chain rely in part on inferences from

prior literature (Attig, 2024; Hsu et al., 2024). Future research employing more granular data on governance quality, disclosure practices, and financing decisions could more directly trace each step of this mechanism.

A further limitation relates to generalizability. Our analysis focuses on the U.S. institutional setting, characterized by a single-tier board structure, dispersed ownership, and a distinct regulatory environment. The role and effectiveness of LIDs may differ in countries with two-tier boards, more concentrated ownership, or different institutional environments (El Ghoul et al., 2016), as well as in contexts with varying cultural attitudes toward gender diversity and stakeholder engagement. Lastly, a consideration concerns the measurement of CSR performance. While KLD CSR scores are widely used and provide a consistent framework for evaluating corporate social performance, their strengths-minus-concerns approach has recognized limitations and may not fully capture the multidimensional nature of CSR and sustainability. Future research could employ alternative CSR or ESG measures (Sustainalytics or Refinitiv scores) to further evaluate the scope of the relationships documented here.

This study offers key insights for policymakers aiming to enhance corporate governance and CSR. First, having a LID is associated with improvements in financial flexibility. Policymakers could consider embedding the LID role in regulations to ensure robust oversight and effective CSR. Second, balanced governance that combines strong leadership with accountability is crucial, and incentives to adopt such models may improve long-term performance. Finally, we have underscored the significant benefits of gender diversity in board leadership. Policymakers can leverage these insights to encourage companies to thoughtfully appoint women to leadership positions as a strategic governance priority, rather than relying on rigid or overly prescriptive hiring quotas.

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Table 1: Summary Statistics
This table presents descriptive statistics for the full sample (Panel A, N = 34,306) and the sample of firms with LIDs (Panel B, N = 14,012). Appendix B contains definitions of all variables.

Panel A	Mean	StDev	10% Quantile	Median	90% Quantile
CSR	0.246	2.046	-2	0	3
LID	0.408	0.492	0	0	1
DIR	9.617	2.703	6	9	13
IND	0.697	0.226	0.333	0.778	0.909
DIV	3.201	0.672	2.280	3.263	4.023
LNF	2.246	0.819	1.099	2.303	3.259
INS	0.739	0.225	0.401	0.794	0.998
ADV	0.120	0.026	0	0	0.036
LNA	7.579	1.725	5.424	7.458	9.947
ROA	0.083	0.070	0.010	0.086	0.157
LEV	0.787	1.974	0	0.419	2.047
EXP	0.082	0.165	0.008	0.034	0.171
RDS	0.120	0.548	0	0	0.181
HHI	0.065	0.065	0.022	0.039	0.145
AGE	21.150	18.796	3	16	46
VOL	0.025	0.012	0.013	0.023	0.042
Panel B	**Mean**	**StDev**	**10% Quantile**	**Median**	**90% Quantile**
CSR	0.512	2.215	-2	0	3
FLID	0.073	0.260	0	0	0
DIR	10.084	2.599	7	10	14
IND	0.752	0.177	0.5	0.8	0.909
DIV	3.337	0.642	2.438	3.422	4.105
LNF	2.400	0.776	1.386	2.484	3.332
INS	0.776	0.196	0.501	0.822	1
ADV	0.120	0.026	0	0	0.374
LNA	7.959	1.758	5.779	7.817	10.424
ROA	0.087	0.065	0.021	0.089	0.156
LEV	0.812	1.956	0	0.477	2.021
EXP	0.079	0.160	0.008	0.033	0.167
RDS	0.082	0.415	0	0	0.159
HHI	0.067	0.068	0.022	0.040	0.151
AGE	24.403	20.702	4	19	52
VOL	0.024	0.012	0.012	0.021	0.039
TEN_{DIR}	3.222	3.332	0	2	8
AGE_{DIR}	65.343	7.836	55	66	75
NUM_{DIR}	1.090	1.243	0	1	3
LOC_{DIR}	0.688	0.463	0	1	1
QLF_{DIR}	1.359	1.270	0	1	3

Table 2: Univariate Analysis
This table reports the sample means of our CSR performance measure (and associated characteristics) derived from different partitions of the full sample. In Panel A, the sample is partitioned on LD, a binary variable that equals 1 for firms with a LID and 0 otherwise. In Panel B, the sample is partitioned on FLD, a binary variable that equals 1 for firms with a female LID and 0 otherwise. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. Appendix B provides definitions of all variables.

Panel A: LIDs and CSR – Full Sample			
	LID = 1 (N = 14012)	LID = 0 (N = 20294)	Difference
CSR	0.512	0.063	0.449***
Panel B: LID Characteristics - Subsample of Firms with LIDs			
	FLD=1 (N = 1024)	FLD=0 (N = 12988)	Difference
CSR	1.465	0.437	1.028***
TEN_{DIR}	2.917	3.290	-0.373***
AGE_{DIR}	62.333	65.581	-3.248***
NUM_{DIR}	1.487	1.059	0.428***
LOC_{DIR}	0.687	0.688	-0.001
QLF_{DIR}	1.457	1.364	0.093**

Table 3: LIDs, Gender, and CSR

This table presents results of the regression of CSR on LID (FLD), a binary variable that equals 1 for firms with a LID (female LID) and 0 otherwise, and other controls. Models in Panel A are estimated using the full sample of firms, with and without LIDs. Columns (1) and (4) do not include any fixed effects. Columns (2) – (5) and (3) – (6) include industry and year fixed effects. Models in Panel B are estimated using the sub-sample of firms with LIDs. Column (1) does not include any fixed effects. Columns (2) – (3) include industry and year fixed effects. Appendix B provides definitions of all variables. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.450***	0.111***	0.067*			
	(9.175)	(2.667)	(1.686)			
FLD				1.256***	0.744***	0.599***
				(7.577)	(5.578)	(4.546)
DIR			0.007			0.009
			(0.770)			(0.933)
IND			0.049			0.048
			(1.097)			(1.069)
DIV			0.612***			0.600***
			(17.348)			(17.078)
LNF			0.266***			0.268***
			(8.306)			(8.446)
INS			-0.656***			-0.648***
			(-6.089)			(-6.045)
ADV			2.473**			2.507***
			(2.515)			(2.586)
LNA		0.419***	0.222***		0.418***	0.220***
		(17.549)	(8.240)		(17.835)	(8.276)
ROA		-2.198***	-1.114***		-2.194***	-1.109***
		(-7.402)	(-3.925)		(-7.460)	(-3.928)
LEV		-0.025***	-0.016*		-0.025***	-0.015*
		(-2.783)	(-1.869)		(-2.785)	(-1.852)
EXP		0.104	0.299**		0.106	0.298**
		(0.744)	(2.129)		(0.759)	(2.127)
RDS		0.083**	0.012		0.083**	0.014
		(2.126)	(0.322)		(2.119)	(0.352)
HHI		-0.694	-0.388		-0.668	-0.363
		(-0.826)	(-0.469)		(-0.803)	(-0.442)
AGE		0.004**	0.002		0.005**	0.002
		(2.189)	(1.059)		(2.291)	(1.136)
VOL		-9.504***	-9.367***		-9.559***	-9.373***
		(-4.841)	(-4.815)		(-4.889)	(-4.832)
Constant	0.063**	-3.706***	-4.943***	0.209***	-3.719***	-4.929***
	(2.012)	(-6.439)	(-7.437)	(7.087)	(-6.771)	(-7.705)
adj. R-sq	0.012	0.257	0.293	0.011	0.260	0.295
N	34306	34306	33267	34306	34306	33267

Panel B: Subsample of Firms with LIDs

	(1)	(2)	(3)
FLID	1.027***	0.659***	0.518***

	(6.118)	(4.992)	(4.025)
DIR			0.016
			(1.039)
IND			0.028
			(0.440)
DIV			0.676***
			(12.663)
LNF			0.378***
			(7.488)
INS			-0.841***
			(-4.470)
ADV			4.128***
			(2.973)
LNA		0.528***	0.273***
		(15.958)	(7.104)
ROA		-2.735***	-1.049**
		(-5.503)	(-2.404)
LEV		-0.016	-0.004
		(-1.169)	(-0.320)
EXP		-0.069	0.223
		(-0.283)	(0.964)
RDS		0.173***	0.070
		(2.606)	(1.089)
HHI		-2.652	-2.158
		(-1.621)	(-1.360)
FAG		0.005**	0.003
		(2.058)	(1.323)
VOL		-11.962***	-10.718***
		(-3.508)	(-3.387)
_cons	0.437***	-4.413***	-5.867***
	(9.432)	(-4.738)	(-5.868)
adj. R-sq	0.015	0.299	0.342
N	14012	14012	13859

Table 4: Selection Bias Mitigation

Panel A (Panel B) of this table presents results of variation of the Heckman two-stage procedure - the Treatment Effects model. Columns (1), (3), and (5) report the first-stage selection equation estimates where the dependent variable equals LID, FLD, and FLD, respectively, and PLD and PFLD (PLD_{low} and $PFLD_{low}$) are used as exogenous explanatory factors. Columns (2), (4), and (6) report the second-stage equation estimates, where the dependent variable is CSR. Appendix B provides definitions of all variables. Z-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Heckman Two-Stage Procedure - Treatment Effect Model

	(1)	(2)	(3)	(4)	(5)	(6)
	Selection	Outcome	Selection	Outcome	Selection	Outcome
	LID	CSR	FLID	CSR	FLID	CSR
LID		1.106***				
		(6.695)				
FLID				3.417***		0.976**
				(10.208)		(2.013)
PLID	0.535***					
	(18.237)					
PFLID			0.423**		0.389*	
			(2.139)		(1.730)	
IMR		-0.640***		-1.302***		-0.233
		(-6.349)		(-8.555)		(-0.952)
DIR	0.037***	-0.007	-0.011	0.012**	-0.037***	0.018**
	(10.087)	(-1.368)	(-1.460)	(2.381)	(-3.987)	(2.127)
IND	0.014	0.042*	0.040	0.038	0.032	0.026
	(0.782)	(1.760)	(1.122)	(1.600)	(0.784)	(0.725)
DIV	0.072***	0.576***	0.457***	0.531***	0.498***	0.650***
	(5.058)	(29.112)	(14.226)	(25.784)	(13.303)	(15.645)
LNF	0.137***	0.214***	0.041	0.262***	-0.013	0.379***
	(10.641)	(11.359)	(1.506)	(15.555)	(-0.419)	(13.210)
INS	0.205***	-0.733***	-0.040	-0.630***	-0.176*	-0.829***
	(5.173)	(-13.671)	(-0.482)	(-12.066)	(-1.718)	(-9.036)
ADV	-0.254	2.585***	-1.240**	2.697***	-1.425**	4.204***
	(-0.816)	(6.237)	(-2.002)	(6.512)	(-1.977)	(6.313)
LNA	0.035***	0.207***	0.033**	0.209***	0.029*	0.270***
	(4.452)	(19.227)	(2.199)	(19.862)	(1.661)	(15.826)
ROA	-0.240*	-1.038***	-0.361	-1.062***	-0.246	-1.039***
	(-1.794)	(-5.817)	(-1.218)	(-5.970)	(-0.700)	(-3.516)
LEV	-0.006	-0.013**	-0.006	-0.014***	-0.006	-0.004
	(-1.602)	(-2.465)	(-0.743)	(-2.711)	(-0.651)	(-0.439)
EXP	0.044	0.280***	-0.014	0.288***	0.040	0.218*
	(0.733)	(3.554)	(-0.089)	(3.668)	(0.214)	(1.657)
RDS	-0.098***	0.052**	-0.112**	0.031	-0.073	0.074
	(-5.299)	(2.094)	(-2.434)	(1.292)	(-1.337)	(1.607)
HHI	-0.554	-0.270	-1.212	-0.208	-0.092	-2.134**
	(-1.393)	(-0.539)	(-1.325)	(-0.416)	(-0.081)	(-2.318)
AGE	0.005***	0.000	-0.001	0.002***	-0.004***	0.003***
	(10.502)	(0.274)	(-0.756)	(3.615)	(-3.366)	(3.331)
VOL	-1.885**	-8.640***	-1.976	-9.179***	-1.632	-10.661***
	(-2.062)	(-7.157)	(-1.010)	(-7.646)	(-0.720)	(-5.355)

Constant	-2.605***	-4.546***	-4.092***	-4.744***	-3.110***	-5.823***
	(-10.348)	(-14.089)	(-7.430)	(-14.976)	(-4.418)	(-9.394)
N	33267	33267	33267	33267	13859	13859

Panel B: Heckman Two-Stage Procedure - Treatment Effect Model: Alternative Instruments

	(1) Selection	(2) Outcome	(3) Selection	(4) Outcome	(5) Selection	(6) Outcome
	LID	CSR	FLID	CSR	FLID	CSR
LID		0.339*				
		(1.659)				
FLID				3.304***		0.825*
				(9.761)		(1.695)
$PLID_{low}$	0.295***					
	(12.132)					
$PFLID_{low}$			0.949**		0.820*	
			(2.218)		(1.713)	
IMR		-0.167		-1.250***		-0.156
		(-1.340)		(-8.117)		(-0.635)
DIR	0.040***	0.003	-0.011	0.011**	-0.037***	0.017**
	(10.953)	(0.626)	(-1.496)	(2.364)	(-4.018)	(2.039)
IND	0.013	0.047**	0.038	0.038	0.030	0.027
	(0.722)	(2.048)	(1.055)	(1.621)	(0.736)	(0.743)
DIV	0.079***	0.603***	0.455***	0.534***	0.496***	0.659***
	(5.555)	(30.713)	(14.173)	(25.931)	(13.273)	(15.840)
LNF	0.142***	0.252***	0.040	0.263***	-0.014	0.379***
	(11.066)	(13.088)	(1.476)	(15.611)	(-0.437)	(13.210)
INS	0.197***	-0.677***	-0.041	-0.631***	-0.176*	-0.833***
	(4.996)	(-12.843)	(-0.494)	(-12.113)	(-1.723)	(-9.089)
ADV	-0.210	2.502***	-1.221**	2.690***	-1.410*	4.179***
	(-0.677)	(6.246)	(-1.973)	(6.512)	(-1.958)	(6.282)
LNA	0.040***	0.218***	0.033**	0.210***	0.029	0.271***
	(5.051)	(20.656)	(2.197)	(19.956)	(1.643)	(15.895)
ROA	-0.236*	-1.094***	-0.367	-1.064***	-0.258	-1.042***
	(-1.767)	(-6.334)	(-1.240)	(-5.997)	(-0.734)	(-3.532)
LEV	-0.007*	-0.015***	-0.006	-0.014***	-0.006	-0.004
	(-1.745)	(-2.953)	(-0.768)	(-2.730)	(-0.664)	(-0.458)
EXP	0.037	0.294***	-0.010	0.289***	0.044	0.219*
	(0.617)	(3.860)	(-0.059)	(3.684)	(0.238)	(1.671)
RDS	-0.105***	0.023	-0.113**	0.030	-0.075	0.073
	(-5.649)	(0.936)	(-2.467)	(1.266)	(-1.371)	(1.576)
HHI	-0.487	-0.357	-1.230	-0.214	-0.123	-2.142**
	(-1.228)	(-0.738)	(-1.347)	(-0.430)	(-0.108)	(-2.329)
AGE	0.006***	0.002**	-0.001	0.002***	-0.004***	0.003***
	(11.272)	(2.245)	(-0.754)	(3.623)	(-3.354)	(3.260)
VOL	-2.069**	-9.177***	-2.093	-9.186***	-1.772	-10.679***
	(-2.266)	(-7.845)	(-1.070)	(-7.674)	(-0.781)	(-5.371)
Constant	-2.706***	-4.839***	-4.058***	-4.751***	-3.074***	-5.838***
	(-10.759)	(-15.337)	(-7.382)	(-15.041)	(-4.368)	(-9.428)
N	33267	33267	33267	33267	13859	13859

Table 5: Difference-in-Differences Analysis

Two events in 2004 (an increase in regulatory pressure from the NYSE and a substantial change in the vote recommendation policies of the ISS) are used as exogenous shocks. Treatment is a binary variable that equals 1 for firms with a combined CEO/chair role in 2003, and 0 for the control group of firms that had separate CEO and chair roles in 2003. Post is a binary variable that is 0 before 2004 and 1 after 2004. The DiD analysis is implemented using a PSM matched sample. Variables are defined in Appendix B. Model (1) has no controls, the others do; (2) has no fixed effects, (3) has year fixed effects, and (4) has year and industry fixed effects. Panel A reports results for the full sample (N = 7,285). Panels B and C present subsample results for firms listed on the NYSE and NASDAQ, respectively. T-statistics (in parentheses) are based on cluster-robust standard errors adjusted for heteroskedasticity. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Data are from 2000 to 2008.

Panel A: Full Sample				
	(1)	(2)	(3)	(4)
Treatment × Post	0.206**	0.212**	0.210**	0.151*
	(1.983)	(2.158)	(2.148)	(1.672)
Post	-0.316***	-0.293***	-1.390***	-0.955***
	(-4.263)	(-3.988)	(-5.524)	(-3.993)
Treatment	-0.190***	-0.198***	-0.199***	-0.252***
	(-2.953)	(-3.234)	(-3.299)	(-4.250)
DIR		-0.060***	-0.059***	-0.045***
		(-4.561)	(-4.510)	(-3.524)
IND		0.316***	0.369***	0.310***
		(4.197)	(4.789)	(4.263)
DIV		0.848***	0.829***	0.616***
		(18.655)	(18.447)	(14.146)
LNF		0.248***	0.210***	0.275***
		(7.570)	(6.323)	(7.475)
INS		-0.916***	-0.775***	-1.107***
		(-6.550)	(-5.440)	(-7.583)
ADV		10.032***	9.840***	9.750***
		(9.680)	(9.529)	(8.243)
LNA		0.061**	0.036	0.077**
		(2.207)	(1.267)	(2.568)
ROA		-1.775***	-2.090***	-0.589
		(-3.752)	(-4.399)	(-1.261)
LEV		-0.002	0.002	-0.001
		(-0.064)	(0.060)	(-0.041)
EXP		-0.587***	-0.585***	2.225***
		(-2.945)	(-2.897)	(7.104)
RDS		-0.110	-0.043	0.054
		(-0.970)	(-0.381)	(0.396)
HHI		-5.043***	-4.912***	-5.942***
		(-10.642)	(-10.360)	(-3.095)
AGE		-0.011***	-0.013***	-0.009***
		(-7.209)	(-8.212)	(-5.293)
VOL		-4.552**	-14.305***	-26.229***
		(-1.979)	(-4.962)	(-9.046)
Constant	0.006	-1.732***	0.071	0.997
	(0.127)	(-8.144)	(0.204)	(1.490)
adj. R-sq	0.0.003	0.114	0.124	0.248
Panel B: NYSE Firms				

	(1)	(2)	(3)	(4)
Treatment × Post	0.316**	0.345***	0.350***	0.259**
	(2.332)	(2.722)	(2.784)	(2.194)
Post	-0.440***	-0.381***	-1.675***	-1.200***
	(-5.131)	(-4.619)	(-5.398)	(-4.071)
Treatment	-0.291***	-0.376***	-0.390***	-0.300***
	(-3.467)	(-4.609)	(-4.875)	(-3.777)
DIR		-0.080***	-0.088***	-0.076***
		(-4.438)	(-4.931)	(-4.311)
IND		0.000	0.045	0.007
		(0.005)	(0.477)	(0.075)
DIV		0.856***	0.826***	0.598***
		(12.365)	(12.006)	(8.686)
LNF		0.109**	0.045	0.309***
		(2.567)	(1.035)	(6.127)
INS		-0.763***	-0.498**	-0.527**
		(-3.944)	(-2.522)	(-2.254)
ADV		14.909***	15.267***	12.887***
		(9.178)	(9.398)	(6.734)
LNA		0.043	0.021	-0.071*
		(1.231)	(0.582)	(-1.747)
ROA		-2.413***	-3.112***	0.254
		(-3.399)	(-4.315)	(0.357)
LEV		0.060*	0.060*	0.060*
		(1.813)	(1.873)	(1.720)
EXP		-0.222	-0.125	3.427***
		(-0.980)	(-0.539)	(8.224)
RDS		8.741***	9.356***	9.006***
		(8.892)	(9.594)	(7.192)
HHI		-2.791***	-2.550***	-0.764
		(-5.386)	(-4.961)	(-0.447)
AGE		-0.013***	-0.015***	-0.005**
		(-8.011)	(-9.285)	(-2.454)
VOL		-12.042***	-36.269***	-31.507***
		(-4.021)	(-9.007)	(-6.879)
Constant	0.008	-1.232***	0.887**	-0.608
	(0.156)	(-4.106)	(1.994)	(-0.658)
adj. R-sq	0.0.006	0.126	0.146	0.256

Panel C: NASDAQ Firms

	(1)	(2)	(3)	(4)
Treatment × Post	0.252**	0.331***	0.324***	0.236**
	(1.964)	(2.728)	(2.664)	(2.157)
Post	-0.228**	-0.374***	-0.767	-0.850
	(-2.574)	(-4.282)	(-0.783)	(-1.449)
Treatment	-0.271***	-0.281***	-0.280***	-0.247***
	(-3.375)	(-3.635)	(-3.622)	(-3.240)
DIR		0.036**	0.036**	0.010
		(2.330)	(2.296)	(0.646)
IND		0.335***	0.345***	0.392***

		(3.506)	(3.552)	(4.085)
DIV		0.651***	0.649***	0.583***
		(12.192)	(12.206)	(10.723)
LNF		0.162***	0.168***	0.147***
		(3.411)	(3.521)	(2.939)
INS		-0.445***	-0.446***	-0.654***
		(-2.963)	(-2.956)	(-4.184)
ADV		-1.074	-1.010	1.773*
		(-1.182)	(-1.117)	(1.901)
LNA		0.040	0.021	0.148***
		(0.919)	(0.472)	(3.467)
ROA		-1.875***	-1.880***	-1.483***
		(-3.885)	(-3.858)	(-2.657)
LEV		0.042	0.046	-0.058*
		(1.002)	(1.087)	(-1.738)
EXP		-0.669***	-0.643***	0.260
		(-2.954)	(-2.831)	(0.981)
RDS		-0.096***	-0.092***	-0.066*
		(-2.998)	(-2.875)	(-1.915)
HHI		-2.608***	-2.741***	-1.164
		(-4.286)	(-4.545)	(-0.442)
AGE		-0.002	-0.002	0.001
		(-0.445)	(-0.585)	(0.342)
VOL		-1.008	-5.452	-13.799***
		(-0.321)	(-1.343)	(-3.577)
Constant	0.095*	-2.048***	-1.297	-1.261
	(1.836)	(-7.241)	(-1.224)	(-1.260)
adj. R-sq	0.0.003	0.108	0.109	0.291

Table 6: Entropy Balancing

This table presents results of the regression weighted by the Entropy Balancing estimator of CSR on LID (FLD), a binary variable that equals 1 for firms with a LID (female LID) and 0 otherwise, and other controls. Models in Panel A are estimated using the full sample of firms, with and without LIDs. Models in Panel B are estimated using the sub-sample of firms with LIDs. Appendix B provides definitions of all variables. All models include industry and year fixed effects. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.131***	0.129***	0.126**			
	(2.589)	(2.618)	(2.546)			
FLD				0.651***	0.467***	0.467***
				(5.903)	(4.291)	(4.450)
CEO_{FEM}			0.337**			0.965***
			(2.524)			(5.226)
TEN_{AV}			-0.030			0.031
			(-1.567)			(0.833)
AGE_{AV}			-0.004			-0.047**
			(-0.300)			(-2.416)
NUM_{AV}			-0.245			-1.122**
			(-1.153)			(-2.407)
LOC_{AV}			0.108			0.587
			(0.405)			(1.274)
QLF_{AV}			-0.183*			-0.021
			(-1.742)			(-0.122)
DIR		-0.014	-0.012		0.022	0.033
		(-1.169)	(-0.939)		(0.972)	(1.483)
IND		0.038	0.033		-0.032	0.014
		(0.760)	(0.650)		(-0.272)	(0.122)
DIV		0.279***	0.303***		0.595***	0.600***
		(5.239)	(5.347)		(5.766)	(5.591)
LNF		0.105**	0.102**		0.431***	0.373***
		(2.318)	(2.267)		(4.461)	(3.928)
INS		0.018	0.024		-0.669*	-0.643*
		(0.120)	(0.161)		(-1.855)	(-1.827)
ADV		1.678	1.570		5.706**	5.227**
		(1.239)	(1.188)		(2.504)	(2.366)
LNA	0.511***	-0.020	-0.026	0.504***	0.274***	0.254***
	(17.030)	(-0.356)	(-0.459)	(9.293)	(4.138)	(4.079)
ROA	-2.422***	0.162	0.182	-2.509***	-0.782	-0.378
	(-6.525)	(0.515)	(0.576)	(-2.958)	(-0.846)	(-0.419)
LEV	-0.015	0.005	0.005	-0.024	-0.023	-0.022
	(-1.484)	(0.635)	(0.604)	(-0.914)	(-0.878)	(-0.832)
EXP	0.007	0.705***	0.678***	-0.350	-0.380	-0.406
	(0.038)	(3.374)	(3.233)	(-0.805)	(-0.813)	(-0.954)
RDS	0.177***	-0.104**	-0.101**	0.363***	0.255**	0.334***
	(3.405)	(-2.104)	(-2.034)	(4.072)	(2.451)	(3.016)
HHI	-2.161*	0.000	0.000	-5.346*	-4.893	-5.053*
	(-1.678)	(.)	(.)	(-1.753)	(-1.615)	(-1.688)
AGE	0.005*	0.021	0.026	0.013***	0.010**	0.009**
	(1.959)	(0.344)	(0.425)	(3.350)	(2.409)	(2.151)

VOL	-8.572***	-4.788**	-5.060**	-17.105***	-14.399***	-13.119***
	(-3.388)	(-2.334)	(-2.469)	(-3.675)	(-3.076)	(-2.847)
Constant	-3.308***	-0.964	-0.643	-4.113***	-5.828***	-4.251***
	(-3.892)	(-0.608)	(-0.381)	(-3.473)	(-5.055)	(-2.757)
adj. R-sq	0.299	0.650	0.651	0.364	0.380	0.395
N	31835	30376	30376	31835	31107	31107

Panel B: Subsample of Firms with LIDs

	(1)	(2)	(3)
FLD	0.621***	0.438***	0.438***
	(5.447)	(3.849)	(3.991)
CEO_{FEM}			0.956***
			(4.837)
TEN_{AV}			0.014
			(0.338)
AGE_{AV}			-0.039*
			(-1.850)
NUM_{AV}			-1.239**
			(-2.464)
LOC_{AV}			0.901*
			(1.800)
QLF_{AV}			0.034
			(0.173)
DIR		0.015	0.023
		(0.578)	(0.884)
IND		-0.079	-0.028
		(-0.644)	(-0.234)
DIV		0.671***	0.709***
		(6.272)	(6.171)
LNF		0.458***	0.408***
		(4.511)	(4.033)
INS		-0.666	-0.673*
		(-1.638)	(-1.712)
ADV		5.473**	4.945**
		(2.209)	(2.082)
LNA	0.505***	0.257***	0.239***
	(8.786)	(3.561)	(3.574)
ROA	-3.110***	-1.024	-0.546
	(-3.348)	(-0.986)	(-0.541)
LEV	-0.023	-0.015	-0.015
	(-0.802)	(-0.566)	(-0.544)
EXP	-0.093	-0.294	-0.384
	(-0.208)	(-0.577)	(-0.792)
RDS	0.302***	0.202*	0.296**
	(3.232)	(1.793)	(2.464)
HHI	-8.257**	-7.948**	-8.302**
	(-2.301)	(-2.089)	(-2.250)
AGE	0.014***	0.012***	0.011***
	(3.410)	(2.750)	(2.586)
VOL	-18.161***	-14.929***	-14.828***
	(-3.731)	(-2.905)	(-2.905)

Constant	-4.630***	-5.894***	-5.062***
	(-3.888)	(-4.585)	(-3.051)
adj. R-sq	0.359	0.383	0.398
N	13295	13174	13174

Table 7: CSR and LID Characteristic

This table presents results of the regression of CSR on FLD, a binary variable that equals 1 for firms with a female LID and 0 otherwise, along with LID characteristics and other controls. The sample only includes firms with LIDs. Appendix B provides definitions of all variables. All models include industry and year fixed effects. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively

	(1)	(2)	(3)	(4)	(5)
FLID	0.515***	0.510***	0.513***	0.514***	0.517***
	(3.958)	(3.891)	(3.894)	(3.899)	(3.918)
TEN_{DIR}	-0.006	-0.005	-0.006	-0.006	-0.006
	(-0.668)	(-0.585)	(-0.612)	(-0.626)	(-0.608)
AGE_{DIR}		-0.002	-0.002	-0.002	-0.002
		(-0.388)	(-0.441)	(-0.479)	(-0.415)
NUM_{DIR}			-0.015	-0.016	-0.018
			(-0.558)	(-0.581)	(-0.685)
LOC_{DIR}				0.052	0.046
				(0.844)	(0.738)
QLF_{DIR}					0.036
					(1.482)
DIR	0.015	0.016	0.016	0.015	0.015
	(1.017)	(1.031)	(1.021)	(0.993)	(0.973)
IND	0.024	0.024	0.025	0.025	0.023
	(0.382)	(0.375)	(0.393)	(0.401)	(0.368)
DIV	0.679***	0.679***	0.684***	0.683***	0.671***
	(12.703)	(12.691)	(12.661)	(12.616)	(12.301)
LNF	0.378***	0.377***	0.377***	0.375***	0.375***
	(7.483)	(7.433)	(7.437)	(7.417)	(7.433)
INS	-0.842***	-0.841***	-0.842***	-0.842***	-0.834***
	(-4.471)	(-4.467)	(-4.472)	(-4.473)	(-4.438)
ADV	4.127***	4.116***	4.118***	4.146***	4.095***
	(2.963)	(2.954)	(2.958)	(2.977)	(2.973)
LNA	0.273***	0.273***	0.275***	0.274***	0.273***
	(7.088)	(7.081)	(7.086)	(7.042)	(7.029)
ROA	-1.047**	-1.047**	-1.057**	-1.067**	-1.045**
	(-2.399)	(-2.398)	(-2.421)	(-2.451)	(-2.401)
LEV	-0.004	-0.004	-0.004	-0.004	-0.004
	(-0.334)	(-0.341)	(-0.347)	(-0.346)	(-0.342)
EXP	0.221	0.220	0.218	0.214	0.221
	(0.960)	(0.955)	(0.946)	(0.933)	(0.969)
RDS	0.070	0.070	0.071	0.073	0.073
	(1.086)	(1.087)	(1.106)	(1.126)	(1.131)
HHI	-2.150	-2.159	-2.126	-2.148	-2.236
	(-1.349)	(-1.353)	(-1.333)	(-1.344)	(-1.401)
AGE	0.003	0.003	0.003	0.003	0.003
	(1.335)	(1.357)	(1.334)	(1.305)	(1.299)
VOL	-10.856***	-10.952***	-10.883***	-10.917***	-10.941***
	(-3.446)	(-3.448)	(-3.428)	(-3.442)	(-3.453)
Constant	-5.838***	-5.757***	-5.764***	-5.747***	-5.745***
	(-5.876)	(-5.645)	(-5.629)	(-5.555)	(-5.531)
adj. R-sq	0.342	0.342	0.342	0.342	0.342

N	13859	13857	13857	13857	13857

Table 8: LIDs and CEO Characteristics

This table presents results of regressions of CSR on LID, a binary variable equal to one for firms with a lead independent director (LID) and zero otherwise, interactions between LID and CEO characteristics, and other controls. All models include industry and year fixed effects. Appendix B provides definitions of all variables. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
LID	0.778**	0.736*	0.740*	0.971**
	(2.280)	(1.894)	(1.907)	(2.020)
LID × CEO_{POWER}	0.063**	0.077***	0.077***	0.085***
	(2.546)	(2.791)	(2.792)	(2.734)
LID × CEO_{AGE}	-0.018***	-0.019***	-0.019***	-0.024***
	(-2.928)	(-2.755)	(-2.786)	(-2.986)
LID × CEO_{FEM}	0.194	0.112	0.111	0.322
	(0.855)	(0.427)	(0.424)	(1.119)
LID × CEO_{VEGA}		0.001***	0.001***	0.001***
		(3.359)	(3.565)	(3.217)
LID × CEO_{DELTA}			0.0001	-0.0001
			(0.176)	(-0.152)
LID × EIN				-0.011
				(-0.194)
CEO_{POWER}	-0.051***	-0.064***	-0.065***	-0.066***
	(-2.943)	(-3.270)	(-3.297)	(-2.900)
CEO_{AGE}	0.005	0.007	0.007	0.010
	(1.093)	(1.247)	(1.260)	(1.470)
CEO_{FEM}	0.563***	0.598***	0.600***	0.398**
	(3.440)	(3.268)	(3.277)	(2.084)
CEO_{VEGA}		0.0001	0.0001	0.0001
		(1.275)	(0.781)	(0.834)
CEO_{DELTA}			0.0001**	0.0001
			(2.033)	(1.502)
EIN				0.026
				(0.573)
DIR	0.031**	0.048***	0.049***	0.046***
	(2.497)	(3.464)	(3.525)	(2.925)
IND	0.061	0.046	0.047	0.087
	(1.042)	(0.736)	(0.756)	(1.212)
DIV	0.565***	0.561***	0.562***	0.571***
	(11.949)	(10.873)	(10.878)	(9.432)
LNF	0.368***	0.385***	0.385***	0.427***
	(8.128)	(7.797)	(7.782)	(7.317)
INS	-0.509***	-0.403**	-0.391**	-0.553**
	(-3.270)	(-2.325)	(-2.259)	(-2.438)
ADV	2.645**	2.806**	2.808**	4.027***
	(2.196)	(2.166)	(2.182)	(2.815)
LNA	0.295***	0.264***	0.262***	0.298***
	(8.579)	(7.069)	(7.147)	(7.198)
ROA	-1.125***	-1.397***	-1.379***	-1.026*
	(-2.735)	(-3.139)	(-3.108)	(-1.916)
LEV	-0.012	-0.002	-0.002	-0.000
	(-1.138)	(-0.176)	(-0.152)	(-0.006)

EXP	0.098	0.357	0.361	0.246
	(0.390)	(1.168)	(1.179)	(0.652)
RDS	0.111	-0.019	-0.020	0.300
	(1.431)	(-0.164)	(-0.169)	(1.366)
HHI	-1.799	-1.935	-1.981	-2.894*
	(-1.412)	(-1.394)	(-1.427)	(-1.696)
AGE	0.007***	0.005**	0.005**	0.004*
	(3.427)	(2.103)	(2.119)	(1.770)
VOL	-9.004***	-7.970***	-7.989***	-9.499***
	(-3.412)	(-2.782)	(-2.794)	(-2.743)
Constant	-5.963***	-6.321***	-6.334***	-7.797***
	(-8.466)	(-7.116)	(-7.144)	(-7.527)
Adj. R-sq	0.340	0.338	0.338	0.349
N	17,275	14,250	14,250	11,058

Table 9: Channels of Influence

This table presents results of the regression of EQC and COV on LID (FLD), a binary variable that equals 1 for firms with a LID (female LID) and 0 otherwise, and other controls. Columns (1)–(3) and (4)–(6) report results for EQC and COV, respectively. Columns (1)–(2) and (4)–(5) use the full sample, while Columns (3) and (6) restrict the sample to firms with LIDs. Appendix B provides definitions of all variables. All models include industry and year fixed effects. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
LID	-0.182*			-0.059*		
	(-1.651)			(-1.654)		
FLD		-0.566**	-0.533**		-0.127*	-0.106
		(-2.373)	(-2.162)		(-1.791)	(-1.616)
DIR	-0.017	-0.020	-0.004	0.008	0.006	0.008
	(-0.671)	(-0.798)	(-0.106)	(0.913)	(0.790)	(0.707)
IND	0.063	0.064	0.057	-0.012	-0.013	-0.054
	(0.515)	(0.521)	(0.366)	(-0.345)	(-0.356)	(-1.219)
DIV	0.405***	0.412***	0.343**	-0.003	0.003	0.000
	(3.806)	(3.870)	(2.194)	(-0.080)	(0.099)	(0.005)
LNF	-0.426***	-0.434***	-0.529***	0.093***	0.088**	0.105**
	(-4.611)	(-4.698)	(-3.657)	(2.680)	(2.548)	(2.112)
INS	1.400***	1.382***	1.019**	0.018	0.014	-0.038
	(4.465)	(4.411)	(2.105)	(0.158)	(0.124)	(-0.238)
ADV	-4.921*	-4.937*	-7.198**	-1.344**	-1.363**	-1.965**
	(-1.859)	(-1.868)	(-2.130)	(-2.043)	(-2.063)	(-2.278)
LNA	0.638***	0.637***	0.724***	0.186***	0.186***	0.170***
	(10.673)	(10.680)	(8.058)	(10.011)	(9.938)	(6.761)
ROA	4.791***	4.797***	5.987***	1.098***	1.120***	1.237***
	(4.819)	(4.821)	(4.068)	(3.869)	(3.919)	(3.243)
LEV	-0.010	-0.010	-0.001	0.018***	0.017***	0.031***
	(-0.389)	(-0.382)	(-0.036)	(2.832)	(2.809)	(3.579)
EXP	-0.006	-0.008	-0.308	0.013	0.002	0.064
	(-0.011)	(-0.015)	(-0.367)	(0.117)	(0.022)	(0.356)
RDS	-0.610***	-0.607***	-0.524	-0.103***	-0.099***	-0.128***
	(-2.893)	(-2.878)	(-1.544)	(-3.731)	(-3.652)	(-3.315)
HHI	-9.600***	-9.619***	-9.371**	0.123	0.079	0.842
	(-3.773)	(-3.775)	(-2.143)	(0.194)	(0.123)	(0.987)
AGE	0.009***	0.009***	0.007*	-0.001	-0.002*	-0.001
	(2.751)	(2.658)	(1.651)	(-1.619)	(-1.794)	(-0.931)
VOL	75.422***	75.513***	79.063***	-3.276*	-3.259*	1.046
	(10.608)	(10.624)	(7.141)	(-1.715)	(-1.702)	(0.367)
Constant	3.154***	3.189***	5.169***	0.178	0.164	0.100
	(2.693)	(2.715)	(2.790)	(0.605)	(0.563)	(0.228)
adj. R-sq	0.084	0.084	0.113	0.321	0.321	0.323
N	33069	33069	13806	2958	2958	1552

Table 10: Performance Implications

This table presents results of the regression of ROA_3 (ROA_5), the average return on assets, estimated over the 3-period (5-year period) after t, on LID (FLD), a binary variable that equals 1 for firms with a LID (female LID), and 0 otherwise, and other controls. Columns (1)–(4) are estimated using the full sample. Columns (5)–(6) are estimated using the sub-sample of firms with LIDs. Appendix B provides definitions of all variables. All models include industry and year fixed effects. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively

Panel A: 3-year Average Return on Assets

	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.010***	0.005***				
	(4.163)	(2.583)				
FLID			0.014***	0.007*	0.008*	0.006*
			(3.285)	(1.960)	(1.953)	(1.782)
DIR		0.002***		0.002***		0.002***
		(3.491)		(3.715)		(3.159)
IND		-0.003		-0.003		-0.001
		(-1.081)		(-1.076)		(-0.328)
DIV		0.001		0.002		-0.003
		(0.630)		(0.665)		(-1.133)
LNF		-0.005***		-0.004**		-0.004**
		(-2.594)		(-2.426)		(-2.263)
INS		0.040***		0.041***		0.047***
		(7.034)		(7.123)		(5.783)
KZI		0.000***		0.000***		0.000***
		(3.403)		(3.409)		(3.151)
SLS		0.001***		0.001***		0.000***
		(5.924)		(5.998)		(5.139)
TBQ		-0.01***		-0.01***		-0.01***
		(-14.211)		(-14.214)		(-9.738)
Constant	0.078***	0.088***	0.081***	0.087***	0.087***	0.199**
	(36.407)	(4.223)	(53.297)	(4.044)	(56.136)	(2.480)
adj. R-sq	0.001	0.078	0.000	0.078	0.001	0.166
N	25370	24651	25370	24651	10352	10256

Panel B: 5-year Average Return on Assets

	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.010***	0.007***				
	(3.612)	(2.808)				
FLID			0.016***	0.008*	0.011**	0.006
			(3.483)	(1.843)	(2.258)	(1.636)
DIR		0.002***		0.002***		0.002***
		(3.100)		(3.244)		(3.138)
IND		-0.003		-0.003		-0.003
		(-1.197)		(-1.158)		(-1.117)
DIV		0.003		0.003		-0.001
		(1.011)		(1.058)		(-0.494)
LNF		-0.005***		-0.004**		-0.003
		(-2.633)		(-2.431)		(-1.326)

INS		0.037***		0.037***		0.049***
		(6.124)		(6.205)		(5.889)
KZI		0.000**		0.000**		0.000***
		(2.225)		(2.237)		(3.276)
SLS		0.001***		0.001***		0.000***
		(5.109)		(5.176)		(4.157)
TBQ		-0.01***		-0.01***		-0.01***
		(-12.566)		(-12.560)		(-8.650)
Constant	0.080***	0.075***	0.083***	0.074***	0.089***	0.181**
	(30.643)	(3.276)	(46.474)	(3.067)	(55.394)	(2.424)
adj. R-sq	0.001	0.063	0.000	0.063	0.002	0.198
N	19817	19324	19817	19324	7915	7852

Appendix A: CSR Dimensions

Dimension	Strength Attributes	Concern Attributes
Community	Charitable giving, innovative giving, non-US charitable giving, support for housing, support for education, indigenous people relations, and volunteer programs, community engagement, and other strengths.	Investment controversies, negative economic impact, tax disputes, and other concerns.
Diversity	CEO is a woman or a member of a minority group, promotion policies, board of directors, work/life benefits, women and minority contracting, employment for the disabled, gay and lesbian policies, employment of underrepresented groups, diversity, and other strengths.	Controversies, non-representation, board diversity, board of directors - minorities, and other concerns.
Employee Relations	Union relations, no-layoff policy, cash profit sharing, employee involvement, retirement benefits, and health and safety, compensation and benefits, employee relations, professional development, human capital management, and other strengths.	Union relations, health and safety, workforce relations, and retirement benefits concerns, supply chain policies, program & initiatives, supply chain controversies, child labor, and other concerns.
Environment	Beneficial products and services, pollution prevention, recycling, clean energy, communications, property, plant and equipment, management systems, water stress, biodiversity & land use, raw material sourcing, and other strengths.	Hazardous waste, regulatory problems, ozone depleting chemicals, substantial emissions, agricultural chemicals, climate change, negative impact of products and services, land use & biodiversity, non-carbon releases, supply chain management, water management, and other concerns.
Human Rights	Positive record in South Africa, indigenous people relations, labor rights, and other strengths.	South Africa, Northern Ireland, Burma, Mexico, labor rights, indigenous people relations, operations in Sudan, freedom of expression & censorship, human rights violations, and other concerns.
Product	Quality, R&D / innovation, and benefits to economically dis-advantaged, access to capital, and other strengths.	Product safety, marketing / contracting, and antitrust, customer relations, and other concerns.

Appendix B: Variable Definitions

Panel A: Dependent Variables and LID Variable

Variable	Definition	Source
CSR	CSR performance measured as the aggregate KLD strengths-minus-concerns score across all dimensions, excluding governance.	MSCI ESG KLD
CSR_{ALT}	Alternative measure of CSR performance, estimated following the method of Lins et al. (2017).	MSCI ESG KLD
CSR_{ADJ}	Industry-adjusted CSR score, calculated by subtracting the average CSR of each industry from a firm's CSR score, year by year.	MSCI ESG KLD
CSR_{OPE}	The aggregate KLD strengths-minus-concerns score across Diversity, Employee Relations, and Environment.	MSCI ESG KLD
CSR_{REL}	The aggregate KLD strengths-minus-concerns score across Community, Human Rights, and Product.	MSCI ESG KLD
EQC	The cost of equity, estimated following Appendix E.	CRSP
COV	The natural log of the number of covenants that restrict financing, investment, and payout activities.	Mergent, FISD
ROA	The average return on assets (earnings before interest, taxes, depreciation, and amortization divided by the sum of market value of equity and total debt), estimated over the following 3-year period.	Compustat, CRSP
ROA_3 (ROA_5)	The average ROA (EBITDA divided by the sum of market value of equity and total debt), estimated over the 3-year (5-year) period) after t.	Compustat, CRSP
LID	a binary variable that equals one for firms with a lead independent director and zero otherwise.	BoardEx
FLD	a binary variable that equals one for firms with a female lead independent director and zero otherwise.	BoardEx

Panel B: Firm Characteristics

Variable	Definition	Source
LNA	The natural logarithm of total assets.	Compustat
ADV	The advertising expense divided by net sales.	Compustat
ROA	The EBITDA divided by the sum of market value of equity and total debt.	Compustat
LEV	Total debt divided by the book value of equity.	Compustat
EXP	The capital expenditures divided by sales.	Compustat
RDS	The research and development expenditures divided by sales.	Compustat
HHI	The Herfindhal-Hirschman index, a proxy for a market concentration, from Harjoto et al. (2015).	Compustat
AGE	The number of years since the firm was first listed in the CRSP database.	CRSP
VOL	The standard deviation of daily stock returns over a one-year period.	Compustat
EQT	The change in book equity, plus the change in deferred taxes, minus the change in retained earnings, all scaled by lagged assets.	Compustat
KZI	The Kaplan and Zingales index is constructed following Lamont et al. (2001).	Compustat
SLS	The total sales revenue in billions.	Compustat

TBQ	The market value of equity minus the book value of equity plus the book value of assets, all divided by the book value of total assets.	Compustat, CSRP

Panel C: Board Characteristics and Governance

Variable	Definition	Source
DIR	The number of directors on the company's board.	BoardEx
IND	The binary variable indicating whether the board consists of at least 75% independent directors.	BoardEx
DIV	The board diversity index from Harjoto et al. (2015).	BoardEx
LNF	The natural log of the number of analysts following the firm.	IBES
INS	Institutional ownership divided by the total shares outstanding.	TR13F
EIN	The Bebchuk et al. (2009) entrenchment index.	ISS (Riskmetrics)
TEN_{AVE}	The average director tenure.	BoardEx
AGE_{AVE}	The average director age.	BoardEx
NUM_{AVE}	The average number of outside directorships.	BoardEx
LOC_{AVE}	The proportion of directors on the board who are U.S. nationals.	BoardEx

Panel C: CEO Characteristics

Variable	Definition	Source
CEO_{POWER}	CEO Power Index from Lisic et al. (2016). CEO power is measured along four dimensions: structural, ownership, expert, and prestige. Structural power is captured by CEO–chair duality and relative compensation (CEO total compensation relative to the highest-paid non-CEO executive in ExecuComp). Ownership power is proxied by beneficial ownership and founder status. Expert power reflects firm-specific knowledge and experience, measured by CEO tenure, the number of executive positions held prior to becoming CEO, and cumulative years in those roles. Prestige power captures social capital and prominence, measured by corporate and non-profit board memberships and an indicator of elite educational background. Each proxy is converted into a dichotomous variable based on industry-year medians and aggregated to form a composite index, with higher values indicating greater CEO power.	BoardEx, ExecuComp
CEO_{AGE}	The CEO's age in years at the end of the fiscal year.	BoardEx
CEO_{FEM}	The binary variable equals one if the CEO is female and zero otherwise.	BoardEx
CEO_{VEGA}	Sensitivity of the CEO's wealth to stock return volatility, estimated following Coles et al. (2006).	ExecuComp, Lalitha Naveen's website
CEO_{DELTA}	Sensitivity of the CEO's wealth to changes in the firm's stock price, estimated following Coles et al. (2006).	ExecuComp, Lalitha Naveen's website

Panel D: LID Characteristics

Variable	Definition	Source
TEN_{DIR}	The LID tenure.	BoardEx
AGE_{DIR}	The LID age.	BoardEx
NUM_{DIR}	The number of outside directorships.	BoardEx
LOC_{DIR}	The binary variable that equals one for the LIDs who are the U.S. nationals and zero otherwise.	BoardEx

QLF_{DIR}	The LID qualification index is calculated by summing indicator variables for the following qualifications: having an academic degree from an "elite" college (QS ranking), having a Ph.D., having a Master's degree, having legal experience, having finance experience, having political experience, and having military experience.	BoardEx

Panel E: Exogenous Factors (Instruments)

Variable	Definition	Source
PLD	The proportion of firms with a LID among all firms in which the firm's directors also serve as directors.	BoardEx
FPLD	The proportion of firms with a female LID among all firms in which the firm's male directors also serve as directors.	BoardEx
PLD_{low}	The fraction of firms with a LID and below average CSR among all other firms in which the firm's directors also serve as directors.	BoardEx, ISS MSCI ESG KLD
$FPLD_{low}$	The proportion of firms with a female lead director and below average CSR among all other firms in which the firm's male directors also serve as directors.	BoardEx, ISS MSCI ESG KLD

Appendix C: Additional Controls and Fixed Effects

This table presents results results of the regression of CSR on LID (FLD), a binary variable that equals 1 for firms with a LID (female LID) and 0 otherwise, and other controls. Models in Panel A are estimated using the full sample of firms. Models in Panel B, Columns (1) – (3) and (4) – (6) are estimated using the full sample and sub-sample of firms with LIDs, respectively. Models in Panels C and D, Columns (1) – (2) and (3) – (4) are estimated using the full sample and sub-sample of firms with LIDs respectively. Models in Panel A, Columns (4) – (6) include firm, year, industry-year, and state-year fixed effects. All other models include year, industry, and state fixed effects. Appendix B defines all variables. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: LIDs						
	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.139***	0.077*	0.079**	0.083*	0.089**	0.086*
	(3.304)	(1.945)	(2.014)	(1.876)	(1.991)	(1.944)
CEO_{FEM}			0.809***			0.411***
			(8.224)			(3.211)
TEN_{AVE}			-0.034***			-0.038**
			(-2.585)			(-2.289)
AGE_{AVE}			-0.019***			0.009
			(-2.586)			(0.846)
NUM_{AVE}			-0.851***			-0.093
			(-6.475)			(-0.539)
LOC_{AVE}			-0.030			0.073
			(-0.211)			(0.348)
QLF_{AVE}			-0.084			-0.137
			(-1.207)			(-1.502)
DIR		0.011	0.019*		-0.003	-0.005
		(1.044)	(1.824)		(-0.320)	(-0.453)
IND		0.068	0.041		0.069	0.059
		(1.495)	(0.889)		(1.631)	(1.367)
DIV		0.603***	0.638***		0.273***	0.290***
		(16.295)	(16.224)		(6.098)	(6.133)
LNF		0.279***	0.231***		0.097***	0.101***
		(8.498)	(7.250)		(2.709)	(2.836)
INS		-0.580***	-0.541***		-0.076	-0.068
		(-4.999)	(-4.777)		(-0.642)	(-0.578)
ADV		2.896***	2.324**		0.229	0.243
		(2.875)	(2.430)		(0.196)	(0.210)
LNA	0.423***	0.225***	0.199***	0.031	-0.024	-0.020
	(16.501)	(7.832)	(7.359)	(0.664)	(-0.486)	(-0.403)
ROA	-2.195***	-1.027***	-0.930***	0.048	0.148	0.153
	(-7.034)	(-3.505)	(-3.175)	(0.181)	(0.549)	(0.569)
LEV	-0.023***	-0.016*	-0.014*	0.007	0.007	0.007
	(-2.623)	(-1.930)	(-1.694)	(1.141)	(1.169)	(1.108)
EXP	0.101	0.280*	0.244*	0.411***	0.400***	0.381***
	(0.666)	(1.893)	(1.690)	(3.076)	(2.915)	(2.807)
RDS	0.086**	0.023	0.046	-0.090**	-0.090**	-0.085**
	(2.088)	(0.582)	(1.164)	(-2.401)	(-2.375)	(-2.258)

HHI	-0.145	0.023	-0.171	0.000	0.000	0.000
	(-0.168)	(0.027)	(-0.202)	(0.000)	(0.000)	(0.000)
AGE	0.004*	0.002	0.003	-0.028	-0.047	-0.039
	(1.827)	(0.740)	(1.061)	(-0.447)	(-0.733)	(-0.600)
VOL	-8.230***	-8.376***	-10.164***	-6.963***	-6.107***	-6.299***
	(-4.048)	(-4.177)	(-5.074)	(-4.024)	(-3.473)	(-3.589)
Constant	-3.515***	-4.771***	-3.274***	0.734	0.487	0.012
	(-5.208)	(-5.926)	(-3.576)	(0.516)	(0.338)	(0.008)
adj. R-sq	0.264	0.302	0.314	0.615	0.617	0.618
N	31835	31107	31107	31105	30376	30376

Panel B: Female LIDs

	(1)	(2)	(3)	(4)	(5)	(6)
FLD	0.724***	0.571***	0.527***	0.624***	0.474***	0.408***
	(5.297)	(4.236)	(4.028)	(4.564)	(3.554)	(3.148)
CEO_{FEM}			0.807***			0.814***
			(8.215)			(5.626)
TEN_{AVE}			-0.033***			-0.045**
			(-2.579)			(-2.234)
AGE_{AVE}			-0.018**			-0.034***
			(-2.465)			(-3.054)
NUM_{AVE}			-0.843***			-0.980***
			(-6.458)			(-4.919)
LOC_{AVE}			-0.028			0.319
			(-0.196)			(1.276)
QLF_{AVE}			-0.076			-0.092
			(-1.097)			(-0.835)
DIR		0.012	0.020*		0.028*	0.038**
		(1.193)	(1.937)		(1.828)	(2.386)
IND		0.067	0.041		0.027	-0.005
		(1.488)	(0.896)		(0.405)	(-0.072)
DIV		0.591***	0.627***		0.670***	0.720***
		(16.029)	(15.958)		(12.149)	(12.065)
LNF		0.282***	0.235***		0.397***	0.321***
		(8.661)	(7.442)		(7.687)	(6.268)
INS		-0.569***	-0.531***		-0.846***	-0.813***
		(-4.939)	(-4.720)		(-4.281)	(-4.174)
ADV		2.930***	2.371**		4.171***	3.328**
		(2.938)	(2.500)		(3.032)	(2.560)
LNA	0.424***	0.224***	0.200***	0.541***	0.274***	0.241***
	(16.885)	(7.899)	(7.443)	(15.483)	(6.823)	(6.250)
ROA	-2.199***	-1.024***	-0.932***	-2.675***	-0.910**	-0.642
	(-7.122)	(-3.516)	(-3.202)	(-5.297)	(-2.081)	(-1.468)
LEV	-0.023***	-0.016*	-0.013*	-0.013	-0.002	-0.002
	(-2.627)	(-1.909)	(-1.688)	(-0.925)	(-0.181)	(-0.189)
EXP	0.102	0.280*	0.244*	-0.043	0.238	0.112
	(0.677)	(1.893)	(1.691)	(-0.171)	(0.992)	(0.474)
RDS	0.085**	0.024	0.046	0.177***	0.080	0.111*
	(2.056)	(0.595)	(1.160)	(2.606)	(1.231)	(1.739)
HHI	-0.128	0.047	-0.147	-2.442	-1.950	-1.999
	(-0.150)	(0.056)	(-0.175)	(-1.466)	(-1.216)	(-1.229)

AGE	0.004*	0.002	0.003	0.005*	0.003	0.004
	(1.915)	(0.811)	(1.118)	(1.818)	(1.148)	(1.547)
VOL	-8.251***	-8.351***	-10.104***	-11.648***	-10.335***	-12.856***
	(-4.075)	(-4.177)	(-5.059)	(-3.324)	(-3.201)	(-3.973)
Constant	-3.495***	-4.723***	-3.298***	-5.015***	-6.468***	-4.546***
	(-5.419)	(-6.032)	(-3.696)	(-7.185)	(-9.344)	(-5.152)
adj. R-sq	0.266	0.304	0.316	0.314	0.357	0.371
N	31835	31107	31107	13295	13174	13174

Panel C: Female LIDs – Hybrid Models (Allison, 2009)

	(1) Within	(2) Between	(3) Within	(4) Between
FLD	0.141**	0.466***	0.134*	0.314**
	(2.27)	(3.17)	(1.71)	(2.44)
DIR	-0.006	0.019*	-0.004	0.034**
	(-0.94)	(1.83)	(-0.4)	(2.02)
IND	0.107***	-0.015	0.081*	0.017
	(3.88)	(-0.28)	(1.84)	(0.21)
DIV	0.291***	0.508***	0.267***	0.569***
	(11.23)	(13.24)	(5.83)	(9.31)
LNF	0.166***	0.214***	0.167***	0.341***
	(7.35)	(6.15)	(3.89)	(6.04)
INS	-0.249***	-0.481***	-0.094	-0.904***
	(-3.26)	(-4.7)	(-0.66)	(-5.19)
ADV	-1.270	1.450*	-0.201	2.473**
	(-1.5)	(1.94)	(-0.13)	(2.03)
LNA	-0.049**	0.175***	-0.064	0.214***
	(-2.03)	(8.2)	(-1.44)	(6.37)
ROA	-0.191	-0.613	-0.042	-0.428
	(-1.02)	(-1.57)	(-0.13)	(-0.68)
LEV	0.009*	-0.022*	0.006	0.019
	(1.91)	(-1.75)	(0.74)	(0.95)
EXP	0.566***	0.109	0.525***	0.002
	(5.49)	(0.76)	(2.67)	(0.01)
RDS	-0.150***	0.078*	-0.035	0.158**
	(-4.51)	(1.87)	(-0.51)	(1.99)
HHI	-2.161***	2.304*	-4.269***	0.968
	(-4.67)	(1.79)	(-4.84)	(0.43)
AGE	-0.133***	-0.001	-0.131***	0.003
	(-6.3)	(-1.04)	(-4.79)	(1.47)
VOL	-3.482***	-10.899***	-0.263	-19.340***
	(-2.87)	-3.790	(-0.12)	(-4.36)
N	31,407	31,407	13043	13043

Panel D: Female LIDs – Hybrid Models with Addtional Controls (Allison, 2009)

	(1) Within	(2) Between	(3) Within	(4) Between
FLD	0.175***	0.362**	0.185**	0.242*
	(2.77)	(2.44)	(2.3)	(1.86)
CEO_{FEM}	0.554***	0.852***	0.777***	0.686***

	(8.31)	(7.61)	(6.69)	(4.31)
TEN_{AVE}	-0.049***	-0.045***	-0.033*	-0.059**
	(-4.95)	(-3.13)	(-1.89)	(-2.55)
AGE_{AVE}	0.015**	-0.008	-0.016	-0.027**
	(2.49)	(-1.22)	(-1.51)	(-2.49)
NUM_{AVE}	0.021	-0.843***	-0.473**	-0.898***
	(0.2)	(-6.68)	(-2.4)	(-4.06)
LOC_{AVE}	0.164	0.288**	0.644**	0.640**
	(1.18)	(2.03)	(2.44)	(2.55)
QLF_{AVE}	-0.143**	-0.145**	-0.196*	-0.106
	(-2.59)	(-2.15)	(-1.9)	(-0.96)
DIR	-0.004	0.028**	0.003	0.049***
	(-0.64)	(2.56)	(0.23)	(2.8)
IND	0.092***	-0.040	0.077*	-0.055
	(3.24)	(-0.7)	(1.71)	(-0.68)
DIV	0.290***	0.607***	0.296***	0.682***
	(10.36)	(13.81)	(5.97)	(9.42)
LNF	0.162***	0.160***	0.137***	0.258***
	(6.97)	(4.39)	(3.1)	(4.39)
INS	-0.239***	-0.442***	-0.132	-0.814***
	(-3.05)	(-4.17)	(-0.91)	(-4.57)
ADV	-0.905	1.046	0.672	1.971
	(-1.04)	(1.39)	(0.44)	(1.61)
LNA	-0.032	0.170***	-0.060	0.201***
	(-1.3)	(7.64)	(-1.32)	(5.8)
ROA	-0.189	-0.480	-0.101	-0.038
	(-0.98)	(-1.200)	(-0.31)	(-0.060)
LEV	0.011**	-0.014	0.006	0.020
	(2.14)	(-1.080)	(0.71)	(1.000)
EXP	0.531***	0.021	0.430**	-0.129
	(5.07)	(0.140)	(2.14)	(-0.530)
RDS	-0.142***	0.142***	-0.024	0.239***
	(-4.24)	(3.370)	(-0.35)	(3.040)
HHI	-2.060***	1.938	-4.146***	0.676
	(-4.4)	(1.490)	(-4.63)	(0.300)
AGE	-0.122***	-0.002	-0.137***	0.004
	(-5.66)	(-1.350)	(-4.93)	(1.790)
VOL	-4.041***	-13.608***	-0.237	-21.266***
	(-3.26)	(-4.550)	(-0.11)	(-4.650)
N	29889	29889	12469	12469

Appendix D: Robustness Checks – Alternative Measures of CSR

This table presents results of the regression of CSR_{ALT} and CSR_{ADJ} on LID (FLD), an indicator variable that equals 1 for firms with a LID (female LID) and 0 otherwise, and other controls. Models in Panels A and B (D and E) are estimated using the full sample of firms, with and without LIDs and female LIDs respectively. Models in Panels C and F are estimated using the sub-sample of firms with lead directors. Appendix B provides definitions of all variables. All models include industry and year fixed effects. T-statistics, based on robust standard errors adjusted for heteroskedasticity and clustered at the firm level, are reported in brackets below the coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full Sample - CSR_{ALT}				
	(1)	(2)	(3)	(4)
LID	0.139***	0.035***	0.017*	0.016*
	(10.263)	(3.129)	(1.685)	(1.645)
CEO_{FEM}				0.218***
				(8.549)
TEN_{AVE}				-0.016***
				(-4.586)
AGE_{AVE}				-0.002
				(-1.080)
NUM_{AVE}				-0.230***
				(-6.816)
LOC_{AVE}				0.048
				(1.318)
QLF_{AVE}				-0.059***
				(-3.383)
DIR			0.006**	0.008***
			(2.366)	(2.898)
IND			0.022*	0.013
			(1.886)	(1.121)
DIV			0.225***	0.245***
			(23.211)	(24.082)
LNF			0.051***	0.038***
			(6.235)	(4.824)
INS			-0.118***	-0.110***
			(-4.026)	(-3.827)
ADV			0.881***	0.796***
			(3.483)	(3.332)
LNA		0.114***	0.052***	0.047***
		(17.799)	(7.219)	(6.842)
ROA		-0.489***	-0.199**	-0.176**
		(-5.855)	(-2.547)	(-2.264)
LEV		-0.007***	-0.004**	-0.004*
		(-2.901)	(-1.962)	(-1.736)
EXP		0.026	0.108***	0.101**
		(0.627)	(2.647)	(2.570)
RDS		0.022*	-0.001	0.006
		(1.877)	(-0.062)	(0.494)
HHI		-0.300	-0.114	-0.166
		(-1.172)	(-0.470)	(-0.684)

AGE		0.001***	0.000	0.001
		(2.651)	(0.857)	(1.300)
VOL		-2.046***	-1.966***	-2.459***
		(-3.813)	(-3.777)	(-4.769)
Constant	-0.081***	-1.210***	-1.708***	-1.470***
	(-9.413)	(-10.771)	(-13.958)	(-9.742)
adj. R-sq	0.013	0.294	0.344	0.356
N	32501	32501	31594	31594

Panel B: Full Sample - CSR_{ALT}

	(1)	(2)	(3)	(4)
FLD	0.391***	0.237***	0.182***	0.167***
	(8.766)	(7.239)	(5.582)	(5.125)
CEO_{FEM}				0.216***
				(8.436)
TEN_{AVE}				-0.015***
				(-4.567)
AGE_{AVE}				-0.002
				(-0.960)
NUM_{AVE}				-0.226***
				(-6.738)
LOC_{AVE}				0.046
				(1.280)
QLF_{AVE}				-0.056***
				(-3.227)
DIR			0.007**	0.008***
			(2.543)	(3.038)
IND			0.022*	0.013
			(1.878)	(1.118)
DIV			0.221***	0.240***
			(22.919)	(23.738)
LNF			0.051***	0.039***
			(6.358)	(4.982)
INS			-0.115***	-0.108***
			(-3.968)	(-3.777)
ADV			0.894***	0.811***
			(3.592)	(3.440)
LNA		0.114***	0.051***	0.047***
		(18.148)	(7.251)	(6.889)
ROA		-0.489***	-0.197**	-0.176**
		(-5.916)	(-2.542)	(-2.275)
LEV		-0.007***	-0.004*	-0.004*
		(-2.885)	(-1.922)	(-1.711)
EXP		0.027	0.108***	0.101**
		(0.638)	(2.635)	(2.557)
RDS		0.022*	-0.000	0.006
		(1.873)	(-0.016)	(0.521)
HHI		-0.293	-0.107	-0.158
		(-1.149)	(-0.441)	(-0.655)
AGE		0.002***	0.001	0.001
		(2.770)	(0.933)	(1.363)

VOL		-2.052***	-1.960***	-2.444***
		(-3.836)	(-3.773)	(-4.748)
Constant	-0.036***	-1.206***	-1.694***	-1.472***
	(-4.433)	(-11.077)	(-14.272)	(-10.006)
adj. R-sq	0.013	0.298	0.347	0.358
N	32501	32501	31594	31594

Panel C: Subsample of Firms with LIDs - CSR_{ALT}

	(1)	(2)	(3)	(4)
FLD	0.321***	0.215***	0.162***	0.143***
	(7.091)	(6.562)	(5.090)	(4.507)
CEO_{FEM}				0.187***
				(4.628)
TEN_{AVE}				-0.014***
				(-2.630)
AGE_{AVE}				-0.009***
				(-2.991)
NUM_{AVE}				-0.198***
				(-3.841)
LOC_{AVE}				0.200***
				(2.834)
QLF_{AVE}				-0.054*
				(-1.908)
DIR			0.009**	0.011***
			(2.078)	(2.609)
IND			0.020	0.011
			(1.221)	(0.663)
DIV			0.240***	0.258***
			(15.706)	(15.795)
LNF			0.085***	0.064***
			(6.593)	(4.974)
INS			-0.139***	-0.138***
			(-2.837)	(-2.821)
ADV			1.360***	1.184***
			(3.971)	(3.594)
LNA		0.142***	0.064***	0.058***
		(15.810)	(6.203)	(5.831)
ROA		-0.645***	-0.212*	-0.146
		(-4.584)	(-1.700)	(-1.174)
LEV		-0.007*	-0.003	-0.003
		(-1.731)	(-0.997)	(-1.020)
EXP		-0.025	0.086	0.059
		(-0.341)	(1.251)	(0.885)
RDS		0.048**	0.017	0.024
		(2.298)	(0.867)	(1.295)
HHI		-1.051**	-0.859*	-0.863*
		(-2.158)	(-1.818)	(-1.802)
AGE		0.002**	0.001	0.001
		(2.305)	(1.024)	(1.470)
VOL		-2.048**	-1.708**	-2.387***
		(-2.252)	(-2.038)	(-2.850)

Constant	0.034***	-1.188***	-1.815***	-1.417***
	(2.700)	(-5.571)	(-8.462)	(-5.356)
adj. R-sq	0.017	0.322	0.375	0.386
N	13368	13368	13244	13244

Panel D: Full Sample - CSR_{ADJ}				
	(1)	(2)	(3)	(4)
LID	0.369***	0.127***	0.077*	0.080**
	(7.963)	(3.069)	(1.941)	(2.067)
CEO_{FEM}				0.753***
				(8.152)
TEN_{AVE}				-0.030**
				(-2.419)
AGE_{AVE}				-0.019***
				(-2.700)
NUM_{AVE}				-0.886***
				(-6.980)
LOC_{AVE}				0.000
				(0.000)
QLF_{AVE}				-0.081
				(-1.211)
DIR			0.012	0.022**
			(1.265)	(2.272)
IND			0.050	0.027
			(1.115)	(0.601)
DIV			0.587***	0.623***
			(16.657)	(16.565)
LNF			0.233***	0.186***
			(7.237)	(5.998)
INS			-0.541***	-0.495***
			(-4.953)	(-4.639)
ADV			3.106***	2.551***
			(3.185)	(2.759)
LNA		0.413***	0.230***	0.203***
		(16.669)	(8.345)	(7.741)
ROA		-1.961***	-0.923***	-0.800***
		(-6.581)	(-3.261)	(-2.817)
LEV		-0.022***	-0.014*	-0.011
		(-2.610)	(-1.700)	(-1.434)
EXP		-0.073	0.122	0.103
		(-0.563)	(0.947)	(0.811)
RDS		0.123***	0.064*	0.087**
		(3.164)	(1.672)	(2.292)
HHI		0.004	0.248	0.056
		(0.006)	(0.332)	(0.075)
AGE		0.005**	0.002	0.003
		(2.225)	(1.066)	(1.319)
VOL		-10.803***	-10.978***	-12.503***
		(-5.507)	(-5.632)	(-6.437)
Constant	-0.149***	-3.255***	-4.573***	-3.133***
	(-5.244)	(-5.810)	(-7.284)	(-4.249)

adj. R-sq	0.010	0.132	0.177	0.191
N	32501	32501	31594	31594

Panel E: Full Sample - CSR_{ADJ}				
	(1)	(2)	(3)	(4)
FLD	1.019***	0.758***	0.613***	0.564***
	(6.163)	(5.649)	(4.655)	(4.397)
CEO_{FEM}				0.747***
				(8.070)
TEN_{AVE}				-0.030**
				(-2.395)
AGE_{AVE}				-0.018***
				(-2.593)
NUM_{AVE}				-0.874***
				(-6.942)
LOC_{AVE}				0.001
				(0.011)
QLF_{AVE}				-0.071
				(-1.071)
DIR			0.014	0.023**
			(1.458)	(2.426)
IND			0.049	0.027
			(1.106)	(0.605)
DIV			0.574***	0.610***
			(16.336)	(16.231)
LNF			0.236***	0.191***
			(7.398)	(6.197)
INS			-0.531***	-0.487***
			(-4.901)	(-4.590)
ADV			3.148***	2.602***
			(3.278)	(2.851)
LNA		0.413***	0.229***	0.203***
		(16.992)	(8.404)	(7.816)
ROA		-1.962***	-0.920***	-0.802***
		(-6.656)	(-3.267)	(-2.841)
LEV		-0.022***	-0.013*	-0.011
		(-2.593)	(-1.664)	(-1.416)
EXP		-0.072	0.120	0.102
		(-0.558)	(0.939)	(0.803)
RDS		0.122***	0.065*	0.087**
		(3.153)	(1.701)	(2.300)
HHI		0.026	0.270	0.079
		(0.034)	(0.366)	(0.106)
AGE		0.005**	0.002	0.003
		(2.340)	(1.152)	(1.390)
VOL		-10.836***	-10.966***	-12.457***
		(-5.551)	(-5.644)	(-6.432)
Constant	-0.028	-3.248***	-4.534***	-3.165***
	(-1.009)	(-6.057)	(-7.434)	(-4.405)
adj. R-sq	0.009	0.135	0.180	0.194

N	32501	32501	31594	31594

Panel F: Subsample of Firms with LIDs – CSR_{ADJ}				
	(1)	(2)	(3)	(4)
FLD	0.832***	0.661***	0.519***	0.447***
	(4.978)	(5.053)	(4.092)	(3.617)
CEO_{FEM}				0.725***
				(5.470)
TEN_{AVE}				-0.042**
				(-2.165)
AGE_{AVE}				-0.036***
				(-3.232)
NUM_{AVE}				-0.973***
				(-4.791)
LOC_{AVE}				0.273
				(1.105)
QLF_{AVE}				-0.101
				(-0.951)
DIR			0.021	0.034**
			(1.398)	(2.223)
IND			0.004	-0.024
			(0.060)	(-0.374)
DIV			0.671***	0.715***
			(12.286)	(12.026)
LNF			0.352***	0.276***
			(6.900)	(5.482)
INS			-0.686***	-0.652***
			(-3.553)	(-3.424)
ADV			4.770***	3.817***
			(3.462)	(2.943)
LNA		0.534***	0.287***	0.249***
		(15.349)	(7.197)	(6.534)
ROA		-2.424***	-0.816*	-0.516
		(-4.868)	(-1.895)	(-1.201)
LEV		-0.021	-0.008	-0.008
		(-1.464)	(-0.639)	(-0.654)
EXP		-0.210	0.113	0.015
		(-0.909)	(0.509)	(0.068)
RDS		0.212***	0.119*	0.147**
		(3.254)	(1.922)	(2.407)
HHI		-0.893	-0.374	-0.439
		(-0.563)	(-0.246)	(-0.285)
AGE		0.005*	0.003	0.004
		(1.883)	(1.105)	(1.548)
VOL		-13.769***	-12.637***	-14.914***
		(-4.037)	(-4.005)	(-4.714)
Constant	0.159***	-4.645***	-6.293***	-4.222***
	(3.538)	(-6.319)	(-8.222)	(-4.341)
adj. R-sq	0.012	0.203	0.254	0.270
N	13368	13368	13244	13244

Appendix E: Decomposition of CSR Dimensions

This table presents results of the regression of CSR dimensions on LID (FLD), an indicator variable that equals 1 for firms with a LID (female LID) and 0 otherwise, and other controls. Panel A (B) reports results for CSR_{OPE} (CSR_{REL}), representing the operationally embedded (relational) CSR dimensions. Panels C-D (Panels E-F) report results for strengths (concerns) dimensions. Appendix B provides definitions of all variables. All models include industry and year fixed effects. T-statistics based on robust standard errors clustered at the firm level are reported in parentheses below coefficients. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: CSR_{OPE}						
	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.107***	0.062*				
	(3.026)	(1.851)				
FLD			0.675***	0.541***	0.590***	0.465***
			(5.763)	(4.661)	(5.103)	(4.108)
DIR		0.005		0.006		0.013
		(0.591)		(0.769)		(1.048)
IND		0.055		0.054		0.023
		(1.410)		(1.384)		(0.409)
DIV		0.559***		0.548***		0.611***
		(18.521)		(18.223)		(13.342)
LNF		0.228***		0.230***		0.319***
		(8.523)		(8.687)		(7.704)
INS		-0.667***		-0.659***		-0.854***
		(-7.502)		(-7.466)		(-5.556)
ADV		3.129***		3.159***		4.603***
		(3.833)		(3.917)		(4.084)
LNA	0.474***	0.302***	0.474***	0.301***	0.572***	0.351***
	(23.446)	(13.515)	(23.929)	(13.638)	(19.562)	(10.552)
ROA	-1.647***	-0.641***	-1.644***	-0.636***	-2.035***	-0.504
	(-6.832)	(-2.753)	(-6.896)	(-2.752)	(-4.997)	(-1.360)
LEV	-0.026***	-0.018***	-0.026***	-0.017***	-0.018	-0.006
	(-3.557)	(-2.655)	(-3.580)	(-2.648)	(-1.443)	(-0.568)
EXP	-0.118	0.056	-0.116	0.055	-0.280	-0.010
	(-1.060)	(0.505)	(-1.055)	(0.501)	(-1.350)	(-0.049)
RDS	0.094***	0.037	0.094***	0.038	0.190***	0.103*
	(2.915)	(1.164)	(2.911)	(1.198)	(3.331)	(1.890)
HHI	0.262	0.454	0.285	0.477	-0.718	-0.298
	(0.405)	(0.726)	(0.445)	(0.770)	(-0.603)	(-0.262)
AGE	0.007***	0.005***	0.007***	0.005***	0.008***	0.005**
	(3.922)	(2.599)	(4.055)	(2.697)	(3.399)	(2.561)
VOL	-7.950***	-8.257***	-8.006***	-8.263***	-10.077***	-9.582***
	(-4.872)	(-5.135)	(-4.925)	(-5.154)	(-3.601)	(-3.655)
Constant	-3.494***	-4.354***	-3.507***	-4.342***	-3.460***	-4.707***
	(-8.844)	(-12.448)	(-8.705)	(-12.262)	(-5.268)	(-7.813)
adj. R-sq	0.320	0.360	0.323	0.362	0.365	0.409
N	34306	33267	34306	33267	14012	13859
Panel B: CSR_{REL}						
	(1)	(2)	(3)	(4)	(5)	(6)

LID	0.001	-0.001				
	(0.071)	(-0.050)				
FLD			0.092**	0.081*	0.098**	0.083*
			(2.000)	(1.743)	(2.123)	(1.799)
LID	0.001	-0.001				
	(0.071)	(-0.050)				
FLD			0.092**	0.081*	0.098**	0.083*
			(2.000)	(1.743)	(2.123)	(1.799)
DIR		0.004		0.004		0.004
		(1.002)		(1.023)		(0.767)
IND		-0.009		-0.009		-0.007
		(-0.607)		(-0.626)		(-0.290)
DIV		0.050***		0.048***		0.066***
		(4.182)		(4.010)		(3.598)
LNF		0.040***		0.040***		0.062***
		(3.610)		(3.593)		(3.599)
INS		-0.006		-0.006		-0.000
		(-0.157)		(-0.145)		(-0.004)
ADV		-0.502		-0.497		-0.144
		(-1.451)		(-1.442)		(-0.303)
LNA	-0.048***	-0.072***	-0.048***	-0.072***	-0.041***	-0.077***
	(-5.680)	(-7.334)	(-5.802)	(-7.376)	(-3.825)	(-5.821)
ROA	-0.499***	-0.407***	-0.497***	-0.406***	-0.611***	-0.417**
	(-4.498)	(-3.726)	(-4.487)	(-3.715)	(-3.241)	(-2.450)
LEV	-0.000	0.001	-0.000	0.001	-0.001	-0.000
	(-0.021)	(0.287)	(-0.007)	(0.298)	(-0.294)	(-0.067)
EXP	0.174***	0.195***	0.175***	0.195***	0.185**	0.211***
	(3.432)	(3.750)	(3.440)	(3.743)	(2.427)	(2.781)
RDS	0.003	-0.010	0.003	-0.009	0.002	-0.015
	(0.184)	(-0.660)	(0.201)	(-0.624)	(0.072)	(-0.681)
HHI	-0.568	-0.457	-0.563	-0.452	-1.390**	-1.311*
	(-1.543)	(-1.217)	(-1.532)	(-1.206)	(-1.971)	(-1.849)
AGE	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001
	(-1.727)	(-1.744)	(-1.755)	(-1.758)	(-1.677)	(-1.601)
VOL	-1.750**	-1.362*	-1.743**	-1.356*	-2.701**	-1.904
	(-2.437)	(-1.839)	(-2.435)	(-1.834)	(-2.218)	(-1.634)
Constant	-0.161	-0.490	-0.159	-0.484	-0.721	-0.939
	(-0.328)	(-0.954)	(-0.324)	(-0.947)	(-1.103)	(-1.399)
adj. R-sq	0.099	0.101	0.100	0.102	0.110	0.114
N	34306	33267	34306	33267	14012	13859

Panel C: CSR_{OPE} – Strengths

	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.077**	0.052*				
	(2.454)	(1.721)				
FLD			0.510***	0.437***	0.434***	0.364***
			(4.543)	(4.001)	(3.966)	(3.446)
DIR		0.000		0.001		0.013
		(0.015)		(0.179)		(1.110)
IND		0.088**		0.087**		0.044
		(2.507)		(2.491)		(0.847)
DIV		0.316***		0.307***		0.363***
		(11.585)		(11.307)		(8.450)

LNF		0.212***		0.214***		0.290***
		(8.802)		(8.921)		(7.230)
INS		-0.851***		-0.845***		-1.073***
		(-10.543)		(-10.522)		(-7.675)
ADV		2.471***		2.495***		4.027***
		(3.294)		(3.364)		(3.784)
LNA	0.568***	0.452***	0.568***	0.451***	0.676***	0.514***
	(28.889)	(21.093)	(29.376)	(21.253)	(23.910)	(16.038)
ROA	-1.499***	-0.674***	-1.497***	-0.671***	-1.944***	-0.602*
	(-7.333)	(-3.325)	(-7.378)	(-3.328)	(-5.589)	(-1.798)
LEV	-0.031***	-0.024***	-0.031***	-0.024***	-0.021*	-0.011
	(-4.753)	(-3.943)	(-4.788)	(-3.952)	(-1.922)	(-1.093)
EXP	-0.323***	-0.230**	-0.322***	-0.231**	-0.453***	-0.269*
	(-3.586)	(-2.536)	(-3.589)	(-2.552)	(-2.777)	(-1.695)
RDS	0.116***	0.086***	0.115***	0.086***	0.237***	0.179***
	(4.480)	(3.344)	(4.478)	(3.374)	(5.030)	(3.935)
HHI	0.763	0.784	0.781	0.802	-0.328	-0.154
	(1.289)	(1.354)	(1.328)	(1.394)	(-0.350)	(-0.172)
AGE	0.011***	0.010***	0.011***	0.010***	0.012***	0.011***
	(6.869)	(6.106)	(6.972)	(6.200)	(5.820)	(5.248)
VOL	-2.225	-3.691***	-2.263	-3.697***	-4.553*	-5.105**
	(-1.600)	(-2.640)	(-1.631)	(-2.649)	(-1.868)	(-2.143)
Constant	-2.915***	-2.980***	-2.924***	-2.971***	-2.735***	-3.194***
	(-4.626)	(-4.785)	(-4.546)	(-4.679)	(-2.905)	(-3.672)
adj. R-sq	0.384	0.413	0.386	0.415	0.449	0.481
N	34306	33267	34306	33267	14012	13859

Panel D: CSR_{REL}– Strengths

	(1)	(2)	(3)	(4)	(5)	(6)
LID	0.000	-0.003				
	(0.034)	(-0.296)				
FLD			0.097**	0.087**	0.098**	0.092**
			(2.274)	(2.102)	(2.361)	(2.281)
DIR		0.006**		0.006**		0.007
		(2.403)		(2.423)		(1.551)
IND		0.008		0.008		-0.001
		(0.735)		(0.708)		(-0.080)
DIV		0.045***		0.043***		0.041***
		(5.122)		(4.889)		(2.979)
LNF		0.033***		0.033***		0.041***
		(4.288)		(4.237)		(3.199)
INS		-0.134***		-0.134***		-0.156***
		(-5.162)		(-5.178)		(-3.384)
ADV		0.821***		0.827***		1.453***
		(2.885)		(2.937)		(3.369)
LNA	0.118***	0.098***	0.118***	0.097***	0.135***	0.111***
	(18.156)	(13.155)	(18.274)	(13.146)	(15.793)	(10.918)
ROA	-0.439***	-0.305***	-0.436***	-0.303***	-0.554***	-0.328***
	(-5.901)	(-3.957)	(-5.886)	(-3.945)	(-4.689)	(-2.760)
LEV	-0.002	-0.001	-0.002	-0.001	-0.002	0.000
	(-0.824)	(-0.289)	(-0.800)	(-0.267)	(-0.597)	(0.026)
EXP	-0.033	-0.016	-0.033	-0.017	-0.044	-0.019
	(-1.033)	(-0.503)	(-1.017)	(-0.513)	(-0.700)	(-0.307)

RDS	0.024**	0.019*	0.024**	0.020*	0.038**	0.035**
	(2.343)	(1.826)	(2.371)	(1.887)	(2.337)	(2.073)
HHI	-1.059***	-1.034***	-1.054***	-1.029***	-1.834***	-1.825***
	(-3.990)	(-3.821)	(-3.998)	(-3.828)	(-3.532)	(-3.558)
AGE	0.002***	0.002***	0.002***	0.002***	0.001**	0.001*
	(4.588)	(3.771)	(4.601)	(3.787)	(2.324)	(1.739)
VOL	0.082	-0.240	0.090	-0.231	-0.462	-0.544
	(0.167)	(-0.465)	(0.183)	(-0.449)	(-0.566)	(-0.652)
Constant	0.058	0.033	0.061	0.040	0.251	0.187
	(0.452)	(0.274)	(0.479)	(0.336)	(1.024)	(0.770)
adj. R-sq	0.209	0.217	0.210	0.217	0.228	0.239
N	34306	33267	34306	33267	14012	13859

Panel E: CSR_{OPE} – Concerns

	(1)	(2)	(3)	(4)	(5)	(6)
LID	-0.036**	-0.016				
	(-1.966)	(-0.891)				
FLD			-0.182***	-0.120***	-0.169***	-0.112**
			(-4.141)	(-2.635)	(-3.754)	(-2.419)
DIR		-0.004		-0.004		0.000
		(-0.819)		(-0.901)		(0.034)
IND		0.030		0.030		0.018
		(1.453)		(1.468)		(0.597)
DIV		-0.249***		-0.246***		-0.253***
		(-15.852)		(-15.660)		(-10.701)
LNF		-0.017		-0.017		-0.033
		(-1.178)		(-1.224)		(-1.380)
INS		-0.172***		-0.174***		-0.197**
		(-3.489)		(-3.537)		(-2.396)
ADV		-0.577*		-0.584*		-0.443
		(-1.650)		(-1.667)		(-0.892)
LNA	0.091***	0.148***	0.090***	0.148***	0.095***	0.155***
	(8.766)	(11.909)	(8.796)	(11.961)	(6.364)	(8.143)
ROA	0.170	-0.014	0.170	-0.014	0.094	-0.105
	(1.259)	(-0.102)	(1.268)	(-0.108)	(0.432)	(-0.509)
LEV	-0.004	-0.005	-0.004	-0.005	-0.003	-0.004
	(-1.074)	(-1.500)	(-1.061)	(-1.502)	(-0.611)	(-0.810)
EXP	-0.221***	-0.303***	-0.221***	-0.303***	-0.165	-0.252*
	(-3.300)	(-4.457)	(-3.308)	(-4.458)	(-1.266)	(-1.936)
RDS	0.019	0.048**	0.020	0.048**	0.034	0.064**
	(1.048)	(2.545)	(1.067)	(2.540)	(1.068)	(2.088)
HHI	0.508	0.335	0.502	0.330	0.285	0.041
	(1.430)	(0.962)	(1.420)	(0.950)	(0.447)	(0.064)
AGE	0.005***	0.006***	0.004***	0.006***	0.004***	0.005***
	(5.036)	(6.168)	(5.017)	(6.176)	(3.980)	(4.602)
VOL	5.797***	4.664***	5.820***	4.667***	5.395***	4.374***
	(6.081)	(4.886)	(6.120)	(4.896)	(3.299)	(2.761)
Constant	0.673*	1.481***	0.679*	1.480***	0.927	1.711***
	(1.661)	(3.290)	(1.707)	(3.326)	(1.537)	(2.736)
adj. R-sq	0.330	0.355	0.331	0.355	0.368	0.387
N	34306	33267	34306	33267	14012	13859

Panel F: CSR_{REL} – Concerns

	(1)	(2)	(3)	(4)	(5)	(6)
LID	-0.000	-0.002				
	(-0.009)	(-0.151)				
FLD			0.001	0.002	-0.006	0.003
			(0.015)	(0.058)	(-0.155)	(0.087)
DIR		0.002		0.002		0.003
		(0.802)		(0.796)		(0.553)
IND		0.019		0.019		0.008
		(1.534)		(1.533)		(0.425)
DIV		-0.004		-0.005		-0.028*
		(-0.422)		(-0.430)		(-1.838)
LNF		-0.006		-0.006		-0.021
		(-0.680)		(-0.693)		(-1.527)
INS		-0.127***		-0.127***		-0.152***
		(-3.759)		(-3.770)		(-2.663)
ADV		1.343***		1.344***		1.645***
		(4.541)		(4.538)		(4.233)
LNA	0.166***	0.169***	0.166***	0.169***	0.178***	0.189***
	(20.696)	(18.752)	(20.809)	(18.768)	(16.183)	(14.132)
ROA	0.061	0.105	0.061	0.105	0.062	0.097
	(0.701)	(1.259)	(0.703)	(1.261)	(0.427)	(0.761)
LEV	-0.001	-0.001	-0.001	-0.001	-0.000	0.001
	(-0.576)	(-0.571)	(-0.575)	(-0.569)	(-0.068)	(0.181)
EXP	-0.212***	-0.214***	-0.212***	-0.214***	-0.233***	-0.234***
	(-5.030)	(-4.938)	(-5.029)	(-4.940)	(-3.733)	(-3.715)
RDS	0.023**	0.031***	0.023**	0.031***	0.037**	0.050***
	(2.008)	(2.634)	(2.009)	(2.644)	(2.127)	(2.961)
HHI	-0.500**	-0.586**	-0.500**	-0.585**	-0.372	-0.439
	(-2.012)	(-2.309)	(-2.012)	(-2.308)	(-0.762)	(-0.896)
AGE	0.003***	0.003***	0.003***	0.003***	0.003***	0.002***
	(5.139)	(4.615)	(5.176)	(4.636)	(3.452)	(3.014)
VOL	1.737***	1.025	1.737***	1.027	2.259**	1.378
	(2.881)	(1.642)	(2.887)	(1.645)	(2.193)	(1.398)
Constant	0.120	0.403	0.120	0.404	0.793	0.950
	(0.219)	(0.712)	(0.219)	(0.714)	(1.146)	(1.374)
adj. R-sq	0.312	0.323	0.312	0.323	0.345	0.352
N	34306	33267	34306	33267	14012	13859

Appendix F: Cost of Equity Estimation

Panel A: Variable Definitions

Variable	Definition	Source
$r_{i,t}$	Return on stock i in period t.	CSRP
$r_{f,t}$	Risk-free rate in period t.	Ken French's data library
$r_{m,t}$	Return on the market portfolio in period t.	Ken French's data library
$\pi_{s,t}$	Excess return for size factor for period t.	Ken French's data library
$\pi_{mb,t}$	Excess return for market-to-book factor for period t.	Ken French's data library
$\pi_{mom,t}$	Excess returns for momentum factor for period t.	Ken French's data library

Panel B: Estimation Process

We estimate the cost of equity in two steps. In the first step we use the five years of monthly data immediately prior to year t to estimate the following regressions for each year in our sample from 1998 to 2019:

$$r_{i,t} - r_{f,t} = \alpha_i + \beta_{m,i,t}(r_{m,t} - r_{f,t}) + \beta_{s,i,t}\pi_{s,t} + \beta_{mb,i,t}\pi_{mb,t} + \beta_{mom,i,t}\pi_{mom,t} + \varepsilon_{i,t}$$

This produces coefficient estimates for use in the second stage. The regression sample periods consist of 60 months of data prior to t. Firms with less than 60 months of data are included in the analysis as long as they have at least 24 months of previous data. In the second stage we use 30-year long-term averages to compute $E(r_{m,t})$, $E(\pi_{s,t})$, $E(\pi_{mb,t})$, and $E(\pi_{mom,t})$. Then the cost of equity for firm i in year t is estimated as follows:

$$E(r_{i,t}) = r_{f,t} + \hat{\beta}_{m,i,t}(E(r_{m,t}) - r_{f,t}) + \hat{\beta}_{s,i,t}E(\pi_{s,t}) + \hat{\beta}_{mb,i,t}E(\pi_{mb,t}) + \hat{\beta}_{mom,i,t}E(\pi_{mom,t})$$