Internal Stakeholders Engagement in CSR

How shareholder proposals and the board of directors' composition influence CSR performance for North American firms

MASTER THESIS ACCOUNTING, AUDITING, AND CONTROL

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Abstract

This research examines how shareholders and the board of directors can influence a company's CSR performance. Shareholders are increasingly incorporating CSR into their decision making. Underperformance or overperformance of CSR can be reason for a shareholder to intervene by filing a shareholder proposal. This is consistent with the concept of agency theory. For the board of directors, steering CSR performance is possible by making the board composition more diverse. A heterogeneous board contributes to better representation of different stakeholder groups, which is consistent with stakeholder theory. The key measure Shareholder Proposals consists of 2 types of proposals. Board composition is disaggregated into five measures of individual director characteristics. The sample consists of 3,980 observations for 398 U.S. companies over the period 2010-2019. OLS regression analysis and the Two-Stage Least Squares method (2SLS) support that board diversity, specifically ethnicity, gender, and other board positions, have a positive significant relationship with CSR performance. A weak negative significant relationship with CSR is found for shareholder proposals. Finally, no significant relationship is observed for the interaction term of shareholder proposals with board diversity. Robustness tests for industry differences show no deviations from my main analyses.

Keywords: Corporate social responsibility; Shareholder activism; Shareholder proposals; Board diversity.

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1. INTRODUCTION

Over the past few years, stakeholder interest in corporate social responsibility (CSR) performance has rapidly grown. Shareholders are increasingly including CSR performance as a key pillar in their investment decisions (Aflac, 2019). This may be motivated from personal motives, as well as for financial gain. In fact, more reports are appearing that observe a positive relationship between CSR and firm financial performance (Dyck et al., 2019; Khoo et al., 2022).

The social and environmental behavior of companies is also followed more scrupulously by the media. One of the much-discussed topics is diversity within the board of directors. Most boards are still male-dominated and ethnic discrimination creates inequality of chances to get elected as director (Perrault, 2015). For this reason, the U.S. and European countries have increasingly introduced regulations to foster diversity within the board of directors. The SEC (2021) has approved of measures such as the NASDAQ's board diversity rule which mandates listed firms on this stock exchange to disclose board diversity details.

The above examples illustrate the impact CSR business decisions have across different audiences. According to the stakeholder theory (Freeman, 1984) a firm bears responsibility for all who can affect or are being affected by its operations. Maximum firm value can thus only be achieved once the needs and interests of all stakeholders are accounted for. This is supported by legitimacy theory that states that corporations entered a 'social contract' with society giving them only the right of existence when support of societal stakeholders is received. However, the objective to satisfy all stakeholders' interest is difficult to achieve as they often are in conflict with each other. Managers tend to prioritize stakeholders whose resources are more crucial for the firm (Fernando & Lawrence, 2014). Shareholders and the board of directors possess these critical resources since they respectively provide equity and governance and control to corporate management. Therefore, corporate managers will put more effort into satisfying the interests of these parties which grants the latter a form of power.

In this research, I will examine the extent to which shareholders and the board of directors can influence CSR policies, through the submission of shareholder proposals and diversity in board composition. Shareholders benefit from exerting influence on CSR. On the one hand, shareholders aim to maximize returns, and as highlighted by some studies higher CSR performance tends to increase stock prices (Flammer, 2013; Khoo et al., 2022). On the other hand, corporate managers do not always have an incentive to invest in CSR or do take above average risks while doing so, and therefore a principal-agent problem arises (Barnett et al., 2022). To reduce the principal-agent problem, shareholders should actively monitor management and steer CSR initiatives by submitting shareholder proposals.

Larger shareholders can under certain conditions submit proposals for Annual General Meetings. These proposals allow shareholders to recommend a course of action for the company to other shareholders by means of the company's proxy card without the consent of the board of directors (U.S. Securities and Exchange Commission, n.d.). This gives the shareholder the opportunity to raise awareness about a particular policy such as CSR and is regularly taken seriously by corporate management (Monks et al., 2004). Since shareholders have a particular interest in increasing CSR efforts, it is therefore expected that a positive relationship between the number of shareholder proposals received and CSR performance occurs.

The board of directors bears shared responsibility for management's creation and execution of CSR policy. Furthermore, the board advises and monitors whether corporate management's actions are in the best interest of stakeholders. One can argue that high CSR performance indirectly reflects effective stakeholder management by the firm (Harjoto et al., 2015). Directors are also motivated from their personal interests to improve CSR performance as it contributes to the director's reputation and career prospects. Given the pivotal role the board of directors plays in shaping CSR activities, the abilities and skillset of these individual directors are of substantial value. Generally, personal attributes and experiences contribute to one's vision and decision-making on certain issues. A company board with a more diverse composition of directors therefore results in a wider spectrum of expertise and knowledge which helps for making informed decisions on CSR. In addition, this translates into better recognition of the interests of various stakeholder groups (Harjoto et al., 2015). For this study, board diversity dimensions include gender, age, ethnicity, tenure, and experience from other board positions. For each of these characteristics prior research found an indication that it can contribute to better CSR performance (Krüger, 2009; Bear et al., 2010; Rao & Tilt, 2016). The overall expectation for the relationship between board composition heterogeneity and CSR performance, therefore is, that a positive association occurs.

The sample consist of 3,980 observations for 398 U.S. companies over the period 2010-2019. CSR performance is analyzed using MSCI data on companies' performance on three dimensions: employee relations, environment, and product characteristics (WRDS, 2023a). From this data, the strengths and concerns in these areas follow which leads to one proxy for CSR performance. The results of the main OLS regression analyses show no significant relationship for shareholder proposals and CSR. However, a strong positive significant relationship is detected between board diversity and CSR performance. In addition, a Two-Stage Least Square analysis is conducted. The regression results confirm the positive effect of board diversity on CSR. Interestingly, for shareholder proposals a negative significant association with CSR performance is observed this time. This could be an indication that there is currently a status of overinvestment in CSR and shareholders want to adjust this downwards, in line with agency theory. As the evidence on the relationship between shareholder proposals and CSR performance is ambiguous over OLS and 2SLS tests, no clear conclusion on the relationship between the two constructs can be drawn in this research paper.

Board composition diversity is positively associated with CSR performance according to the regression outputs. Considering the individual diversity predictors, gender, ethnicity, and other director positions are found to be positively significant. This implies that heterogeneity in the board of directors, especially in terms of gender, ethnicity and other board positions, contributes to enhancing CSR performance. In addition, it is investigated whether a possible interaction term between shareholder proposals and board diversity exists. Perrault (2015) argues that shareholder trust in the capabilities of the firm increases when boards are more heterogeneous. Likewise, shareholder proposals can be targeted on enabling board diversity. No significant effect is found for the interaction. Lastly, a robustness test on industry effects shows no inconsistencies with the previous results from the main regression analysis.

This study contributes to the growing literature on stakeholders influence on CSR performance. First, most studies on board composition focus solely on one aspect of diversity, e.g., gender diversity. The test in this paper uses five different constructs for diversity and all

these constructs are scaled for heterogeneity according to Blau's heterogeneity index (Blau, 1977). This proxy provides information on how heterogeneity of boards contributes to CSR performance. Scholars are ambivalent about the contribution of a heterogeneous board to decision-making processes and ultimately CSR performance, and this research may shed more light on that (Harjoto et al., 2015; Khoo et al., 2022). Second, Barnett et al. (2022) and Mackey et al. (2007) note that CSR is a crucial component for shareholders in their investment decision-making process. However, it remains unknown whether this active attitude toward CSR persists over the period that shareholders hold the shares, as evidenced by shareholder activism. Shareholder activism, in turn, manifests itself in the submission of shareholder proposals regarding CSR. Gathering insights on shareholder proposal filing as a medium for encouraging CSR is a new contribution to the corporate governance literature. Third, this study is the first to examine the joint effect of shareholders and board of directors on CSR performance in a single research design. From the results, it can be determined which of the two stakeholders has a more predominant influence on CSR. It also tests whether an interaction term exists between shareholder proposals and diversity in board composition. The results of the study show that board composition diversity is the only significant component of the two influencing CSR performance.

The societal contribution of this research paper lies in expanding knowledge about stakeholder management. The findings on the role of board composition indicate that diversity in gender, ethnicity, and experience in other board positions, are relevant factors to achieve growth in CSR. Managers should include these aspects in the recruitment and selection process of director candidates. Furthermore, the positive association between board diversity and CSR legitimizes the regulations set-up by the SEC to further encourage board diversity. The results for shareholder proposals provide shareholders insights into whether submitting proposals is an effective means of driving CSR performance. In addition, filing proposals can be valuable in mitigating potential agency problems about CSR policies.

The rest of this paper is structured as follows: section 2 discusses findings from previous literature on CSR, board composition and shareholder proposals. Section 3 develops hypotheses. Section 4 discusses the data collection and research design. Section 5 presents the regression results and additional tests. Finally, section 6 of the paper concludes with a summary and discussion of the implications of the main findings. This section also includes perceived limitations and suggestions for future research.

2. BACKGROUND AND LITERATURE REVIEW

This section provides an overview of prior literature related to the role of shareholders and board directors in shaping CSR performance. First, core theories will be reviewed that offer insights into what motivates shareholders and directors to influence CSR and whether this is likely to be legitimized by the firm's management. Second, for both internal stakeholders, it is discussed what mechanisms can be deployed to impact CSR performance. The discussion centers on shareholder proposals and board composition heterogeneity.

2.1 Corporate Social Responsibility (CSR) and its underlying theories

Corporate social responsibility (CSR) has become a well-established concept over the past decades. An increasing number of firms is allocating resources to CSR and public awareness rises as more types of media are closely monitoring firm's CSR performance (Gray et al., 2009). There are multiple definitions of CSR that appear in academic research. For this study the widely acknowledged definition according to the Oxford Handbook (Carroll, 2008) is followed, supported by research of Han et al. (2019). The author describes CSR as "The commitments of business firms to seek those strategies, to settle on those decisions, or to pursue those lines of activity that are according to societal values and expectations" (Carroll, 2008, p.19). At the same time, this also raises the question to whom companies ultimately owe responsibility. Traditionally, the view has been that a company's primary objective is to maximize profits for the benefit of its owners, the shareholders. Accountability to the well-being of society did not belong to the key objectives (Flammer, 2013).

However, this perception changed in the 1980s driven by Freeman's stakeholder theory (1984). This theory entails that a firm has responsibility towards those who can affect or are being affected by the firm's activities. Not solely financial objectives must be met, resources should also be allocated to non-financial objectives that are of relevance to stakeholders. Stakeholders can be segregated into internal and external stakeholders. Internal stakeholders are directly affected by and involved in the firm's operations through the ownership or services they offer to the firm. These stakeholders include shareholders, board of directors, and employees. External stakeholders are indirectly affected by a firm's actions and include customers, suppliers, local communities, and the government (Neubaum et al., 2012). This study will focus on the role of shareholders and the board of directors in directing CSR performance.

It may be challenging for companies to meet all stakeholders' expectations because interests are often conflicting and resources are scarce. The managerial perspective of stakeholder theory states that managers prioritize the needs of stakeholders whose resources are vital to the organization (Fernando et al., 2014; Neu et al., 1998). Since shareholders provide the company with equity and the board of directors governs and controls the company's management and operations, both can be classified as key stakeholders. This implies that shareholders and directors can incentivize companies to choose business plans within the desired social framework, such as CSR investments (Flammer, 2013). According to stakeholder theory, shareholders and directors are thus in a powerful position to enforce CSR performance.

Another key theory in the literature on CSR is legitimacy theory. This theory assumes that a firm and society have a 'social contract'. Organizations can only continue to exist if value

is attributed to business activities by society (Dowling & Pfeffer, 1975; Gray et al., 2009). This emphasizes that a company's management is committed to meeting the needs of its stakeholders. Shareholders can file a resolution against a company as a signal of dissatisfaction, for example about pay disparity. In essence, shareholders thereby question the legitimacy of the company. Consistent with legitimacy theory, this would require the company to comply with the resolution to main legitimacy (Perrault, 2015). Hence, shareholder proposals could potentially be an effective method to increase CSR performance. On the other hand, companies can make their CSR activities appear better than they are to obtain legitimacy e.g., through sustainability disclosures. The board of directors oversees the company's lawful actions so that value for stakeholders is preserved. The next sections will discuss what motivates shareholders and directors to engage in CSR performance and how to exert influence.

2.2 Shareholders and CSR

Previous research indicates that shareholders consider CSR performance as an important non-financial factor in their investment decisions (Barnett et al., 2022). A proportion of institutional investors already apply a threshold where they only invest in companies that meet a predetermined CSR benchmark level. Investors' motives to do so include personal conviction and opportunities for financial gain. The latter is evidenced by multiple prior studies indicating that firms who undertake CSR activities may be subject to lower cost of equity, lower cost of debt, and reduced systematic risk (Harjoto et al., 2015; Khoo et al., 2022). In addition, Flammer (2013) observed for US publicly traded firms that their stock prices increased when reporting on positive environmental actions. Firm reputation can also be improved for higher CSR activity as well as competitive advantage (Dhaliwal et al., 2012). However, there are also studies that contradict the assertion that CSR is positively related to financial performance (Barnett et al., 2022). Regardless of the financial returns, Mackey et al. (2007) argue that CSR is still a dominant force in shareholders' investment choices. This is remarkable since from the traditional shareholder perspective, one would expect shareholders to only invest for financial gain.

The lack of a direct link between CSR initiatives and enhanced business performance can lead to agency problems within the firm. Agency problem refers to the situation where a manager takes actions out of self-interest that do not maximize shareholder value (Jensen & Meckling, 1976). In this instance, when undertaking CSR activities fails to yield a corresponding improvement in financial results, managers may be discouraged from allocating resources to CSR if their own benefits are tied to the company's financial performance. In contrast, a positive relationship between CSR and firm performance can also be detrimental. Managers might overinvest in CSR and take above average risks when personal gain is involved (Barnett et al., 2022). Krüger (2015) confirms this by arguing that higher spendings on CSR can benefit managers' reputation among key stakeholders while disadvantaging shareholder wealth.

The damage shareholders can suffer from harmful CSR activities is significant. Shareholders may be exposed to long-term financial risk when firms act socially and environmentally irresponsible. Consequences could be litigations or governmental penalties caused by stricter legislation. For example, Shell was ordered by a court to pay a financial compensation of 95 million euros to southern Nigerian communities following two major oil

spills in the area (NOS, 2021). To reduce the agency problem and monitor managers, shareholders will have to take an active stance to encourage CSR related initiatives. One method to achieve this is shareholder activism in the form of filing shareholder proposals.

2.3 Shareholder activism

One of the direct tools for shareholders to influence CSR policy is the submission of shareholder proposals. Shareholder proposals are items brought on the annual shareholder meeting's agenda by large shareholders that recommend the company a course of action to be voted on. The purpose of filing proposals is generally to raise managers' awareness about a particular issue rather than targeting a majority vote. Obtaining a majority vote is difficult since institutional investors, who often hold a significant proportion of shares, tend to be more cautious to vote for shareholder proposals (Barnett et al., 2022). Despite the non-binding nature of shareholder proposals, corporate managers tend to perceive them as a cause for concern and an expression of shareholder pressure (Monks et al., 2004). Managers fear reputational damage when rejecting strong shareholder requests which puts shareholders in a position to foster CSR engagement (Flammer, 2013).

Two main types of shareholder proposals are distinguished: socially responsible investing (SRI) proposals and corporate governance proposals (GOV). The former presses for sufficient social and environmental performance of the company. The latter involves strengthening the position of shareholders relative to corporate management by deploying mechanisms such as majority voting requirements and assigning more supervisory power to the board of directors (Monks et al., 2004; Gifford, 2010). Both types of proposals are crucial for shareholder activism, as stronger corporate governance provides a more balanced ground for SRI initiatives. According to Barnett et al. (2022) poor corporate governance can incentivize opportunistic behavior of managers harming CSR performance and shareholders' wealth. Hence, shareholders proposals serve as an important safeguard for shareholders' interests. The effectiveness of shareholder proposals was already confirmed in the late 1990s when the successful application of shareholder pressure on U.S. companies led to divestment in racially segregated practices in Africa (Kastiel & Nili, 2021). In the next section, the impact of the board of directors on CSR performance will be examined.

2.4 Board of Directors and CSR

The board of directors shares responsibility for developing CSR policy and dealing with current issues. The board (1) appoints the corporate's management who is responsible for daily operations, and (2) oversees and controls management's actions and whether these align with the interests of stakeholders. As the board of directors has a central position in shaping CSR activities, the abilities and skillset of these individual directors are of considerable value. Prior research has extensively examined the relationship between board composition and financial performance, but research related to non-financial performance such as CSR is rarer. For the association between board composition heterogeneity and financial performance the results are mixed. Most studies indicate a positive association, but others find negative, or even insignificant results (Carter et al., 2010; Randøy et al., 2006; Rao & Tilt, 2016).

Complex decision-making can be more efficient with good use of heterogeneous knowledge. Heterogeneous board dimensions include gender, age, ethnicity, tenure, and

diversity of work experience. Whether heterogeneity is preferable to homogeneity has been subject to discussion. On the one hand, heterogeneity can improve the representation of multiple stakeholder groups and generate a wider range of ideas and solutions (Robinson & Dechant, 1997). On the other hand, heterogeneity can lead to many conflicting opinions thereby delaying the decision-making process. Despite the drawbacks, most findings point to predominantly positive effects of diversity (Rao & Tilt, 2016).

Board diversity has the potential to enhance firm's CSR performance. Variety in directors' characteristics and expertise contributes significantly to a more comprehensive discussion on how to effectively address CSR issues and satisfy the needs of different stakeholders (Rao & Tilt, 2016). One of these distinguishing director characteristics is gender. Bear et al. (2010) discovered that having more female directors leads to improved CSR ratings. Another distinctive characteristic is age. Prior research suggests that director age is positively related to CSR performance (Rao & Tilt, 2016). According to Hafsi and Turgut (2013), both junior and senior directors are having a crucial role in improving CSR performance. Ethnicity forms the foundation for peoples' opinions and values which are reflected in a board member's actions. Selecting directors from minority groups allows for the development of more collective firm policies and the reduction of bias toward certain stakeholder groups (Rao & Tilt, 2016). Another key director characteristic is tenure. Longer director's tenure is associated with greater firm-specific knowledge. However, familiarity can also lead to a less critical attitude toward corporate management. Diversity in director tenure is thus presumably conducive to CSR performance (Harjoto et al., 2015). Finally, Krüger (2009) examined whether directors' experience of other board positions contributes to CSR. He argues that additional work experience both within and outside the current business sector is beneficial to CSR. In addition, it is argued that directors with multiple other board positions face greater reputational risk. Therefore, these directors will strive to meet the CSR benchmarks expected by stakeholders (Krüger, 2009). In conclusion, prior research shows potential for board diversity to impact CSR. Considering a variety of board diversity elements, this paper will further explore the influence of the board of directors on CSR performance.

2.5 Shareholder Proposals and Board Composition

Shareholder proposals and board composition are possibly mutually linked. The board of directors is partly responsible for the corporate governance of the firm and overseeing management performance (Harjoto et al., 2015). How effectively the board performs its duties depends on the composition of the board. Meanwhile, shareholders rely on the internal corporate governance structures to mitigate agency costs. When governance structures are weak, shareholders might experience a reduction in their shareholders wealth. This can be the case when a gap is perceived between desired CSR outcomes and actual values. As a result, shareholders' trust in the firm decreases and this incentivizes the filing of shareholder proposals (Perrault, 2015). Shareholder resolutions can relate to board composition, such as gender diversity, and have been found to be an effective instruments for inducing institutional change (Perrault, 2015). This illustrates that board composition and shareholder's perception of the firm are closely related and together can affect CSR.

3. RESEARCH HYPOTHESES

This chapter presents the hypotheses that are developed based on key theories from previous studies. The hypotheses are used to gain insights into the role of shareholder proposals, board composition diversity, and the interaction between both, on companies CSR performance.

3.1 Shareholder proposals

Shareholder involvement with CSR performance is likely to occur. Although not necessarily financially motivated, shareholders seem to attach value to firm investment in CSR (Dyck et al., 2019; Khoo et al., 2022). The explanation for this assumption lies in stakeholder theory which entails that the focus of the firm to maximize profits in favor of the shareholders has broadened to meeting stakeholder needs. Satisfying the interests of other stakeholders in the field of CSR is indirectly beneficial for the shareholder as well. It reduces long-term financial risks associated with social and environmental issues. Moreover, prior studies have found evidence that successfully engaging in CSR leads to higher net present value (Flammer, 2013; Servaes & Tamayo, 2013).

Shareholders are able to influence CSR performance after gaining more governance rights in recent years. In turn, to obtain critical resources from the shareholders, companies will have to respond to these influences (Fernando et al., 2014). Shareholder proposals are potentially a powerful tool to influence CSR. It indicates a certain level of pressure from shareholders and this can be perceived as a red flag by management. Although shareholder proposals are non-binding, it is likely they will be adopted if management fears reputational damage to their careers due to shareholder dissatisfaction (Monks et al., 2004). Another study from Dyck et al. (2019) notes that shareholder proposals are primarily used as leverage to improve the effectiveness of private negotiations leading to CSR changes. In summary, a positive relationship between shareholder interference and CSR performance is expected driven by the deployment of shareholder proposals. This leads to the following hypothesis:

H1: An increase in CSR related shareholder proposals will positively influence CSR performance

3.2 Board composition diversity

Redirecting the attention from shareholders to the board of directors, it can be assessed that the board has a central position in shaping CSR activities. The board of directors governs and controls management's actions and therefore has an important task in managing stakeholder engagement (Bear et al., 2010). Consistent with Freeman's stakeholder theory (1984), the board of directors must commit to allocating resources to non-financial objectives to satisfy stakeholder interests. For CSR, this means that the company will have to meet industry-wide CSR benchmarks to gain stakeholder approval for business activities. Legitimacy theory indicates that companies need this approval to continue to exist (Gray et al., 2009).

Consequently, the abilities and skillset of individual directors are of considerable value. A more heterogeneous board is expected to offer greater wisdom, which ought to make stakeholder advocacy easier. Several studies examined the relationship between board composition diversity and financial performance. The results of these studies are inconsistent, some find

evidence for a positive relationship between board composition and financial performance, while others find no evidence for a relationship at all (Rao & Tilt, 2016). Looking at studies examining the relationship between individual board characteristics and CSR, there are substantial findings that indicate a positive relationship between the two constructs. Bear et al. (2010) mentioned that having more female directors contributes to higher environmental corporate social responsibility. Furthermore, director's experience from other board positions seems to lower negative CSR outcomes. A higher number of other board positions may lead to more CSR related experience that affects one's attitude toward CSR performance (Marquis & Lee, 2013). In addition, directors with multiple board positions face greater reputational and career risk when associated with CSR failure. Age, ethnicity and tenure are also critical factors in improving CSR performance (Krüger, 2009; Hafsi & Turgut, 2013). Taken together, it can be assumed that diversity in the board of directors is likely to have a positive impact on CSR performance.

H2: More diversity in the composition of the board of directors will positively influence CSR performance

3.3 Shareholders and Board of Directors

Shareholder proposals and board composition are potentially interrelated. According to Perrault (2015) more heterogeneous boards generate higher levels of shareholder trust in the organization. A diverse board of directors provides a comprehensive knowledge base, and in addition, it should be easier to emphasize with different stakeholder groups. These components lead to enhanced shareholder perceptions of the board's capabilities and reliability. If there is more confidence in board monitoring, shareholders will be more reluctant to submit shareholder proposals. Simultaneously, it is argued in the paper that shareholder activism might play a critical role in reshaping boards when diversity levels are low. Both interaction scenarios can affect CSR performance levels. Hence, the following hypothesis is established:

H3: There is no statistically significant relationship between shareholder proposals and board composition in their influence on CSR performance

4. RESEARCH DESIGN

In this section the research design is outlined. First, the data collection and sample procedure are described. After, the key variables – the dependent, independent, and control variables – will be defined and elaborated on. Finally, the chapter concludes with a preliminary data analysis of the descriptive statistics and correlations. Additional information on the variable definitions can be found in Appendix A.

4.1 Data sources

The primary relation examined is to what extent the board of directors and shareholders influence CSR performance. The influence of the board of directors is captured by the board diversity level, and shareholders' influence is reflected by the absolute number of CSR related shareholder proposals submitted for annual or special meetings. Data on board diversity and shareholder proposals is gathered from Institutional Shareholder Services (ISS) and CSR data from MSCI (previously KLD). Data on the control variables is gathered from CompStat and CRSP. These data sources can be retrieved from Wharton Research Data Services (WRDS) and are widely acknowledged sources containing reliable information about publicly traded S&P 1500 firms (Harjoto et al., 2015). The S&P 1500 index covers approximately 90% of the equity market capitalization in the U.S. Examining a significant selection of these S&P 1500 firms therefore provides a comprehensive understanding of the relationship between internal stakeholders and CSR performance for North American firms.

4.2 Sample selection

The sample of this study consists of S&P 1500 firms during the time window 2010-2019. This period is selected because it is after the peak of the financial crisis in 2008 and pre Covid-19 which started in 2020. Moreover, panel data allow for examination of changes in variables over time. A 1-year time lag is used for CSR performance, as research shows it usually takes time before the effects of changes in board composition and number of shareholder proposals are reflected in CSR results (Harjoto et al., 2015). Consequently, the 2019 observations for board composition and shareholder proposals are not included in the study. The merged dataset contains 5,621 observations for 446 unique firms after deleting irrelevant or incomplete firm-year items. Next, new variables are created to match the objective of the study. Multiple imputation technique is applied to generate substitutes for the few missing values for director's age and tenure (Rubin & Schenker, 1991). For director ethnicity the categories 'unknown' and 'prefer not to disclose' are removed as it cannot give an indication about how diverse the board is. Shareholder proposals deal with missing observations due to absent classification of resolution type. Hence, these observations are removed as well. After creating the CSR proxy, 38 observations are missing. This means that for all three dimensions, employee relations, environment, and product characteristics, values about strengths and concerns are unknown. No imputation method can be used to substitute these missing values without introducing biases, so these CSR proxies will be omitted. Finally, a large portion of the missing inputs of control variables are also removed. Continuous variables are winsorized at the 1 and 99 percent level. An inspection of the extreme values shows these are in line with expectations of the variables. One last check is performed to verify that only firms are included

in the final dataset for whom all observations over the time period 2010-2019 are present. After omitting a total of 1,641 observations for 48 unique firms, there is a final dataset with 3,980 firm-year observations for 398 unique S&P 1500 firms.

TABLE 1: Sample Selection and Sample Distribution

Panel A: Sample selection procedure of the internal stakeholder sample

	N	
Sampling procedure	Cases	Firm-years
Total observations of firms with board composition, shareholder proposal and CSR performance data	446	5,621
Less: Firms with missing observations in *MSCI, ISS, Compustat and CRSP* dataset	(48)	(1,641)
Final internal stakeholder sample for the regression design	398	3,980

Panel B: Frequency of firm-years by CSR performance year (N = 3,980)

Year	Frequency	Percent	Cumulative Frequency
2010	3,980	10.0	398
2011	3,980	10.0	796
2012	3,980	10.0	1,194
2013	3,980	10.0	1,592
2014	3,980	10.0	1,990
2015	3,980	10.0	2,388
2016	3,980	10.0	2,786
2017	3,980	10.0	3,184
2018	3,980	10.0	3,582
2019	3,980	10.0	3,980

Panel A of this table presents the sample selection procedure. Panel B presents the frequency distribution of CSR observations per firm-year in the period 2010-2019.

4.3 Key measures

4.3.1 CSR proxy

To measure CSR performance, MSCI data (WRDSa, 2023) is used following research from Harjoto et al. (2015) and Nguyen et al. (2020). In this dataset, companies are scored annually on various CSR dimensions based on qualitative data as surveys, media coverage, and financial statements. The dimensions considered in the study are *environment, employee relations, and product characteristics*. The MSCI dimensions *diversity* and *corporate governance* are excluded to avoid multicollinearity with the independent variables board diversity and shareholder proposals. A firm is evaluated on 'strengths' and 'concerns' across 5 to 7 sub-items related to the specific category. A binary rating is applied, meaning that a value of 1 represents a strength or concern on that issue, score of 0 is otherwise. To obtain a single dimension proxy for environment, employee relations, and product characteristics each, the dummy values per strength and concern item are summed and then divided by the number of categories that dimension counts (Harjoto et al., 2015). The average strength and concern value per dimension retains a scale between 0 and 1. After that, the average strength values of each dimension are summed to arrive at a single strength CSR proxy. The same applies to concerns.

This single strength or concern proxy is also divided by the number of dimensions included in the count. Ultimately, a value between 0 and 1 is obtained for both CSR strength and CSR concern per firm-year. The final CSR proxy is established by reducing the strength value with the concern value which provides a comprehensive measure of CSR performance.

4.3.2 Board composition

The influence of the board of directors on CSR performance is measured by analyzing the board composition. Details on board composition are utilized from ISS (WRDS, 2023b), and more specifically five constructs are elected: director age, gender, ethnicity, tenure, and other major board positions (Harjoto et al., 2015). DIR_AGE consists of five categories: less than 40 years old, 40-49, 50-59, 60-69, and 70-years and older. DIR_GENDER is a dummy variable with two categories: 1 is female and 0 male. DIR_ETHINICITY has ten categories representing different subgroups in society: Caucasian, Asian, American, Black African, South Asian, Middle Eastern, Latin American, Pacific Islander, Other Ethnicity, and Mixed Race. DIR_TENURE contains six categories where it is assumed that on average a director term is 3 years, meaning a director gets elected for 3 years directly after voting (Hafsi & Turgut, 2013). Hence, the categories reflect 3 years each: tenure is less than 3 years, 3-5, 6-8, 9-11, 12-14, and more than 15 years of tenure. Lastly, DIR_OTHP reflects the number of other board positions the director fulfills. There are six categories: 0, 1, 2, 3, 4, 5 and more positions. For each of the board composition constructs a diversity index has been created using Blau's index of heterogeneity (Blau, 1977). Blau's measure follows the formula $1 - \Sigma Pi^2$, where P represents the share of individuals (directors) in each category, and i is the total number of categories. The heterogeneity index has a value ranging between 0 and 1, where 1 represents complete heterogeneity and 0 complete homogeneity of the board of directors. Finally, all the individual board heterogeneity indices are summed. Each index is valued at the maximum index that can be achieved within that category, which would be the scenario if each category of that construct is equally represented on the board[1]. Together, the sum of the individual board heterogeneity constructs forms the overall DIV measure of board composition.

4.3.3 Shareholder proposals

To analyze shareholder involvement in directing CSR performance, voting analytics of the ISS database are collected (WRDS, 2023c). The shareholder proposal section includes resolutions both related to corporate governance (GOV) and socially responsible investment (SRI). Therefore, the resolutions concerning CSR have to be identified from the corporate governance data by filtering on social and environmental aspects. Examples of CSR type of corporate governance resolutions include the requirement for a director with environmental expertise or reporting on pay disparity. Hereafter, the absolute number of shareholder proposals per firm-year is counted for both GOV and SRI proposals, which forms the predicting value for the regression analysis. This method is inspired by Khoo et al. (2022).

[1] E.g., the maximum value of a board construct with three categories is 0.67 ($=1 - (1/3^2 + 1/3^2 + 1/3^2)$).

4.3.4 Control variables

Prior literature identifies several control variables that have a significant impact on CSR performance. Firm specific control variables are firm size, ROA, leverage, and analyst following. According to Krüger (2009), large firms can be more prone to environmental and social issues and experience higher levels of public scrutiny. As a result, a positive correlation between *firm size* and CSR is expected. Return on Assets, *ROA,* gives an indication of the profitability and future financial performance of the firm. It is likely that more profitable firms have more resources available to allocate to non-financial performance objectives, positively affecting CSR (Harjoto et al., 2015). *Leverage* indicates firm's risk level. Prior studies found a positive association between leverage and CSR disclosure (Branco & Rodrigues, 2008; Katmon et al., 2019). This may suggests that firms with higher debt levels are more inclined to improve CSR performance to show it off. *Analyst following* is part of a firm's monitoring mechanism. Harjoto et al. (2015) report that analysts tend to give more favorable ratings to firms with superior CSR performance, giving firms an incentive to invest in their CSR. A board-level control is *board size*. Larger boards can contribute positively to CSR performance through increased monitoring capacity and expertise (Birindelli et al., 2018).

4.4 Descriptive statistics

Table 2, Panel A, provides descriptive statistics to give a preliminary impression of the data. The main item of analysis, CSR, has a mean of 0.154, implying that firms on average have more CSR strengths than concerns. Nevertheless, the small magnitude of the mean, median (0.00), and third quartile (0.33) coefficient of CSR performance suggests that high CSR performance of companies is scarce and that a significant portion of the firms is concentrated near the lower end of the scale. The overall board diversity value can range between 0 and 5, with 5 representing complete heterogeneity. The mean of 3.1 and the first quartile of 2.8 demonstrate that the average board in the sample is moderately diverse. Looking at the mean of individual board characteristics, it can be observed that director age, tenure, and other board positions are the most heterogeneous (*coef.* > 0.7). The least heterogeneous characteristic is ethnicity (*mean* = 0.3).

The descriptive statistics show that shareholder proposals are not frequently submitted. Both corporate governance proposals (GOV) and socially responsible investment proposals (SRI) have mean values of less than 1 and low first and third quartiles. The distribution of shareholder proposals, both GOV and SRI, is thus skewed to the left. The standard deviation of SRI proposals is twice as big as the mean (1.55 > 0.67). This indicates that the absolute number of SRI proposals per firm is quite widely distributed. As such, it seems that SRI proposals are primarily submitted relative to GOV proposals.

Concerning firm characteristics, ROA has a mean value of 0.06, implying that the average return on assets is 6.0%. The standard deviation is around the mean, so the variability is moderate. The average firm leverage on total assets is around 61.7%, and the average firm size is 9.42, equivalent to approximately $12 billion. The mean log of analyst following is 2.74, implying that around 15 analysts on average follow the firms in the sample. Finally, the board size mean value is 10 directors. As the median is also 10, this supports that most of the observations are clustered around the 10 board members.

4.5 Correlations

Table 2, Panel B provides information about correlations among CSR and the other key measures. There is a positive correlation between CSR and the diversity construct (0.227), meaning that more heterogeneity in board composition is expected to improve CSR performance. Other than the age construct, all individual diversity indicators are positively correlated with CSR. For the shareholder proposals, only the corporate governance type has a significant positive correlation with CSR (0.034). However, the value is rather low indicating a weak correlation. SRI proposals are positively correlated with board composition diversity, which suggest that an interaction term between the two might exists. It implies that more diverse boards have a higher likelihood of receiving SRI type of proposals. All the control items are positively correlated with CSR as well. Firms with increased CSR performance, would typically have a slightly higher ROA (0.053), proportion of debt financing (0.114), firm size (0.245), board size (0.188), and analyst following (0.196). A few strong correlations (value > 0.5) are observed across the indicators. The highest correlation occurs for shareholder proposals and SRI resolutions (0.98), and for age, gender, ethnicity, tenure, and other board positions with the overall diversity proxy (between 0.5 and 0.7). This can be explained from the perspective that the overall shareholder proposal measure is for a majority composed of SRI type of resolutions. Similarly, the diversity measure is composed of the individual director constructs.

TABLE 2: Descriptive Statistics and Correlation Matrix for Board Diversity Characteristics and Shareholder Proposals

Panel A: Descriptive Statistics

Variables	N	Mean	SD	p25	Median	p75
CSR	3,980	0.154	0.270	0.000	0.000	0.333
DIV	3,980	3.087	0.539	2.820	3.191	3.471
DIR_AGE	3,980	0.707	0.141	0.625	0.741	0.803
DIR_GENDER	3,980	0.541	0.271	0.395	0.595	0.750
DIR_ETHNICITY	3,980	0.314	0.198	0.184	0.331	0.454
DIR_TENURE	3,980	0.832	0.144	0.792	0.864	0.919
DIR_OTHP	3,980	0.693	0.185	0.635	0.744	0.817
SHP	3,980	0.752	1.168	0.000	0.000	1.000
SHP_GOV	3,980	0.082	0.306	0.000	0.000	0.000
SHP_SRI	3,980	0.670	1.549	0.000	0.000	1.000
ROA	3,980	0.061	0.061	0.024	0.055	0.094
LEVERAGE	3,980	0.617	0.201	0.476	0.620	0.759
FIRM_SIZE	3,980	9.415	1.646	8.217	9.279	10.431
BOARD_SIZE	3,980	10.000	2.308	9.000	10.000	11.000
ANLST	3,980	2.741	0.529	2.485	2.833	3.091

Panel B: Correlations							
(1) *CSR*	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(2) *DIV*	0.227**						
(3) *DIR_AGE*	-0.012	0.331**					
(4) *DIR_GENDER*	0.234**	0.702**	0.012				
(5) *DIR_ETHNICITY*	0.102**	0.587**	0.082**	0.172**			
(6) *DIR_TENURE*	0.085**	0.523**	0.076**	0.237**	0.117**		
(7) *DIR_OTHP*	0.154**	0.601**	0.035*	0.204**	0.240**	0.219**	
(8) *SHP*	0.015	0.151**	0.007	0.090**	0.101**	0.077**	0.137**
(9) *SHP_GOV*	0.034*	0.029	0.015	0.005	0.004	0.025	0.042**
(10) *SHP_SRI*	0.009	0.152**	0.004	0.093**	0.105**	0.075**	0.135**
(11) *ROA*	0.053**	-0.036*	0.045**	-0.043**	-0.002	-0.025	-0.053**
(12) *LEVERAGE*	0.114**	0.313**	0.003	0.263**	0.186**	0.134**	0.221**
(13) *FIRM_SIZE*	0.245**	0.422**	-0.013	0.311**	0.244**	0.192**	0.375**
(14) *BOARD_SIZE*	0.188**	0.465**	0.094**	0.279**	0.276**	0.332**	0.321**
(15) *ANLST*	0.196**	0.264**	0.054**	0.140**	0.177**	0.133**	0.294**
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(2) *DIV*							
(3) *DIR_AGE*							
(4) *DIR_GENDER*							
(5) *DIR_ETHNICITY*							
(6) *DIR_TENURE*							
(7) *DIR_OTHP*							
(8) *SHP*							
(9) *SHP_GOV*	0.318**						
(10) *SHP_SRI*	0.982**	0.134**					
(11) *ROA*	-0.019	0.031	-0.026				
(12) *LEVERAGE*	0.093**	0.016	0.094**	-0.330**			
(13) *FIRM_SIZE*	0.294**	0.158**	0.276**	-0.277**	0.484**		
(14) *BOARD_SIZE*	0.153**	0.058**	0.148**	-0.142**	0.317**	0.563**	
(15) *ANLST*	0.169**	0.132**	0.151**	0.112**	0.041**	0.425**	0.203**

Table 2 Panel A presents the descriptive statistics for all key measures. Panel B presents the Pearson correlations between the constructs. *, and ** indicate statistically significant at 5% and 1 % respectively. The detailed variable description is provided in *Appendix A*.

4.6 Methodology

To evaluate whether a causal relationship exists between board composition, shareholder proposals and CSR a regression analysis will be performed. First, ordinary least square regression (OLS) is applied to analyze the individual relationships between (1) shareholder proposals and CSR, (2) board composition and CSR, (3) the combined effect of shareholder proposals and board composition on CSR. This is in line with the established hypotheses. As the CSR performance is measured for the successive year, a time lag for the predicting variables is formed. In addition, a lag for CSR is added to account for any serial correlation since the magnitude of CSR tends to be stable over time. Consequently, the following regression models have been created to test the relationship between absolute number of shareholder proposals received and CSR performance. Appendix A lists the definitions of the predictor and control variables.

$$CSR = \beta_0 + \beta_1 Lag_{CSR_{t-1}} + \beta_2 SHP_{t-1} + \beta_3 ROA_{t-1} + \beta_4 LEVERAGE_{t-1} + \beta_5 FIRM_{SIZE_{t-1}} + \beta_6 BOARD_{SIZE_{t-1}} + \beta_7 ANLST_{t-1} + \varepsilon; \quad (1)$$

$$CSR = \beta_0 + \beta_1 Lag_{CSR_{t-1}} + \beta_2 SHP_{GOV_{t-1}} + \beta_3 SHP_{SRI_{t-1}} + \beta_4 ROA_{t-1} + \beta_5 LEVERAGE_{t-1} + \beta_6 FIRM_{SIZE_{t-1}} + \beta_7 BOARD_{SIZE_{t-1}} + \beta_8 ANLST_{t-1} + \varepsilon; \quad (2)$$

CSR is a continuous proxy for which the value ranges between -1 and 1, whereas 1 represents the maximum attainable CSR performance for a firm. The outcome is dependent on the absolute number of governance type of proposals (GOV), and socially responsible investment type of proposals (SRI) submitted in the previous year. The prediction and test for hypothesis 1, is that a higher number of received shareholder proposals positively influences CSR performance. The magnitude of SRI proposals is likely to be greater than GOV proposals, as SRI proposals directly steer on CSR initiatives whereas GOV resolutions propose more indirect actions.

Models 3 and 4 relate to the effect of board composition heterogeneity on CSR performance. Board composition is expressed by the overall diversity measure as well as five individual director characteristic constructs. The diversity construct (DIV) has a value ranging between 0 and 5, as it composes the sum of the five individual director characteristics indexes. The prediction for hypothesis 2 is that higher board diversity positively influences CSR performance. This assumption is amplified by the significant positive correlation for DIV and CSR observed earlier, indicating there is a mutual relationship ($p<0.01$). To test this relationship the following models have been used.

$$CSR = \beta_0 + \beta_1 Lag_{CSR_{t-1}} + \beta_2 DIV_{t-1} + \beta_3 ROA_{t-1} + \beta_4 LEVERAGE_{t-1} + \beta_5 FIRM_{SIZE_{t-1}} + \beta_6 BOARD_{SIZE_{t-1}} + \beta_7 ANLST_{t-1} + \varepsilon; \quad (3)$$

$$CSR = \beta_0 + \beta_1 Lag_{CSR_{t-1}} + \beta_2 DIR_{AGE_{t-1}} + \beta_3 DIR_{GENDER_{t-1}} + \beta_4 DIR_{ETHNICITY_{t-1}} + \beta_5 DIR_{TENURE_{t-1}} + \beta_6 DIR_{OTHP_{t-1}} + \beta_7 ROA_{t-1} + \beta_8 LEVERAGE_{t-1} + \beta_9 FIRM_{SIZE_{t-1}} + \beta_{10} BOARD_{SIZE_{t-1}} + \beta_{11} ANLST_{t-1} + \varepsilon; \quad (4)$$

Multiple regression analysis is suitable to detect the effect of several predictors on CSR. Consequently, this type of analysis is used to examine the combined effect of shareholder proposals and board composition heterogeneity on CSR. Assessing both components in the same regression, opens the opportunity to obtain information on which of the two is more predominant in driving a CSR performance change. It could be the case that a more heterogeneous board generates more shareholder trust in the organization, thereby lowering the magnitude of the shareholder proposal effect on CSR (Perrault, 2015). Simultaneously, it is argued that shareholder activism might play a critical role in reshaping boards when diversity levels are low. Including an interaction term between shareholder proposals and board diversity should provide more insights on the mutual effects. In line with non-directional hypothesis 3, it is argued that no significant interaction effect exists. Model 5 shows the regressors to test in

the regression analysis. The variable SHP shows the total count of both governance and socially responsible investment type of shareholder proposals. The variable DIV represent the overall diversity measure.

$$CSR = \beta_0 + \beta_1 Lag_{CSR_{t-1}} + \beta_2 DIV_{t-1} + \beta_3 SHP_{t-1} + \beta_4 DIV_{t-1} * SHP_{t-1} + \beta_5 ROA_{t-1} + \beta_6 LEVERAGE_{t-1} + \beta_7 FIRM_{SIZE_{t-1}} + \beta_8 BOARD_{SIZE_{t-1}} + \beta_9 ANLST_{t-1} + \varepsilon \quad (5)$$

The models as described will be executed in the statistical software R-studio. A significance threshold of 5% (p-value = <0.05) is applied to evaluate whether a variable is statistically significant and justifies rejecting the null hypothesis. To ensure reliability of the outcomes, multicollinearity, independence of errors, and endogeneity are crucial conditions which will be studied in additional tests.

5. RESULTS

This chapter discusses the results from the analysis that was laid out in the methodology section above and assesses whether the hypotheses are supported. It encompasses the regressions results and robustness tests.

5.1 Ordinary Least Square Regression

Table 3 presents the results from the OLS analyses. First, it is evaluated whether there exists a serial correlation between the current CSR and the prior period's CSR. Across the five models tested, it can be observed that the values are positive and significant at a level of 1 percent. This is consistent with the time serial data used in this study and suggests that there is a systematic positive tendency in CSR performance. Second, the coefficient estimates in the several columns reveal more details on the potential effect and magnitude of the relationship between shareholder proposals, board composition and CSR. The coefficients and p-values of the first two models show that there is insufficient evidence for a causal relationship between shareholder proposals, both SRI and GOV related, and CSR performance. Hypothesis 1 is thus rejected. The success of CSR performance in the sample seems not to be impacted by the overall shareholder proposal construct.

Board composition heterogeneity is assessed in model 3 and 4 of the regression, where the overall diversity construct and individual components are addressed respectively. The aggregated diversity measure is significant at 1% level and has a magnitude of 0.021. This implies that a one-unit increase in overall board diversity encourages CSR performance growth. This is in line with hypothesis 2, stating that increased levels of board heterogeneity would increase firm's CSR performance. It follows that more diverse boards are better capable of serving stakeholder needs. Considering the underlying drivers of board diversity, it is observed that gender, ethnicity, and other board positions show a significant result (respectively $p < 0.1$, $p < 0.05$, $p < 0.05$). All three positively affect CSR performance, although the coefficient estimate of ethnic diversity is slightly more pronounced (*coef.* = 0.050). Furthermore, gender diversity has a weaker significance level of 10 percent. The other individual diversity constructs are not significantly found to be related to CSR.

Model 5 examines whether an interaction effect between shareholder proposals and board composition impacts CSR performance. This analysis reaffirms that support is found for a causal relationship between board composition and CSR, but not for shareholder proposals. The interaction term between shareholder proposals and board composition is nil in magnitude and insignificant (*coef.* = 0.000). Therefore, there is no compelling argument for a relation between the two measures, and hypothesis 3 is accepted. It merely implies that board heterogeneity appears to have a stronger impact on CSR accomplishments.

The coefficient estimates of the control variables are all positive and a majority is also significant. The log of total assets (FIRM_SIZE) and analyst following (ANLST) are positively significant for both shareholder proposal and board composition. This indicates that larger firms with more analyst following tend to have higher CSR performance.

Finally, the adjusted R-squared is 0.47, meaning that approximately 47% of the variance in the model is covered by the variables included.

Table 3: Ordinary least square regressions on shareholder proposals, board composition and CSR

	CSR (1)	CSR (2)	CSR (3)	CSR (4)	CSR (5)
LAG_CSR	0.578***	0.578***	0.575***	0.573***	0.575***
	(27.52)	(27.56)	(27.07)	(27.07)	(27.03)
DIV			0.021***		0.021***
			(3.07)		(3.08)
DIR_AGE				-0.027	
				(-1.38)	
DIR_GENDER				0.023*	
				(1.88)	
DIR_ETHNICITY				0.050**	
				(2.02)	
DIR_TENURE				-0.011	
				(-0.37)	
DIR_OTHP				0.036**	
				(2.08)	
SHP	-0.002				-0.003
	(-0.92)				(-0.19)
SHP_GOV		0.012			
		(1.17)			
SHP_SRI		-0.003			
		(-1.17)			
DIV X SHP					0.000
					(0.06)
ROA	0.078	0.076	0.066	0.064	0.068
	(1.26)	(1.23)	(1.05)	(1.04)	(1.09)
LEVERAGE	0.020	0.020	0.010	0.008	0.010
	(0.87)	(0.89)	(0.45)	(0.38)	(0.43)
FIRM_SIZE	0.017***	0.017***	0.014***	0.013***	0.015***
	(3.87)	(3.74)	(3.36)	(2.74)	(3.51)
BOARD_SIZE	0.003	0.003	0.002	0.002	0.002
	(1.32)	(1.33)	(0.96)	(1.33)	(0.93)
ANLST	0.028***	0.027***	0.025***	0.025***	0.025***
	(3.13)	(3.15)	(2.78)	(2.72)	(2.87)
Constant	-0.187***	-0.185***	-0.206***	-0.159***	-0.210***
	(-7.85)	(-7.74)	(-8.23)	(-5.46)	(-8.01)
Adj. R^2	0.467	0.467	0.468	0.469	0.468
Observations	3,980	3,980	3,980	3,980	3,980

Table 3 shows the result of the OLS regression on whether shareholder proposals (*SHP*) and board composition heterogeneity (*DIV*) are associated with CSR performance (i.e. *CSR*). The remaining variable definitions are available in Appendix A. All regressions include the Fama-French 48 industries and year fixed effects, and standard errors are clusters based on firm and industry. The parentheses include the estimated t-statistics. *, **, and *** indicate statistically significant at 10, 5, and 1 % respectively.

To account for multicollinearity, Variance Inflation Factors (VIF) are determined. VIF presents the degree to which multicollinearity has inflated the variance of the derived regression coefficients. Generally, a lower level of VIF is preferred. Problematic levels of multicollinearity start to arise when the VIF value is higher than 5. Table 4 shows the VIF values for all five main regressions performed in this study. All values are below 2.5, and a majority is even close to 1. This suggests there is minimal correlation among the predictors in the models, and multicollinearity can be ruled out.

Table 4: VIF-values OLS regressions (model 1 to 5)

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
LAG_CSR	1.078	1.079	1.080	1.102	1.089
DIV			1.420		1.561
DIR_AGE				1.029	
DIR_GENDER				1.224	
DIR_ETHNICITY				1.141	
DIR_TENURE				1.176	
DIR_OTHP				1.273	
SHP	1.112				1.561
SHP_GOV		1.048			
SHP_SRI		1.103			
DIV X SHP					1.077
ROA	1.229	1.231	1.233	1.237	1.245
LEVERAGE	1.424	1.425	1.463	1.467	1.466
FIRM_SIZE	2.369	2.382	2.261	2.330	2.394
BOARD_SIZE	1.477	1.479	1.624	1.674	1.625
ANLST	1.360	1.362	1.379	1.408	1.382
Observations	3,980	3,980	3,980	3,980	3,980

Table 4 shows the Variance Inflation Factor (*VIF*) for the models used in the OLS regression analyses. The construct presents the degree of variance in the regression coefficient caused by possible multicollinearity.

In addition, endogeneity is being addressed. Endogeneity entails that omitted variables or simultaneity bias the predictor variables, so that these key measures are not independent of the error term. Prior studies have observed endogeneity between the board composition and corporate social responsibility measures (Harjoto et al., 2015; Katmon et al., 2019). Table 5 shows the results of the Durbin test, which is a well-known statistical method to observe whether endogeneity is present in the model or not. The Durbin test is applied to the shareholder proposal model, board composition model, and interaction model between both constructs. The individual components of shareholder proposals and board composition are omitted, as the aggregated measures are sufficiently representative. If the Durbin test statistic has a value equaling 2, there is no endogeneity. When the value is higher (lower) than 2, there is negative (positive) dependence on errors. The Durbin values in table 5 depict values less than 2 for all key measures which suggests there is positive endogeneity in the main regression models.

Table 5: Durbin test for endogeneity			
	SHP	DIV	SHP x DIV
DURBIN	0.915	0.944	0.945
***P* VALUE**	0.000	0.000	0.000

Table 5 shows the Durbin test values to examine whether endogeneity exists in the main regression models. The Durbin test assumes a null hypothesis where the residuals of the model do not exhibit any autocorrelation. The alternative hypothesis states that a positive or negative dependence on errors is present.

5.2 Two-Stage Least Square Regression

Two-Stage Least Square (2SLS) regression analysis is conducted to deal with the endogeneity found for shareholder proposals, board composition, and the interaction term. Instrumental variables are added to the main regression models to assess whether this improves the coefficient estimates' reliability. The instrumental variables selected are the lagged version of the key measures - shareholder proposals, board composition, and interaction term shareholder proposals x board composition –, return on assets (ROA), log of total assets (FIRM_SIZE), firm age (FIRM_AGE), sales growth (SLS_GR), and annual returns on stock investments (RET). These instrumental variables are found to be good estimators of exogenous effects for the main constructs in the models. Harjoto et al. (2015) state that larger, older, and more profitable firms are projected to have greater board diversity and be exposed to more public scrutiny.

In the first stage, regression models are utilized for shareholder proposals (SHP), board composition diversity (DIV), and the interaction between both (SHP x DIV). These parameters turn into the dependent variable and the instrumental variables are used to predict values to isolate the endogenous effect. These predicted values that are generated for the endogenous variable can be used in the second phase of the analysis. In the second stage of the analysis, we conduct another regression for the original main models, (1) the relationship between shareholder proposals and CSR, (2) the relationship between board composition and CSR, and (3) the combined effect of shareholder proposals and board composition on CSR. All are held constant with the OLS regression except the predicted values for the independent variables. The results are robust when both the 2SLS and OLS regressions display similar results.

Table 6 displays the first and second stage analysis results. The reliability of the instrumental variables is verified with the F-values and Wald-test. The F-values of all models are above 10 and significant, indicating that the instrumental variables are related to the endogenous variable. In addition, the Wald-test values are quite high supporting this conclusion. The instrumental variable sales growth shows a significant relationship with both shareholder proposals and board composition. Firm age is only found significant for board composition. Furthermore, the first stage models all present a strong significant relation between the key parameter and their lagged variable, suggesting the existence of a serial correlation.

In the second stage of the 2SLS regression model, shareholder proposals are observed as statistically significant at a 10% level. This contradicts the results from the OLS regression were an insignificant relationship between shareholder proposals and CSR was noted. For the diversity of board composition a positive and significant relation with CSR is detected, consistent with the results from the OLS regression and strengthening hypothesis 1. In addition,

no significant effect is detected for the interaction term and CSR. This observation also aligns with the OLS regression. The same hold for the magnitude, sign, and significance levels of the control variables. In summary, a majority of the results of the 2SLS analysis are consistent with the OLS regression results in table 3 which grants robustness to my results.

Table 6: Two-stage least square (2SLS) regressions for shareholder proposals, board composition, and CSR

	First stage SHP	Second stage CSR	First stage DIV	Second stage CSR	First stage SHP x DIV	Second stage CSR
LAG_CSR		0.577***		0.574***		0.574***
		(28.07)		(26.85)		(27.37)
LAG_DIV			0.532***			
			(26.82)			
DIV				0.029***		0.021***
				(3.92)		(3.08)
LAG_SHP	0.507***					
	(8.64)					
SHP		-0.010*				-0.001
		(-1.87)				(-0.35)
Lag_DIVxSHP					0.506***	
					(8.65)	
DIV X SHP						-0.002
						(-1.27)
ROA	0.570*	0.088	0.114	0.063	2.256**	0.077
	(1.91)	(1.39)	(0.99)	(1.00)	(2.39)	(1.21)
LEVERAGE		0.018		0.006		0.008
		(0.82)		(0.28)		(0.39)
FIRM_SIZE	0.179***	0.020***	0.004	0.013***	0.622***	0.018***
	(5.95)	(4.05)	(0.17)	(3.09)	(5.61)	(3.66)
BOARD_SIZE		0.003		0.001		0.001
		(1.31)		(0.95)		(0.92)
ANLST		0.028***		0.024**		0.025***
		(3.12)		(2.69)		(2.77)
FIRM_AGE	-0.001		-0.036**		-0.001	
	(-0.58)		(-2.22)		(-0.46)	
SLS_GR	-0.000*		0.000***		0.000*	
	(-1.80)		(3.08)		(-1.80)	
RET	0.013		0.010		0.084	
	(0.16)		(0.62)		(0.32)	
Constant	-0.749***	-0.208***	-0.216***	-0.215***	-2.857***	-0.229***
	(-5.02)	(-7.78)	(7.85)	(-8.41)	(-8.19)	(-8.09)
Adj. R^2	0.280	0.468	0.832	0.469	0.308	0.468
F	27.24	59.26	48.94	59.54	31.08	57.55
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000
Wald	225	448	378	432	259	331
Prob > Wald	0.000	0.000	0.000	0.000	0.000	0.000
Observations	3,980	3,980	3,980	3,980	3,980	3,980

Table 6 shows the result of the Two-stage least square (2SLS) regressions. The instrumental variables are the lagged version of the key measure of that particular analysis, return on assets (*ROA*), log of total assets (*FIRM_SIZE*), firm age (*FIRM_AGE*), sales growth (*SLS_GR*), and annual returns on stock investments (*RET*). The first stage parameters are used to predict values to isolate the endogenous effect. In the second stage, these predicted values are used in the main regression model. All regressions include industry and year fixed effects, and standard errors are clusters based on firm and industry. The parentheses include the estimated t-statistics. *, **, and *** indicate statistically significant at 10, 5, and 1 % respectively.

5.3 Robustness Test

To control for the influence that industry fixed effects potentially have on CSR performance, a benchmark for CSR performance per industry is determined. The sample is distributed across 48 industry portfolios according to the Fama-French 48 industries model (Kenneth, 2023). For each industry the mean level of CSR performance is computed. The CSR value per firm-year is then benchmarked against the industry average to obtain a weighted representation. It is important to identify CSR levels per industry, as industries differ significantly in its core business activities, working conditions, public expectations, and government regulations. For example, businesses in the utilities industry are facing considerably more environmental risks and attract greater media attention. Shareholders will evaluate the firm's performance therefore against its peers and react on extreme deviations, among others, via shareholder proposals (Barnett et al., 2022). Fearing reputational damage and the loss of crucial stakeholders, companies in more pressured industries are likely to be more responsive to the mechanisms that stakeholders use to promote CSR (Flammer, 2013).

Table 7 shows the OLS regression results when Adjusted CSR is taken as dependent metrics. Adjusted CSR is composed of the firm-year CSR minus the industry average CSR performance for that specific year. The results are overall consistent with the OLS regression results in table 3. Diversity in board composition has a significant and positive relation with Adjusted CSR performance. Furthermore, no significant effect is found for shareholder proposals and the interaction term between shareholder proposals and board composition. This suggests that industry differences in CSR performance cannot be clearly assigned to the contribution of shareholder proposals, but rather to board composition differences among industries. Regarding the control variables, most results are also in line with the OLS regression in table 3. In general, the results from Adjusted CSR, table 7, are in line with the results from CSR, table 3, and provide robustness to our results.

Table 7: OLS regressions corrected for industry benchmark by Fama-French 48 industries

	ADJ. CSR (1)	ADJ. CSR (2)	ADJ. CSR (3)	ADJ. CSR (4)	ADJ. CSR (5)
LAG_ADJCSR	0.578***	0.578***	0.575***	0.573***	0.575***
	(27.52)	(27.56)	(27.07)	(27.07)	(27.03)
DIV			0.021***		0.021***
			(3.07)		(3.08)
DIR_AGE				-0.025	
				(-1.38)	
DIR_GENDER				0.023*	
				(1.88)	
DIR_ETHNICITY				0.050**	
				(2.02)	
DIR_TENURE				-0.011	
				(-0.37)	
DIR_OTHP				0.036**	
				(2.08)	
SHP	-0.002				-0.003
	(-0.92)				(-0.19)
SHP_GOV		0.012			
		(1.17)			
SHP_SRI		-0.003			
		(-1.17)			
DIV X SHP					0.000
					(0.06)
ROA	0.078	0.076	0.066	0.064	0.068
	(1.26)	(1.23)	(1.05)	(1.04)	(1.07)
LEVERAGE	0.020	0.020	0.010	0.008	0.009
	(0.87)	(0.89)	(0.45)	(0.38)	(0.43)
FIRM_SIZE	0.017***	0.017***	0.014***	0.013***	0.015***
	(3.87)	(3.74)	(3.36)	(2.74)	(3.51)
BOARD_SIZE	0.003	0.003	0.002	0.002	0.002
	(1.32)	(1.33)	(0.96)	(1.33)	(0.93)
ANLST	0.028***	0.027***	0.025***	0.025***	0.025***
	(3.13)	(3.15)	(2.78)	(2.72)	(2.87)
Constant	-0.249***	-0.247***	-0.268***	-0.221***	-0.273***
	(-8.95)	(-8.78)	(-9.63)	(-6.48)	(-9.12)
ADJ. R^2	0.401	0.401	0.402	0.403	0.402
F	45.35	44.64	45.56	42.9	44.09
Prob > F	0.000	0.000	0.000	0.000	0.000
Observations	3,980	3,980	3,980	3,980	3,980

Table 7 shows the coefficient estimates for the effect of shareholder proposals (*SHP*) and board composition heterogeneity (*DIV)* on Adjusted CSR. Adjusted CSR presents the CSR score relative to the industry benchmark. This benchmark is established using the Fama-French 48 industry classification. The regressions include industry and year fixed effects, and standard errors are clusters based on firm and industry. The parentheses include the estimated t-statistics. *, **, and *** indicate statistically significant at 10, 5, and 1 % respectively.

6. CONCLUSION

This chapter summarizes and discusses the key findings of the regression analysis on the effect of shareholder proposals and board composition on CSR performance. The results are compared with the formulated hypotheses. Furthermore, the limitations of the study are provided as well as future research suggestions.

6.1 Summary of results and key findings

The key objective of this research is to examine to what extent shareholders and board directors can influence a firm's CSR performance. The constructs that are used to measure the influence of both internal stakeholders are shareholder proposals and board composition respectively. *CSR*, is the variable of interest which reflects how a company performs on the dimensions of *environment, employee relations,* and *product characteristics*. As the CSR performance is measured for the successive year, a time lag for the predicting variables is formed. This way serial correlation is also accounted for. The sample consists of 3,980 observations for 398 S&P 1500 firms over the period 2010 to 2019. Five models are composed for ordinary least square regression to test shareholder proposals and board composition on both an aggregated as disaggregated level. In addition, it is examined whether an interaction term exists between the two main measures.

The influence of shareholder proposals (SHP) on CSR is first measured at the aggregated level. The OLS result shows an insignificant coefficient estimate for shareholder proposals. The second model disaggregates shareholder proposals in corporate governance resolutions, and socially responsible investment resolutions. Also this time no significant relationship is observed. The Two-Stage Least Square analysis emphasizes these results except for the fact that SHP is significant at the 10% and the individual constructs are insignificant. The SHP coefficient is negative, suggesting that shareholders tend to adjust the CSR performance downwards potentially in a reaction on CSR overinvestment as a result of principal-agent problems. Overall, the evidence is inconclusive to draw a conclusion on whether there is a relationship between shareholder proposals and CSR performance. The deviations between the OLS and 2SLS may be due to the instrumental variables selected. This makes that hypothesis one is rejected.

Board composition diversity (DIV) and its five individual constructs – age, gender, ethnicity, tenure, and other board positions – are also tested in the regression models. The overall diversity is found to be positively significant at a 1% level for both OLS and 2SLS. This implies that a one-unit increase in overall board diversity encourages CSR performance growth. This is in line with hypothesis two, stating that increased levels of board heterogeneity would increase firm's CSR performance. Considering the individual director predictors, only GENDER, ETHNICITY, and OTHER BOARD POSITIONS are positively significant. In sum, it can be concluded that board composition heterogeneity on gender, ethnicity, and other board positions are vital components to increase CSR performance. The results enlighten the literature, as it confirms that a more heterogeneous board is beneficial to CSR rather than more obstructive to decision-making.

The interaction term (SHP * DIV) is found to be statistically insignificant for both OLS and 2SLS. Given that the shareholder proposal term had only a weak negative relationship with

CSR, it is reasonably expected that the interaction term would be negligible. There is no evidence that shareholder proposals and board composition together influence CSR performance.

Finally, a robustness test is performed for industry differences in CSR according to Fama-French 48 model. The independent variable, *ADJCSR*, shows CSR performance measured against the industry norm. Results are consistent with the OLS outcomes as just discussed. Diversity in board composition is significant and positively related to Adjusted CSR performance. Further, no significant effect is found for shareholder proposals nor the interaction term. This implies that more diverse board of directors tend to perform increasingly above industry average.

6.2 Limitations and future research suggestions

The thesis is impacted by multiple limitations which affect the validity of the aforementioned results. First, shareholder's influence on CSR is measured by the absolute number of shareholder proposals per firm-year. However, it is likely that a significant part of the variance in CSR is not explained by solely this construct. Large institutional shareholders most likely engage in private engagement with the firm's management to realize changes in firm performance. Think about e-mails, phone calls, and in-person conversations. As institutional shareholders often hold a large share of the stock for S&P 1500 firm, my test results for shareholder proposals may be weakly significant since the effect of private engagement is not captured by my tests. One note is that it is difficult to obtain data on the private engagements, let alone on a large scale. The results found for shareholder proposals in our model therefore rather provide a lower bound on the shareholder proposals effect on CSR performance.

A second limitation regarding shareholder proposals is that it is unknown whether the proposal seeks to strengthen or weaken CSR based on the available data. It is possible that shareholders make proposals in reaction to excessive CSR spending that may be considered wasteful. If you were to make a separate proxy for proposals related to CSR strength and a separate one for CSR concern, a negative coefficient for shareholder proposals as obtained from our regression model would be justifiable.

A third limitation is that my model does not consider legislation differences across the U.S. states. There may be different rules across states for the threshold of stock ownership that is required before a shareholder proposal can be submitted, which consequently reduces the effect of the performed tests in this study. Moreover, incentives for board composition diversity potentially vary across states. This can bias the degree of influence shareholders or directors have over CSR performance.

A future research suggestion is to make a distinction between material and immaterial CSR performance indicators. Material CSR indicators are most likely long-term and have a more significant impact compared to immaterial CSR performance items. In this way, the potential effect of greenwashing can also be eliminated, what occurs when firms solely invest in minor immaterial CSR issues to distract the focus from material shortages.

A second suggestion for future research would be to extend the research frame from North America to Europe where large and listed firms mandatorily need to disclose their ESG performance as of 2023. Other interesting aspects include gender quotas in certain countries

such as Germany, where regulations require a 30% presence of women in top positions. For these types of legislation, it can be evaluated whether board diversity actually led to better CSR results.

A third suggestion for future research would be to include the selection process of directors in the model. Doing so allows for the collection of data on whether board composition heterogeneity is occurring by chance or that the hiring procedure is adjusted accordingly.

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APPENDICES

Appendix A. Variable definitions

Variable	Definition
	Variables used in the main analysis
Independent variables	
<u>*Board of Directors*</u>	
DIV	Overall diversity measure, expressed as the sum of the five individual board characteristic constructs: DIR_AGE, DIR_GENDER, DIR_ETHNICITY, DIR_TENURE, and DIR_OTHP. Each individual construct represents a heterogeneity index with a value ranging between 0 and 1 based on Blau's index of heterogeneity (computed as $1 - \Sigma Pi^2$, where *P* represents the share of individuals (directors) in each category, and *i* is the total number of categories). As these five constructs are summed, the value of DIV varies between 0 and 5, where 5 means complete board heterogeneity. Method following Harjoto, Laksmana and Lee (2015)
DIR_AGE	Index of heterogeneity for the age of directors with five categories: less than 40, 40-49, 50-59, 60-69, and 70-years and above. The index is standardized between 0 and 1. Following Harjoto et al. (2015) (source: ISS)
DIR_GENDER	Index of heterogeneity for gender with two categories: male and female. The index is standardized between 0 and 1. Following Harjoto et al. (2015) (source: ISS)
DIR_ETHNICITY	Index of heterogeneity for ethnicity consisting of 10 categories: Caucasian, Asian, American, Black African, South Asian, Middle Eastern, Latin American, Pacific Islander, Other Ethnicity, and Mixed Race. The index is standardized between 0 and 1. Following Harjoto et al. (2015) (source: ISS)
DIR_TENURE	Index of heterogeneity for director tenure. Tenure represents the number of terms the director has been in position. A director term is assumed to be 3 years on average. Six categories include: less than 3 years, 3-5, 6-8, 9-11, 12-14, more than 15 years. The index is standardized between 0 and 1. Following Harjoto et al. (2015) (source: ISS)
DIR_OTHP	Index of heterogeneity for the number of other directorships held by the director. Six categories include: 0, 1, 2, 3, 4, and 5 and more positions. Following Harjoto et al. (2015) (source: ISS)
<u>*Shareholders*</u>	
SHP	Overall shareholder proposal measure, which represents the sum of the absolute values of SHP_GOV and SHP_SRI proposals that have been submitted (source: ISS)
SHP_GOV	The absolute number of corporate governance-related shareholder proposals submitted. Following Khoo et al. (2022) (source: ISS)
SHP_SRI	The absolute number of socially responsible investment-related shareholder proposals submitted. Following Khoo et al. (2022) (source: ISS)

Appendix A. Variable definitions continued

Variable	Definition
	Variables used in the main analysis
Interaction term	
DIV x SHP	The interaction term between shareholder proposals (SHP) and board diversity (DIV). It represents the extent to which the relationship between shareholder proposals and the dependent variable is influenced by the level of board diversity, and vice versa.
Dependent variables	
CSR	Sum of the CSR strengths minus CSR concerns across 3 categories: employee relations, environment, and product characteristics. Following Ngyuen et al. (2020) (source: MSCI)
Product Characteristics	
Quality	Strength - Dummy variable equaling 1 when product quality is high and sustainable, 0 otherwise (source: MSCI)
Product Safety	Concern - Dummy variable equaling 1 when product safety is at risk, 0 otherwise (source: MSCI)
Marketing-Contracting Concern	Concern – Dummy variable equaling 1 when controversies with contracted marketing professionals exists about promoted goods, 0 otherwise (source: MSCI)
Antitrust	Concern – Dummy variable equaling 1 when controlling party exists in the market. pressuring fair competition. 0 otherwise (source: MSCI)
Employee Relations	
Employee Involvement	Strength – Dummy variable equaling 1 when employee engagement is frequent, 0 otherwise (source: MSCI)
Cash Profit Sharing	Strength – Dummy variable equaling 1 when firm offers cash profit sharing to majority of its employees, 0 otherwise (source: MSCI)
Employee Health and Safety	Strength – Dummy variable equaling 1 when firm provide good health benefits and maintains high safety standard, 0 otherwise (source: MSCI)
Health and Safety Issues	Concern – Dummy variable equaling 1 when there are frequent health and safety issues identified, 0 otherwise (source: MSCI)
Union Relations	Concern – Dummy variable equaling 1 when firm has bad relations with its unions, 0 otherwise (source: MSCI)
Employee Relations Other Concerns	Concern- Dummy variable equaling 1 when firm is confronted with residual employee relation concerns, 0 otherwise (source: MSCI)
Environment	
Pollution Prevention	Strength – Dummy variable equaling 1 when firm has strong pollution prevention programs, 0 otherwise (source: MSCI)
Clean Energy	Strength – Dummy variable equaling 1 when firm uses clean energy for a significant amount of its energy needs, 0 otherwise (source: MSCI)

Appendix A. Variable definitions continued

Variable	Definition
	Variables used in the main analysis
Substantial Emissions	Concern – Dummy variable equaling 1 when firm's emission of toxic chemicals is excessive, 0 otherwise (source: MSCI)
Climate Change	Concern – Dummy variable equaling 1 when firm's contribution to climate change is high, 0 otherwise (source: MSCI)
Environment Other Concerns	Concern – Dummy variable equaling 1 when firm is confronted with other environmental concerns, 0 otherwise (source: MSCI)
Control variables	
ROA	Return on Assets computed by dividing net income by total assets (source: Compustat North America)
LEVERAGE	Leverage, determined by dividing total liabilities by total assets. Following Branco & Rodrigues (2008) (source: Compustat North America)
FIRM_SIZE	Natural logarithm of total assets (total assets in $ million). Following Branco & Rodrigues (2008) (source: Compustat North America)
BOARD_SIZE	Absolute number of board members per firm. Following Birindelli et al. (2018) (source: ISS)
ANLST	Natural logarithm of the mean of the number of analyst followings. Following Harjoto et al. (2015) (source: I/B/E/S)
Instrumental variables	
FIRM_AGE	Numbers of years since the firm's founding date. Following Harjoto et al. (2015) (source: CRSP)
SLS_GR	Net sales growth on a yearly basis. Following Harjoto et al. (2015) (source: Compustat North America)
RET	Annual stock return. Following Harjoto et al. (2015) (source: CRSP)