Board characteristics and aggressive CSR engagement: Do CSR committees provoke or restrain?

Abstract

Over the past two decades, numerous research studies have focused on the effect of board characteristics on corporate social responsibility (CSR) engagement. However, whether boards favor or oppose aggressive CSR engagement above an optimal level remains to be explored. Thus, we extend prior studies and explore boards' association with aggressive CSR engagement by estimating aggressive CSR level according to multiple firm characteristics. We also investigate the moderation role of CSR committees in the connection between boards and aggressive CSR engagement. Drawing on an international sample of 39,855 firm-year observations from 2002 to 2019 and performing a fixed-effects regression, we find that board gender and cultural diversity, board skills, board meeting attendance, and board independence are positively associated with aggressive CSR engagement. However, CSR committees negatively moderate the relationship between board characteristics and aggressive CSR engagement. To check the robustness of the findings, we ran several tests adopting alternative aggressive CSR proxy, addressing the endogeneity, and conducting heterogeneity analyses for firm and institutional characteristics.

Keywords: aggressive CSR; board characteristics; CSR committee

1. Introduction

Diverse stakeholders, including investors, regulators, and the research community, are increasingly demanding corporate social responsibility (CSR) (Martínez-Ferrero et al., 2021; Zhou, 2022) which has emerged as a leading subject in the business world (Kim et al., 2014a). Corporate boards are the main CSR decision-makers (Radu & Smaili, 2021) and the important governance bodies responsible for monitoring managers and incentivizing them to engage in CSR and build relationships with stakeholders (Al-Mamun & Seamer, 2021; Jian & Lee, 2015; Zhou, 2022). Aggressive CSR engagement refers to engagement in CSR beyond an optimal level and is disproportionate to firm financial and governance characteristics (Al-Shaer et al., 2023; Bu et al., 2021; Uyar et al., 2023a). A few recent studies have distinguished between normal and abnormal CSR, since engagement in CSR can be subject to managerial decisions, thus diverging from an optimal level (Al-Shaer et al., 2023; Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022). CSR engagements that divert from their optimal level may decrease shareholders' wealth by shifting wealth from shareholder to stakeholder (Khan et al., 2023a). Shareholders' reaction to beyond-optimal CSR engagement may depend on the availability and growth of the firm's financial resources (Al-Shaer et al., 2023). In this case, aggressive CSR engagement above an optimal level may depend on the boards of directors' discretion and judgment, and the structure of boards, including diversity, skills, meeting attendance, and independence.

The structure of the board may affect aggressive CSR engagement in two different ways. On the one hand, managers can overinvest in CSR to increase their individual benefits such as social status and personal reputation at the expense of shareholders' wealth which can lead to agency problems (Chin et al., 2013; Jensen & Meckling, 1976; Zhou, 2022). In this case, aggressive CSR engagement will likely be disciplined and monitored by the board of directors (Bu et al., 2021). On the other hand, firms that over-engage in CSR can maintain support from various stakeholders, including investors, employees, customers, and suppliers, which helps improve firms' financial position (Freeman, 2010). Greater engagements in CSR can be associated with better brand loyalty (Sen & Bhattacharya, 2001), more retention of high-quality employees (Greening & Turban, 2000), and thus better productivity, and better innovation (Bos-Brouwers, 2010). Moreover, firms' engagement in CSR can give them opportunities to access finance (Bhandari & Javakhadze, 2017; Cheng et al., 2014) and cheaper equity financing (El Ghoul et al., 2011). CSR is an important

driver that impacts the firm reputation and financial performance (Javed et al., 2020; Khan et al., 2024; Saeidi et al., 2015; Zhu et al., 2014). Therefore, firms could intensify their CSR engagements to enhance liquidity and improve their financial position and business image (Sun & Cui, 2014). In this case, the board of directors is likely to support the over-engagement in CSR to improve firm performance by gaining support from stakeholders (Bu et al., 2021; Chiu & Sharfman, 2018).

This study addresses the following research questions:

> *(1) Given the prevailing two different views of the role of the board of directors, what impact do various board characteristics have on aggressive CSR engagement?*
>
> *(2) What is the potential moderating role of CSR committees in the relationship between board characteristics and aggressive CSR?*

Our investigation should be important from the perspectives of agency, stakeholder, and upper echelons theories. The agency view of CSR holds that the board's monitoring role restrains managerial self-serving behaviors and, hence, curtails aggressive CSR engagement (Bu et al., 2021; Zhou, 2022). However, stakeholder theory posits that for companies to increase wealth, they must work closely with stakeholders (Benson et al., 2011). Due to increased pressure from stakeholders, boards may provoke engagement in aggressive CSR activities to better respond to stakeholders' demands (Radu & Smaili, 2021). Finally, from the perspective of the upper echelons theory, firms may pursue aggressive CSR engagement beyond an optimal level when corporate boards enjoy several demographic attributes and have a CSR committee operating on the board, which may help firms allocate their financial resources effectively between CSR and other initiatives, such as investments. Hence, this research informs firm managers and stakeholders about directors' and CSR committees' stance on excessive CSR engagement. It could be useful for firms in designing top management teams and committees taking into account the stakeholders' expectations.

This study explores the effect of board characteristics on aggressive CSR engagement and contributes to the literature in several ways. *First*, we examine whether boards favor or oppose aggressive CSR engagement above an optimal level. Previously, while Bu et al. (2021) studied

talented inside directors' associations with aggressive CSR engagement, Zhou et al. (2022) investigated lone-insider boards'[1] associations with aggressive CSR engagement, Jian and Lee (2015) examined the association of chief executive officer (CEO) compensation with aggressive CSR commitment, Al-Shaer et al. (2023) investigated value-relevance of aggressive CSR engagement on firm value with the moderating effect of cash flow and firm growth, and Gerged et al. (2024) explore the relationship between aggressive CSR engagement and the recognition of CSR awards. We extend these prior studies by investigating the effect of selective critical board attributes, which were largely ignored in the aforementioned studies, on aggressive CSR engagement. Thus, we contribute to the corporate governance literature by demonstrating that board characteristics (board gender and cultural diversity, board skills, board meeting attendance, and board independence) play a key role in aggressive CSR actions. *Second*, from a methodological perspective, following a few recent studies (Al-Shaer et al., 2023; Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022), we distinguish between normal and abnormal (i.e., aggressive) CSR engagement following separate regressions for firm characteristics. We consider that optimal and aggressive CSR engagement may be a function of firm attributes based on industry–year fixed effects which have not been considered in recent studies at all. *Third*, we investigate the moderating role of CSR committees in the connection between board attributes and aggressive CSR engagement. In particular, we examine whether CSR committees play a monitoring or advisory role regarding aggressive CSR, presuming that while their monitoring role restrains aggressive CSR practices, their advisory role provokes it. The monitoring role involves overseeing managerial discretionary behavior and is likely to constrain aggressive CSR actions, whereas the advisory role involves supporting managers in formulating and determining strategic decisions, including CSR decisions (Faleye et al., 2011), and is likely to provoke aggressive CSR. As an increasingly important CSR mechanism, we focus on CSR committees' key role in strategic CSR decision-making.

Drawing on an international sample of 39,855 firm-year observations from 2002 to 2019 and executing a fixed-effects regression, we find that board gender and cultural diversity, board skills, board meeting attendance, and board independence are positively associated with aggressive CSR engagement. We posit that our findings do not contradict prior studies but extend them since prior

[1] A lone-insider board is a board on which the CEO is the only inside director (Zhou, 2022).

investigations do not distinguish between optimal and excessive CSR. Our result shows that board attributes are influential on excessive CSR beyond the optimal level i.e., deviating from the optimal CSR level does not imply that directors diminish CSR level; on the contrary, they motivate firms for the highest level of CSR engagement. We also show that the existence of a CSR committee negatively moderates the relationship between board characteristics and aggressive CSR engagement. This evidence is particularly important for researchers, managers, and practitioners, as prior studies have generally identified a provoking, rather than a restraining, role of CSR committees in CSR engagement. For example, prior studies have found that CSR committees foster CSR performance (Orazalin, 2020) and CSR reporting and assurance (Kılıç et al., 2021), helping firms mobilize their financial resources for CSR (Heubeck and Ahrens, 2024; Khan et al., 2024; Wasiuzzaman et al., 2022). Our evidence suggests that CSR committees restrain directors' propensity for aggressive CSR engagement. Finally, our channel test reveals that the director-aggressive CSR link is sensitive to some firm-level and institutional characteristics such as firm size, cash flow, investment, law system, and public governance quality. We verified the robustness of our findings and addressed endogeneity concerns using entropy balancing, propensity matching, and instrumental variable analysis.

The remainder of the paper is structured as follows: Section 2 explains the theoretical framework and outlines the research hypotheses. Section 3 describes the research methodology. Section 4 reports the empirical results, and Section 5 discusses the results, draws conclusions, and suggests implications and future research opportunities.

2. Theoretical Background and Hypotheses

2.1 Board Characteristics and Aggressive CSR Engagement

Boards of directors play monitoring and advisory roles in corporate governance (Adams et al., 2010; Bu et al., 2021) that promote governance quality (Katmon et al., 2019). The agency theory of CSR holds that managers engage in aggressive CSR actions beyond an optimal level to extract private benefits, improve their reputations, and enhance their social positions among stakeholders (Bu et al., 2021; Chin et al., 2013; Jensen & Meckling, 1976; Uyar et al., 2023a; Zhou, 2022). It follows that boards' monitoring function is likely to constrain managerial self-serving behavior, hence reducing aggressive CSR engagement. In contrast, stakeholder theory asserts that for

companies to increase wealth, they must work closely with stakeholders (Benson et al., 2011). Companies that engage in aggressive CSR activities generally enjoy support from a wide range of stakeholders, including employees, customers, investors, suppliers, local communities, competitors, and regulators (Bu et al., 2021; Jian & Lee, 2015). Stakeholders may make specific demands regarding CSR activities (Matuszak et al., 2019), leading companies to engage in aggressive CSR actions to meet their expectations. Hence, boards of directors are likely to recognize stakeholders' needs and interests and advise engagement in aggressive CSR activities.

Aggressive CSR engagement may hinge on the boards of directors' discretion, judgment, and decision-making processes, and the structure of boards, including diversity, skills, meeting attendance, and board independence, may foster aggressive CSR engagement above an optimal level. Upper echelons theory claims that CSR engagement can go beyond specific regulations and standards and is largely affected by managerial discretion (Lee et al., 2018; McWilliams & Siegel, 2001; Zhou, 2022) and the demographic and personal characteristics of senior managers (Firoozi & Keddie, 2022; Li et al., 2022). It explains that boards of directors are important predictors of effective organizational decisions (Orazalin, 2020) and sustainability strategies (Post et al., 2015; Shahab et al., 2018). The theory highlights the effect of senior managers' characteristics in determining firms' strategic choices, which in turn influences business performance (Orazalin & Baydauletov, 2020). Based on this argument, directors' decisions reflect their specific skills, knowledge, and features (Hambrick, 2007; Shahab et al., 2018).

Research evidence has shown that female directors are conservative and stronger monitors (Adams & Ferreira, 2009), and tend to lean towards lower-risk financial decision-making (Levi et al., 2014; Saeed et al., 2016; 2021). The evidence has also revealed that having more female directors brings effective governance and may provoke boards to engage in greater CSR engagement (Al-Shaer & Zaman, 2016; Khan et al., 2019; Liao et al., 2015; Kizys et al., 2023; Liu et al., 2023). Female directors are likely to be stakeholder-oriented (Katmon et al., 2019) and have a wider range of skills and expertise, which may enhance their CSR judgment and discretion (Galbreath, 2017). A diverse board with more female directors can generate new ideas and prompt insights into societal and market realities (Katmon et al., 2019), in turn, enhancing boardroom discussions and impacting decision-making processes (Katmon et al., 2019; Liao et al., 2015; Post et al., 2011). Female directors exhibit communal, democratic, and participative directorship styles (Bear et al.,

2010; Ben-Amar et al., 2017). They can bring broader perspectives to boards, enabling them to effectively address and fulfill the needs of various stakeholders (Harjoto et al., 2015; Martínez-Ferrero et al., 2021; Uyar et al., 2021). Moreover, female directors are likely to utilize firms' resources to better respond to stakeholder demands (Uyar et al., 2021; Zhang et al., 2013), and thus advise engagement in aggressive CSR activities.

Directors with diverse cultural backgrounds provide unique thinking and divergent insights that widen boards' perspectives on decision-making processes (Dodd et al., 2022; Katmon et al., 2019), enhancing their ability to grasp stakeholders' needs in a CSR context (Harjoto et al., 2015). Culturally diverse boards have different perceptions, which generate more effective and feasible ideas and encourage group debate (Butler, 2012, Martínez-Ferrero et al., 2021). Board cultural diversity sends a strong signal to stakeholders that a company is likely to understand different views and mindsets when making decisions (Miller & del Carmen Triana, 2009), which may affect corporate engagement in CSR activities.

Board members with different skills and professional backgrounds are likely to be committed to CSR (Martínez-Ferrero et al., 2021; Naheed et al., 2021; Li et al., 2022). Directors with diverse skills and expertise advise managers on their strategic decision-making (Godos-Díez et al., 2018; Hillman et al., 2000), which supports firms' long-term goals. including CSR. When board compositions include collective skills and experiences, including knowledge of corporate strategies, communal and regulatory affairs, and relationships with external stakeholders (Hillman et al., 2000), they may foster corporate engagement in CSR initiatives. Moreover, frequent board meetings enhance board discussions, result in effective decision-making processes (Shahbaz et al., 2020; Vafeas, 1999), and increase boards' capacity for effective management of oversight and consultation (Shahbaz et al., 2020). During board meetings, directors can generate new ideas and insights about a firm's future strategies, highlight problems, and deliver prompt solutions (Mangena et al., 2012).

The presence of independent directors on boards enhances the monitoring of managerial self-serving attitudes and safeguards the interests of stakeholders through CSR initiatives (Al-Mamun & Seamer, 2021; Arora & Dharwadkar, 2011). Independent directors are likely to align the interests of shareholders and stakeholders as drivers of long-term strategies (Hillman et al., 2008).

Empirical evidence has shown that boards dominated by independent directors are likely to engage in CSR projects (Al-Mamun & Seamer, 2021; Arora & Dharwadkar, 2011; De Villiers et al., 2011; Kim et al., 2014b). They are also more motivated to engage in CSR initiatives since they are likely to be aware of how a firm's sustainable performance improves its reputation and corporate image among external stakeholders, including investors, suppliers, and creditors (De Villiers et al., 2011).

Hence, we assumed that boards of directors are likely to support aggressive CSR actions that go beyond specific obligations, are subject to managerial discretion, and have different characteristics that garner support from diverse stakeholders. Given the preceding discussion, we developed the first hypothesis (H1) as follows:

> *H1: Board characteristics (i.e., gender diversity, board independence, board meeting attendance, board skills, and cultural diversity) are positively associated with aggressive CSR engagement.*

2.2. The Moderating Effect of CSR Committees

CSR committees are known as effective governance bodies that focus on specific CSR tasks and provide insightful advice to managers about stakeholder expectations (Al-Shaer & Zaman, 2018; Amran et al., 2014; Elmaghrabi, 2021; Homroy & Slechten, 2019). Upper echelons theory claims that the establishment of a CSR committee leads to improved CSR performance through effective CSR practices (Orazalin, 2020; Shahab et al., 2018). An organization that has a CSR committee with specific CSR expertise working with the board will impact the firm's engagement in CSR (Velte & Stawinoga, 2020). Drawing on upper echelons theory, Hambrick (2007) and Shahab et al. (2018) highlighted the moderating effect of CSR committees in restraining or provoking aggressive CSR engagement.

The advisory role of CSR committees focuses on social, environmental, and performance issues (Homroy & Slechten, 2019), facilitates access to information and other resources (De Villiers et al., 2011), and supports managers' strategy formulation and implementation (Faleye et al., 2011). Stakeholder theory proposes that corporate boards function through CSR committees to balance the interests of various stakeholders. CSR committees help to manage CSR risks and opportunities (García-Sánchez et al., 2019; Peters & Romi, 2015; Radu & Smaili, 2021), implement and review

firms' CSR policies and activities (Dixon-Fowler et al., 2017; Liao et al., 2015), and support boards in CSR decision-making processes that foster CSR engagement. CSR committees play an important advisory role in satisfying stakeholder demands and improving sustainability, which may encourage directors to engage in aggressive CSR activities. Consequently, the establishment of a CSR committee as part of a corporate board demonstrates the board's CSR orientation and commitment (Uyar et al., 2021), which may stimulate the board of directors to take aggressive CSR actions. Given the foregoing discussion, we formulated the second hypothesis (H2a) as follows:

> *H2a: A CSR committee positively moderates the association between board characteristics and aggressive CSR engagement.*

Agency theory holds that self-serving managers may overinvest in CSR to improve their images and preserve their legacies (Bu et al., 2021; Chin et al., 2013). CSR committees' monitoring function is likely to constrain managerial self-serving behaviors. CSR committees help foster compliance with CSR policies and standards, oversee CSR activities, and ensure that stakeholders' expectations are met (Martínez-Ferrero et al., 2021). According to agency theory, CSR committees are expected to monitor environmental and social practices and set CSR objectives for companies (Dixon-Fowler et al., 2017; Godos-Díez et al., 2018; Martínez-Ferrero et al., 2021). The monitoring role of CSR committees can include controlling and authorizing CSR decisions and evaluating managerial discretion regarding CSR (Alhossini et al., 2021). Based on the agency view of CSR, the monitoring function of CSR committees is likely to constrain aggressive CSR engagement and negatively moderate the impact of board characteristics on aggressive CSR commitment. Given the foregoing discussion, we developed the second hypothesis (H2b) as follows:

> *H2b: A CSR committee negatively moderates the association between board characteristics and aggressive CSR engagement.*

3. Research Methodology

This section describes the research variables, sample, and empirical methodology. We formulated research models to incorporate direct associations and moderating effects.

3.1. Variables

To calculate levels of aggressive CSR, following prior studies (Al-Shaer et al., 2023; Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022), we integrated the following variables into the model described by Equation 1[2]: proxy considering environmental, social, and governance strengths and concerns (ESG), cash and cash equivalents (CASH), advertising expenditure (ADV), earnings before interest and tax plus depreciation and amortization (EBITDA), board independence (Bindepend), financial leverage (DEBT), net profit margin (NPM), market to book value (MB), firm size (FSIZE), research and development expenditure (RD), and asset turnover (ATR).

The residuals obtained from Equation 1 were the first proxy of aggressive CSR (ESG-res1), from which we developed two more aggressive CSR proxies—ESG-res2 and ESG-res3. Whereas ESG-res2 was taken from the top quartile of ESG-res1 (taking 1 if the residual was in the top quartile or 0 otherwise), ESG-res3 was based on whether the residual was positive or not (if ESG-res1 was positive, it took 1 or 0 otherwise (Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022).[3] Whereas ESG-res1 was used in the baseline analysis, ESG-res2 and ESG-res3 were used in the robustness tests.[4]

Following prior studies, we selected several board characteristics as independent variables that could explain aggressive CSR engagement, as detailed in the theoretical section. We chose board gender diversity (Bgenderdiv), board independence (Bindepend), board meeting attendance (Battendance), board skills (Bskills), and board cultural diversity (Bculturaldiv) as prominent board characteristics based on prior studies (Dodd et al., 2022; Dwekat et al., 2020; Kılıç et al., 2021; Kuzey et al., 2022; Martínez-Ferrero et al., 2021).[5]

The moderating variable was the existence of a sustainability/CSR committee or team (CSRcom), which took 1 if such a committee existed or 0 otherwise. We carefully selected this moderator due to its key position in firms' CSR engagement, as CSRcom has been the key variable of interest in several recent studies (Kılıç et al., 2021; Wasiuzzaman et al., 2022; Al-Shaer et al., 2023).

[2] Please see Equation 1 in section 3.3.
[3] While ESG-res1 was used in the main analysis, ESG-res2 and ESG-res3 were used as alternative proxies in the robustness checks.
[4] Equation 1 in section 3.3. describes how ESG-res1 was obtained.
[5] Equations 2–7 in section 3.3. describe the formulation of the research models.

In line with prior studies (Bu et al., 2021; Jian & Lee, 2015; Uyar et al., 2021; Gerged et al., 2023; Uyar et al., 2023b; Zhou, 2022), we integrated a battery of control variables that were likely to affect aggressive CSR engagement and firm value: board size (Bsize) and CEO duality (CEO) controlled for board governance, whereas firm size (Fsize), Leverage, return on assets (ROA), Tobin's Q (TobinQ), capital expenditures (Capex), and current ratio (Currentr) controlled for financial characteristics. Furthermore, free float (Ffloat) controls for ownership structure. Lastly, WGI (World Governance Indicators), the law system of nations (Law), and economic development (GDP) control the institutional environment. While the board is the main strategic decision-making body driving all corporate strategies including CSR, financial characteristics constrain or promote CSR engagement via impacting available funds. While ownership structure shows shareholder power which managers should consider in corporate policies and practices, institutional environment proxies might play a role in firms' CSR engagement level.

The detailed definitions of the variables used to calculate aggressive CSR and the main model are shown in Panels A and B of Table 1, respectively.

INSERT TABLE 1 HERE

3.2. Sample

The sample included 39,855 cross-country and cross-industry observations from 2002 to 2019, for which the data were retrieved from the Thomson Reuters Eikon database. Thomson Reuters Eikon database has been a reliable source of social and environmental performance data in prior studies (Albitar et al., 2024; Kuzey et al., 2024). We retrieved the raw data and subjected them to various data-cleaning steps, then organized them and transferred them to the software environment for subsequent analyses. Data screening was a vital step before testing the research hypotheses (Hair et al., 2019). The research sample included observations from non-financial sectors, countries with at least 10 unique firms, and available observations after the first phase of the analysis (see the formulation of the research models in the forthcoming subsection). First, we winsorized some of the research variables because there was high variability around the mean values or extreme values. Hence, we winsorized ADV, CASH, EBITDA, NPM, DEBT, MB, RD, and ATR from Phase 1, and Bsize, ROA, Leverage, TobinQ, Capex, and Currentr from Phase 2. We replaced the extreme

values at the one percent level on the two tails with their winsorized counterpart values (Cox, 2006).

Next, we analyzed the multivariate outliers using the minimum covariance determinant method (Verardi & Dehon, 2010). Following the outlier detection step, we detected and removed 19 significant multivariate outliers from the research sample. We then performed a missing value analysis. The descriptive statistics from the missing value analysis revealed that the ratios of the missing values ranged between 0.18% (Fsize and Leverage) and 2.91% (Bindepend)[6]—significantly less than the suggested threshold value of 5% or 10%. Missing values with less than 5% ratios were deemed inconsequential (Schafer, 1999), and missing values with less than 10% ratios were unlikely to cause estimation bias during the analysis (Bennett, 2001).

The final step was the imputation phase. Although variables with less than 5% missing values are generally inconsequential, we subjected them to imputation using the Markov chain Monte Carlo method. Two of the research variables (Battendance and Bskill) were not imputed due to the large ratios of the missing values.

Detailed information regarding the sample distribution is as follows: First, the initial sample had 59,192 records. From the initial sample, 13.333 records of the financial sectors, 445 firm-year observations of the countries with less than 10 firms, 1,592 records of non-available observations from Phase-1, 3,948 missing observations of Law, and 19 significant multivariate outliers are excluded. The final sample included 39,855 firm-year observations, which were used in the following analyses (Table 2, Panel A).

Second, the sector-level and yearly sample distributions are reported in Panel B of Table 2. The sector-level sample distribution showed that the ratios ranged between 2.91% (telecommunications services) and 21.56% (industrials).[7] Also, the results for the year-level sample distribution showed that the ratios ranged between 0.79% (2002) and 12.05% (2019). The

[6] The ratios of the missing values were Bindepend (2.91%), Bgenderdiv (1.82%), Currentr (1.32%), Capex (1.17%), Ffloat (0.99%), TobinQ (0.78%), ROA (0.57%,) Bsize (0.42%), Leverage (0.18%), and Fsize (0.18).

[7] The sample distribution based on the sector is summarized as industrials (21.56%), consumer cyclicals (19.38%), basic materials (12.99%), technology (10.79%), health care (9.45%), consumer non-cyclicals (9.06%), energy (8.25%), utilities (5.61%), and telecommunications services (2.91%).

country-level sample distribution is reported in Table A1 (see Appendix). The results revealed 36 countries with 5,250 unique firms and 39,855 firm-year observations.

INSERT TABLE 2 HERE

3.3. Research Models

We proposed models with linear associations and models with moderating effects which incorporate two phases. To examine these models, we used country, industry, and year-fixed effects in our regression methodology. This approach helps mitigate potential time-invariant endogeneity (Feenstra et al., 2013; Rjiba et al., 2020), control for omitted variable bias (Baltagi, 2013), and address heterogeneity at the country, industry, and year levels (Wooldridge, 2010). It is suitable for our study since the sample includes multiple observations within each country, industry, and year.

To capture these fixed effects, we included country, industry, and year as dummy variables in the regression models. Specifically, we used the Least Squares Dummy Variable (LSDV) approach (Gujarati, 2014) to control for heterogeneity at these levels.

We formulated the baseline research models in two phases. In the first phase, we generated the dependent variable for the aggressive CSR engagement level following a regression analysis (Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022). In the second phase, we incorporated the generated dependent variable based on the residuals of the first phase into the baseline research models.

Phase 1 (extraction of aggressive CSR): We aimed to generate the dependent variables for the aggressive CSR engagement level in this phase. Thus, we formulated the initial model to generate residuals as the dependent variables for use in the subsequent models. Equation 1 describes the formulation of Phase 1 (Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022; Al-Shaer et al., 2023), as follows:

$$ESG_i = \beta_0 + \beta_1.ADV_i + \beta_2.CASH_i + \beta_3.EBITDA_i + \beta_4.NPM_i + \beta_5.\ Bindepend_i + \beta_6.DEBT_i + \beta_7.MB_i + \beta_8.RD_i + \beta_9.FSIZE_i + \beta_{10}.ATR_i + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (1)$$

We performed country, industry, and year fixed-effects (FE) regression analysis to generate the residual ESG values (Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022). We incorporated these values

(ESG-res1, ESG-res2, and ESG-res3) as dependent variables in the subsequent baseline and robustness analyses (see the descriptions in Table 1).

The primary objective of utilizing residuals is to capture instances of aggressive CSR practices. We first estimate the expected or predicted ESG values for each firm using a regression model, as represented in equation (1). To determine how aggressive a firm's CSR activities are, we calculate residuals for each firm. These residuals are computed by taking the difference between the actual ESG score (ESG_{Actual}) and the predicted ESG score ($ESG_{Predicted}$) for that firm. The formula used for calculating residuals is as follows: $(Residuals)_i = (ESG_{Actual})_i - (ESG_{Predicted})_i$.

By calculating residuals in this manner, we can identify firms whose actual ESG scores deviate from what would be expected based on their board and financial characteristics. These deviations highlight firms that engage in unusually aggressive CSR practices.

Alternative dependent variables for the robustness check: We generated two further variables from the first phase and incorporated them as alternative dependent variables in the robustness test. With this aim, we generated ESG-res2 as a binary variable using the top quartile residual values. We assigned ESG-res2 a value of 1 for the top quartile residuals, which we called aggressive ESG, and assigned a value of 0 for the remaining values (Al-Shaer et al., 2023; Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022). Moreover, we generated ESG-res3 as the binary alternative dependent variable for the robustness test. We assigned ESG-res3 a value of 1 for the positive residuals denoting aggressive ESG and a value of 0 for the negative residuals (Al-Shaer et al., 2023; Bu et al., 2021; Jian & Lee, 2015; Zhou, 2022).

Phase 2 (baseline research models): We used one of the generated variables (ESG-res1) from Phase 1 in the baseline research models within the second phase. We formulated the country, industry, and year FE regression models using Equations 2–6 below.

$$ESG\text{-}res1_i = \beta_0 + \beta_1.\mathbf{Bgenderdiv_i} + \beta_2.Bsize_i + \beta_3.CEO_i + \beta_4.Fsize_i + \beta_5.ROA_i + \beta_6.Leverage_i + \beta_7.TobinQ_i + \beta_8.Capex_i + \beta_9.Currentr_i + \beta_{10}.Ffloat_i + \beta_{11}.WGI_i + \beta_{12}.Law_i + \beta_{13}.GDP_i + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (2)$$

$$ESG\text{-}res1_i = \beta_0 + \beta_1.\mathbf{Bindepend_i} + \beta_2.Bsize_i + \beta_3.CEO_i + \beta_4.Fsize_i + \beta_5.ROA_i + \beta_6.Leverage_i + \beta_7.TobinQ_i + \beta_8.Capex_i + \beta_9.Currentr_i + \beta_{10}.Ffloat_i + \beta_{11}.WGI_i + \beta_{12}.Law_i + \beta_{13}.GDP_i + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (3)$$

$$ESG\text{-}res1_i = \beta_0 + \beta_1.\mathbf{Battendance_i} + \beta_2.Bsize_i + \beta_3.CEO_i + \beta_4.Fsize_i + \beta_5.ROA_i + \beta_6.Leverage_i + \beta_7.TobinQ_i + \beta_8.Capex_i + \beta_9.Currentr_i + \beta_{10}.Ffloat_i + \beta_{11}.WGI_i + \beta_{12}.Law_i + \beta_{13}.GDP_i + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (4)$$

$$ESG\text{-}res1_i = \beta_0 + \beta_1.\mathbf{Bskills_i} + \beta_2.Bsize_i + \beta_3.CEO_i + \beta_4.Fsize_i + \beta_5.ROA_i + \beta_6.Leverage_i + \beta_7.TobinQ_i + \beta_8.Capex_i + \beta_9.Currentr_i + \beta_{10}.Ffloat_i + \beta_{11}.WGI_i + \beta_{12}.Law_i + \beta_{13}.GDP_i + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (5)$$

$$ESG\text{-}res1_i = \beta_0 + \beta_1.\mathbf{Bculturaldiv_i} + \beta_2.Bsize_i + \beta_3.CEO_i + \beta_4.Fsize_i + \beta_5.ROA_i + \beta_6.Leverage_i + \beta_7.TobinQ_i + \beta_8.Capex_i + \beta_9.Currentr_i + \beta_{10}.Ffloat_i + \beta_{11}.WGI_i + \beta_{12}.Law_i + \beta_{13}.GDP_i + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (6)$$

Baseline moderation analysis: We examined the moderating effect of CSRcom on the relationship between board characteristics and aggressive CSR using the dependent variable (ESG-res1) generated from Phase 1. To simplify the list of baseline models for moderation analysis, we formulated them using Equation 7, as follows:

$$Y_i = \beta_0 + \beta_1.X_{1i} + \beta_2.M_i + \beta_3.(X_{1i}*Mi) + \beta_4.X_{2i} + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (7)$$

In Equation 7, ESG-res1 is the dependent variable denoted by the "Y_i" term. Bgenderdiv, Bindepend, Battendance, Bskills, and Bculturaldiv are the independent testing variables denoted by the "X_{1i}" term. CSRcom is the moderating variable denoted by the "*Mi*" term. Finally, Bsize, CEO, Fsize, ROA, Leverage, TobinQ, Capex, Currentr, Ffloat, WGI, Law, and GDP are the control variables denoted by the "X_{2i}" term. According to the baseline direct associations, we performed a country–industry–year FE regression analysis using robust standard errors clustered by country to control the heteroscedasticity threat (Wooldridge, 2020).

4. Findings

4.1. Summary Statistics

The descriptive statistics for the research variables are reported in Table 3. Regarding Phase 1, the mean value for ESG was 40.31, ranging between 0.12 and 94.09, with relatively small variability around the mean value. Regarding Phase 2, the average for ESG-res1 was 0, for ESG-res2 it was 0.29, and for ESG-res3 it was 0.51. The mean values for the board characteristics were as follows: Bgenderdiv 13.86, Bindepend 73.63, Battendance 87.71, Bskills 53.75, and Bculturaldiv 8.48.

INSERT TABLE 3 HERE

4.2. Correlation Coefficients

The correlation coefficients for the baseline research models are presented in Table 4, based on Pearson's correlation analysis. Regarding the variables of interest, Bgenderdiv, Battendance, and Bculturaldiv had significant positive linear correlations with ESG-res1, ESG-res2, and ESG-res3 ($p < .05$), whereas Bindepend and Bskills had a significant negative linear correlation with ESG-res1, ESG-res2, and ESG-res3 ($p < .05$).

INSERT TABLE 4 HERE

Multicollinearity check: We examined multicollinearity by calculating the variance inflation factors (VIFs) of the independent variables (see Table A2 in the Appendix). The results showed that the VIF values ranged between 1.03 and 3.37—significantly less than the suggested cutoff value of 10 (Hair et al., 2019; Kennedy, 2008; Neter et al., 1996). Therefore, there was no multicollinearity problem regarding the independent variables in the research models.

4.3. Baseline Analysis

Linear analysis: We examined the baseline research models with the direct associations using the country–industry–year FE regression analysis results in Table 5. The results revealed that the board characteristics, including Bgenderdiv, Battendance, Bindepend, Bskills, and Bculturaldiv had significant positive associations with ESG-res1 ($p < .01$). This result supports H1 concerning the association between board characteristics (i.e., gender diversity, board independence, board meeting attendance, board skills, and cultural diversity) and aggressive CSR engagement. The finding confirms the upper echelons theory's claims such that the extent of CSR engagement is largely affected by the boards of directors' structure (Orazalin, 2020). The theory outlines the

influence of senior managers' attributes in determining firms' strategic choices, which in turn affects firm outcomes including CSR (Orazalin & Baydauletov, 2020). The result also supports the notion that the board monitoring mechanism aligns with the interests of stakeholders (i.e., stakeholder theory) (Benson et al., 2011).

INSERT TABLE 5 HERE

Moderation analysis: The moderating effect of CSRcom on the relationship between board characteristics (Bgenderdiv, Bindepend, Battendance, Bskills, and Bculturaldiv) and ESG-res1 is explained in Table 6. The results revealed that the interaction terms, including Bgenderdiv*CSRcom ($p<0.01$), Bindepend*CSRcom($p<0.01$), Battendance*CSRcom($p<0.01$), Bskills*CSRcom($p<0.01$), and Bculturaldiv*CSRcom ($p<0.10$) had significant negative relationships with ESG-res1.

Hence, the moderation analysis supports H2b concerning the negative moderating effect of CSR committees between board characteristics (i.e., gender diversity, board independence, board meeting attendance, board skills) and aggressive CSR engagement but rejects the alternative hypothesis H2a. This finding highlights the critical role of an upper-echelon CSR team in restraining other board members' desire for over-CSR commitment despite the past evidence indicating its provoking role in the CSR uptake of firms (Kılıç et al., 2021; Orazalin, 2020; Wasiuzzaman et al., 2022). Our evidence shows that CSR committees help to manage CSR risks as well as pursue opportunities (García-Sánchez et al., 2019; Radu & Smaili, 2021), review firms' CSR policies and activities (Dixon-Fowler et al., 2017; Liao et al., 2015), and balance other directors in boardrooms concerning CSR-associated decision-making. In undertaking this constraining role, they might be considering an equilibrium between shareholders' and other stakeholders' interests rather than overly focusing on other stakeholders' expectations to avoid exacerbating agency conflicts.

INSERT TABLE 6 HERE

4.4. Robustness Checks

To examine the robustness of the baseline analysis results, we conducted multiple further tests. We used alternative dependent variables for the linear and moderation analyses. We also addressed

endogeneity concerns using entropy balancing, propensity score matching, and two-stage least squares (2SLS) regression analysis. Finally, we incorporated the one-year lag of testing variables and differencing of the variables approaches for the baseline research models.

Alternative dependent variable: We used ESG-res2 and ESG-res3 as alternative dependent variables to assess the linear relationships in the research models (Tables 7 and 8). The results were fully compatible with the initial baseline results. In both analyses, the coefficients for board characteristics were significantly positive.

INSERT TABLE 7 HERE

INSERT TABLE 8 HERE

We also used ESG-res3 as the alternative dependent variable to examine the moderating role of CSRcom, as shown in Table 9. Although the results were mainly consistent with the initial moderation analysis results, there was one exception: the coefficient of Bskills*CSRcom lost its significance in the robustness check.

INSERT TABLE 9 HERE

Endogeneity: We generated an alternative sample using the entropy balancing method (Hainmueller & Xu, 2013) to address endogeneity concerns by effectively minimizing variations in the variables across the treatment and control groups. It can alleviate the self-selection bias that may arise from observable characteristics (Hainmueller, 2012). The entropy balancing method enables data to be reweighted in such a way that the covariate distributions in the reweighted data satisfy a set of specified moment conditions, which allows us to create a balanced sample (Hainmueller & Xu, 2013). In the analysis, we used a binary treatment variable by which the control group data could be reweighted to match the covariate moments in the treatment group (Hainmueller & Xu, 2012). Accordingly, the covariate imbalance improved after matching (Gaver & Utke, 2019; Hainmueller, 2012; McMullin & Schonberger, 2020). The entropy balancing method has been applied significantly in accounting and finance research (Garcia et al., 2021; Kyaw et al., 2022; Wang et al., 2022).

We generated binary variables to use as treatment variables, employing the variables for board characteristics—Bgenderdiv, Bindepend, Battendance, Bskills, and Bculturaldiv. We assigned a value of 1 to the observations with top quartile values for the board characteristic variables (the treatment group) and assigned a value of 0 to the remaining values (the control group) to be used in the entropy balancing.

Following alternative sample generation based on entropy balancing, we examined the baseline research models (Table 10). The results of the entropy balancing method are mainly consistent with the initial analysis results.

INSERT TABLE 10 HERE

Second, we generated an alternative sample using the propensity score matching method (PSM) with a one-to-one matching approach. As with the entropy balancing approach, we used the binary board characteristic variables as the treatment and control groups. We used records with top quartile values for the board characteristics as the treatment group and the remaining observations as the control group. We matched the top quartile values with the remaining identical values for the control variables.

To verify the correct application of the PSM methodology, we performed a diagnostic check using logistic regression analysis (Table 11, Panel A). The binary dependent variable indicates the treatment and control groups, taking a value of one for observations in the treatment groups—representing high levels of Bgenderdiv, Bindepend, Battendance, Bskills, and Bculturaldiv—and zero for the remaining observations. We ran two models for each group: the first model uses the full sample before matching, while the second model is based on the PSM-matched sample after the matching process. The findings show that the coefficients of the first models are statistically significant, demonstrating the differences between treatment and control groups. In contrast, the coefficients of the second model are mostly non-significant, with only a few exceptions. This indicates the success of the PSM matching methodology.

Additionally, the assumption of unconfoundedness is met by using the correct number of observed covariates (Bu et al., 2021; Jian & Lee, 2015; Uyar et al., 2021; Gerged et al., 2023; Uyar et al., 2023b; Zhou, 2022), as explained in detail in the variables section. The common support

condition is also satisfied, ensuring that for each covariate value, there is a positive probability of being both treated and untreated, meaning there are treated and control observations for each covariate value.

After generating the alternative sample, we reran the research models using the new alternative sample (Table 11, Panel B). The results are mainly aligned with the baseline analysis results.

INSERT TABLE 11 HERE

We also performed a 2SLS regression analysis to address endogeneity concerns, along with entropy balancing and propensity score matching approaches. We used two instrumental variables: (i) investor protection (InvProtection), and (ii) the one-year lag of the independent testing variables, in the 2SLS regression analysis (Murcia et al., 2021; Wang & Li, 2008). We reported the results for the first stage, the second stage, and the post-estimation test results in Table 12.

The first stage results indicate that the instrumental variables are correlated with the endogenous variables. The coefficients of the instrumental variables are statistically significant, thus meeting the relevancy criterion (Stock & Watson, 2015). Furthermore, the exogeneity condition is satisfied, as the p-values of the Hansen J statistics are relatively large, indicating that the instrumental variables are not correlated with the error term (Wooldridge, 2010).

The diagnostic test results confirm the suitability of the chosen instrumental variables. The significant Kleibergen-Paap rk LM statistic indicates that Bgenderdiv(t-1), Bindepend(t-1), Battendance(t-1), Bskills(t-1), Bculturaldiv(t-1), and InvProtection are not under-identified. Both the Cragg-Donald Wald F statistic and Kleibergen-Paap rk Wald F statistic are significant. This demonstrates the robustness of these instruments. The Stock-Yogo weak ID test critical values are lower than the Cragg-Donald Wald F statistics. This indicates the strength of the instruments. Finally, the non-significant Hansen J-statistics confirm the validity of these variables as instruments.

Regarding the second stage, which incorporates the predicted values of the endogenous variables from the first stage as proxies for the endogenous variables themselves, the findings are largely consistent with the initial baseline analysis results.

INSERT TABLE 12 HERE

Lagged models: We incorporate the one-year lag of the testing variables into the baseline research models to alleviate potential endogeneity (Lehoucq & Pérez-Liñán, 2014), threats of causal identification (Bellemare et al., 2017), the causal inference risk (Reed, 2014), and reverse causality risk (Steinberg & Malhotra, 2014). The results are reported in Table 13. Accordingly, the results are aligned with the initial baseline analysis results.

INSERT TABLE 13 HERE

Change model: We employ the change modeling method to alleviate potential reverse causality concerns (Tsang et al., 2019). The formulation of the change model is shown in equation (8)

$$\Delta y_i = \beta_0 + \beta_1 \Delta X_{1i} + \beta_2 \Delta X_{2i} + Country\ FE + Industry\ FE + Year\ FE + \varepsilon_i \quad (8)$$

In equation (8), the changes in the variables from t-1 to t are represented by "$\Delta X = X_t - X_{t-1}$". The dependent variable is ΔESG-res1 denoted by the "Δy_i" term. The independent testing variables are the board characteristics including ΔBgenderdiv, ΔBindepend, ΔBattendance, ΔBskills, & ΔBculturaldiv which are denoted by the "ΔX_{1i}" term. Also, the same control variables are incorporated in this model which are denoted by the "ΔX_{2i}" term.

The baseline research models are re-run using the change model approach (Table 14). According to the obtained results, the results are mainly compatible with the initial analysis results except for the coefficient of ΔBindepend, which became significantly negative in the robustness check.

INSERT TABLE 14 HERE

Heterogeneity analysis: Finally, we run several heterogeneity analyses drawing on firm and institutional characteristics that could affect the link between board structure and aggressive CSR engagement. The findings are reported in Table 15.

First, we run the main model with the interaction of firm size, cash flow, and capital expenditures (Table 15). Our reasoning for these additional tests is that larger and cash-rich firms might have greater financial resources and be exposed to greater public and regulatory scrutiny and firms having more capital expenditures might be financially more constrained for aggressive CSR

engagement (Al-Shaer et al., 2023; Lys et al., 2015; Gerged et al., 2023; Uyar et al., 2023b). We interacted board characteristics with these channels (i.e., firm size, cash flow, and capital expenditures) and found that firm size diminishes the effect of board attributes on aggressive CSR engagement which implies that directors of large firms are more prudent about aggressive CSR engagement. As expected, cash flow plays a role in female and foreign directors' positive effect on aggressive CSR engagement, but not on independent directors, directors having financial or sector expertise, and board attendance. In these diverging results, the directors' mission might be influential. For example, while female and foreign directors might consider a broader profile of stakeholders in deploying cash, independent and expert directors might consider shareholders' rights in that respect. We found a similar result for board attributes' effect on aggressive CSR engagement in investing firms. While female and foreign directors are in favor of aggressive CSR engagement in investing firms probably to reinforce firm legitimacy, expert and independent directors are against that.

Second, we run two tests taking into account the institutional characteristics and interacting law system (i.e., common and code law) (La Porta et al., 1998) and public governance strength (Khan et al., 2023b) with board attributes. The public governance and law systems are coercive institutional characteristics impacting firms' practices. The rationality behind this test is that coercive forces might play a role in enforcing board configuration and inciting firms for CSR engagement. After we ran the main model with the interaction of these variables, we observed that whereas common law affiliation amplifies board attributes' influence on aggressive CSR engagement, public governance strength weakens it.

INSERT TABLE 15 HERE

5. Discussion and Conclusion

In recent years, numerous prior research studies have focused on the effect of board characteristics on CSR engagement. However, whether boards favor or oppose aggressive CSR engagement above an optimal level remains unexplored. Thus, we extended prior studies by exploring the role of board characteristics in aggressive CSR engagement. We also examined whether CSR committees moderated the link between board attributes and aggressive CSR engagement.

We found that board gender and cultural diversity, board skills, board meeting attendance, and board independence were positively associated with aggressive CSR engagement. This highlights that the stakeholder perspective (Benson et al., 2011) outweighs the agency perspective (Lee et al., 2018; Zhou, 2022) in boardrooms. More specifically, gender-diverse and culturally diverse boards advocate greater stakeholder engagement (Katmon et al., 2019; Martínez-Ferrero et al., 2021) via aggressive CSR engagement. Our finding confirms prior studies' assertion that board gender and cultural diversities reinforce boards' advisory and monitoring functions by provoking wider and different perspectives, deepening discussions in board meetings, and mitigating groupthink (Dodd et al., 2022; Kuzey et al., 2022). Ultimately, board cultural and gender heterogeneity leads to a better and broader conception of stakeholder needs and more aggressive adoption of CSR policies aiming to respond to them (Dodd et al., 2022; Kuzey et al., 2022). In addition, directors' diverse expertise, skills, and independence align boards strongly with stakeholder orientation (Al-Mamun & Seamer, 2021; Godos-Díez et al., 2018; Hillman et al., 2000). While expert directors import wide sectoral experiences, knowledge, and skills to firms, they also build firms' relationships with the external environment (i.e., stakeholders) and boost organizational reputation via CSR (Al-Mamun & Seamer, 2021). Furthermore, since board meetings are the platforms enabling executive and non-executive directors to interact, higher meeting attendance is of critical importance to identifying corporate policies (Shahbaz et al., 2020). Hence, board meeting attendance can help directors bring new perspectives and insights into firms' future strategies and discussions about environmental and social issues (Mangena et al., 2012).

However, the presence of a CSR committee negatively moderates the relationship between board characteristics and aggressive CSR engagement. This evidence is particularly important for researchers and practitioners since prior studies have generally identified a provoking, rather than a restraining role of CSR committees in CSR engagement. Prior studies have shown that CSR committees foster CSR performance (Orazalin, 2020), improve CSR reporting and assurance (Kılıç et al., 2021), and help mobilize firms' financial resources toward CSR (Wasiuzzaman et al., 2022). Thus, our evidence suggests that CSR committees restrain firms' CSR engagement if it reaches an aggressive level. We verified the robustness of our findings using alternative proxies for aggressive CSR engagement and addressed endogeneity concerns by employing entropy balancing, propensity matching, and instrumental variable analysis.

We also demonstrated that the results are sensitive to several firm-level and institutional channel tests. They indicated that directors are less eager to stimulate aggressive CSR engagement in larger firms (Kuzey et al., 2023). Although there is a common belief that larger firms are more visible to stakeholders, and hence more eager to invest in CSR (Wang & Qiao, 2022; Zaiane & Ellouze, 2023), our finding denies this approach. Nevertheless, while female and foreign directors are inciting aggressive CSR engagement in investing firms and firms with higher cash flow, independent and expert directors are taking a contrary position this. We are not the first who found contradictory results for different types of directors in CSR engagement. For example, Uyar et al. (2024) found that female directors and directors having financial, or sector expertise take opposing stances towards environmental practices such that women directors are in favor, but expert directors are against such practices. Lastly, while common law affiliation amplifies board attributes' influence on aggressive CSR engagement, public governance strength weakens it. Thus, this implies that the board and common law system affiliation are complementary in creating synergy for stakeholder engagement (García-Sánchez et al., 2018), the board and public governance are substitutive in that respect (Kuzey et al., 2023).

6. Implications and Limitations

The findings have several theoretical and practical implications[8]. First, the results confirm upper echelons and stakeholder theories' claims of a positive association between board characteristics and aggressive CSR engagement. This implies that firms pursuing aggressive CSR should shape their board structures carefully and deploy skillful, female, and non-executive directors, as well as directors with different cultural backgrounds. This implies that firms aiming to engage in aggressive CSR should consider carefully structuring their boards to include a diverse range of directors. It is also important to draw attention to board meeting attendance since such meetings are the main strategic decision-making entities at which firms' main strategies are discussed, including CSR strategies. Regular and active participation in these meetings ensures that board members are fully engaged in shaping and monitoring the firm's CSR activities. Furthermore, the moderating effect of CSR committees highlights the vital role of such committees in restraining

[8] While suggesting implications, the research does not take a position for favoring or disfavoring aggressive CSR engagement. In line with the empirical findings, we suggest implications for how to shape board structure for aggressive CSR engagement and the critical role of the CSR committee in the connection between boards and aggressive CSR engagement.

aggressive CSR—a topic that has not yet been explored in prior studies confirming upper echelons and agency theories. This finding particularly verifies the monitoring role of CSR committees and their crucial role in establishing checks and balances for CSR activities. This aspect of governance, which aligns with agency theory, highlights the monitoring role of CSR committees and their importance in balancing a company's CSR efforts. In summary, the study contributes to the broader understanding of the relationship between board characteristics and CSR engagement, providing both theoretical validation and practical guidance for firms seeking to enhance their CSR practices. It suggests that careful consideration of board composition and the establishment of dedicated CSR committees are crucial steps in fostering responsible and balanced CSR strategies.

Further tests imply that different types of directors might position differently under certain circumstances, thus there is no unique pattern between board attributes and aggressive CSR engagement. Although female and foreign directors are keen on aggressive CSR engagement in investing firms and firms with cash flow, independent and expert directors are against it. This gives us some evidence concerning the perspective of directors in certain circumstances about aggressive CSR engagement. While female and foreign directors are more stakeholder-oriented, independent and expert directors could be more shareholder- and financial performance-oriented. However, all directors unanimously seem against aggressive CSR engagement in large firms implying size matters. Although there are some arguments that larger firms are more visible and hence exposed to greater public scrutiny leading to greater CSR engagement, they might be pursuing an optimal level of CSR engagement due to some financial and budgetary concerns, whereas smaller firms might need to enhance their visibility stimulating them for aggressive stakeholder commitment. Furthermore, channel tests also revealed that internal governance positions itself considering its surrounding factors. Institutions (law system and public governance) shape internal governance's behavior in driving firms' CSR engagement. This suggests implications for boards of directors and policymakers as well.

Although the results are generalizable across industries and countries due to the wide coverage of the sample, they may not be directly applicable to specific industries or specific periods, such as the COVID-19 pandemic. Moreover, we measured CSR committees using a binary variable due to the availability of dichotomous (i.e., the existence of the committee, but not its composition) data. Despite these limitations, our study is among the earliest ones to explore aggressive CSR,

which promises new avenues for future research. For example, it would be worth exploring whether aggressive CSR improves or damages market and accounting performance to highlight whether it is beneficial for stakeholders expecting financial returns from firms. Besides, determining whether different types of ownership structure provoke or restrain aggressive CSR may help firms shape their corporate policies regarding aggressive CSR engagement.

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Table 1

Variables

Panel A: Phase 1	
ESG	ESG strengths minus ESG weaknesses
ADV	Advertising expenditure over net sales
CASH	Cash and cash equivalents over total assets
EBITDA	Earnings before interest and tax plus depreciation and amortization over total assets
NPM	Net profit over net sales
Bindepend	Proportion of non-executive directors on board
DEBT	Total debt over total assets
MB	Market capitalization over total equity
RD	Research and development expenditure over total assets
FSIZE	Natural logarithm of total assets
ATR	Net sales over total assets
Panel B: Phase 2	
ESG-res1	Residual ESG based on Equation 1
ESG-res2	The upper quartile of residual ESG calculated in Equation 1. The observations in the upper quartile take the value of 1, whereas others take the value of 0.
ESG-res3	If residual ESG calculated in Equation 1 is positive, it takes the value of 1 or 0 otherwise.
Bgenderdiv	Proportion of female directors on board
Bindepend	Proportion of non-executive directors on board
Battendance	Average board meeting attendance of board members
Bskills	Proportion of board members with sector-specific backgrounds or strong financial backgrounds
Bculturaldiv	Proportion of board members with different cultural backgrounds from the location of the firm's headquarters
CSRcom	If the company has a CSR committee or team, it takes the value of 1 or 0 otherwise.
Bsize	Number of directors on board
CEO	CEO duality, which takes the value of 1 if the CEO and the board chair is the same person or 0 otherwise
Fsize	Natural logarithm of total assets
ROA	Earnings before interest and tax over total assets
Leverage	Total liabilities over total assets
TobinQ	Market capitalization plus total liabilities over total assets
Capex	Capital expenditures over total assets
Currentr	Current assets over current liabilities
Ffloat	Free float rate of shares
WGI	World Governance Indicators' average including political stability and absence of violence/terrorism, control of corruption, voice and accountability, government effectiveness, rule of law, and regulatory quality. (Values range between -2.5 and 2.5).
Law	The law system of nations indicated by a binary variable taking 1 if the law system is common law, and 0 if the law system is code law.
GDP	The natural logarithm of GDP per capita.

This table presents and defines the research variables.

Table 2: Sample distribution

Panel A

Initial sample	59,192
(-) Financial sector	13,333
(-) Countries with less than 10 firms	445
(-) Non-available firm-year observations from Phase-1	1,592
(-) Missing observations of Law	3,948
(-) Outliers	19
Final Sample	39,855

Panel B

Variable	Category	Freq.	Percent
Sector	Basic Materials	5,178	12.99
	Consumer Cyclicals	7,723	19.38
	Consumer Non-Cyclicals	3,612	9.06
	Energy	3,287	8.25
	Healthcare	3,766	9.45
	Industrials	8,593	21.56
	Technology	4,301	10.79
	Telecommunications Services	1,158	2.91
	Utilities	2,237	5.61
	Total	*39,855*	*100*
Year	2002	313	0.79
	2003	502	1.26
	2004	838	2.1
	2005	1,173	2.94
	2006	1,253	3.14
	2007	1,351	3.39
	2008	1,513	3.8
	2009	1,769	4.44
	2010	2,018	5.06
	2011	2,216	5.56
	2012	2,338	5.87
	2013	2,416	6.06
	2014	2,534	6.36
	2015	2,953	7.41
	2016	3,541	8.88
	2017	3,937	9.88
	2018	4,387	11.01
	2019	4,803	12.05
	Total	*39,855*	*100*

This table gives detail of sample formation and distribution across sectors and periods.

Table 3: Descriptive statistics

Panel A: Phase 1

Variable	Units	Obs.	Mean	Std. Dev.	Min	Max
ESG	Value (0-100)	39,855	40.31	19.38	0.12	94.09
ADV	Ratio	39,855	0.01	0.03	0.00	0.20
CASH	Ratio	39,855	0.10	0.10	0.00	0.59
EBITDA	Ratio	39,855	0.12	0.10	-0.34	0.42
NPM	Ratio	39,855	0.00	0.88	-6.13	3.63
Bindepend	Percentage	39,855	73.63	22.17	0.00	100.00
DEBT	Ratio	39,855	0.24	0.17	0.00	0.83
MB	Ratio	39,855	3.49	4.24	0.28	27.20
RD	Ratio	39,855	0.02	0.05	0.00	0.27
FSIZE	Value (natural log of total assets in $)	39,855	22.12	1.62	11.25	27.41
ATR	Ratio	39,855	0.96	0.98	0.00	7.32

Panel B: Phase 2

Variable		Obs.	Mean	Std. Dev.	Min	Max
ESG-res1	Value	39,855	0.00	16.36	-63.22	63.08
ESG-res2	Binary	39,855	0.29	0.46	0.00	1.00
ESG-res3	Binary	39,855	0.51	0.50	0.00	1.00
Bgenderdiv	Percentage	39,855	13.86	12.58	0.00	100.00
Bindepend	Percentage	39,855	73.63	22.17	0.00	100.00
Battendance	Percentage	28,491	87.71	11.09	0.00	100.00
Bskills	Percentage	36,392	53.75	23.78	0.00	100.00
Bculturaldiv	Percentage	39,855	8.48	19.67	0.00	100.00
CSRcom	Binary	39,855	0.48	0.50	0.00	1.00
Bsize	Value (Count)	39,855	10.06	3.38	4.00	21.00
CEO	Binary	39,855	0.40	0.49	0.00	1.00
Fsize	Value	39,855	22.12	1.62	11.25	27.41
ROA	Ratio	39,855	0.08	0.10	-0.37	0.36
Leverage	Ratio	39,855	0.55	0.20	0.05	1.00
TobinQ	Ratio	39,855	1.96	1.47	0.62	9.36
Capex	Ratio	39,855	0.06	0.06	0.00	0.42
Currentr	Ratio	39,855	2.04	1.89	0.25	12.90
Ffloat	Percentage	39,855	79.18	23.61	0.00	100.00
WGI	Value (-2.5-2.5)	39,855	1.21	0.48	-0.54	1.97
Law	Binary	39,855	0.62	0.48	0.00	1.00
GDP	Value (natural log of GDP per capita in $)	39,855	10.56	0.71	6.90	11.54

This table reports descriptive statistics of the variables used in Phases 1 & 2. Please see variables' definitions in Table 1.

Table 4: Correlation analysis

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	ESG-res1	1										
2	ESG-res2	0.780*	1									
3	ESG-res3	0.817*	0.637*	1								
4	Bgenderdiv	0.166*	0.130*	0.144*	1							
5	Bindepend	-0.013*	-0.016*	-0.023*	0.335*	1						
6	Battendance	0.248*	0.198*	0.210*	0.007	-0.178*	1					
7	Bskills	-0.027*	-0.047*	-0.030*	-0.180*	-0.384*	-0.051*	1				
8	Bculturaldiv	0.125*	0.118*	0.108*	0.128*	0.185*	0.218*	-0.083*	1			
9	CSRcom	0.427*	0.366*	0.372*	0.143*	-0.016*	0.229*	-0.079*	0.164*	1		
10	Bsize	0.059*	0.082*	0.073*	0.012*	-0.052*	-0.072*	-0.135*	0.048*	0.220*	1	
11	CEO	-0.114*	-0.092*	-0.107*	-0.027*	-0.014*	-0.285*	0.089*	-0.074*	-0.057*	0.076*	1
12	Fsize	0.022*	0.100*	0.058*	0.046*	0.014*	-0.048*	-0.113*	0.147*	0.345*	0.536*	0.134*
13	ROA	-0.008	0.01	-0.013*	0.053*	0.050*	0.052*	-0.054*	0.014*	0.052*	0.038*	0.041*
14	Leverage	0.051*	0.072*	0.060*	0.122*	0.116*	-0.054*	-0.143*	0.050*	0.140*	0.248*	0.037*
15	TobinQ	-0.019*	-0.046*	-0.032*	0.062*	0.083*	-0.098*	0.025*	-0.042*	-0.151*	-0.180*	0.022*
16	Capex	-0.027*	-0.024*	-0.032*	-0.078*	0.033*	0.079*	0.036*	0.007	0.002	-0.060*	-0.027*
17	Currentr	-0.059*	-0.077*	-0.058*	-0.090*	-0.044*	-0.075*	0.128*	-0.057*	-0.157*	-0.217*	-0.008
18	Ffloat	0.015*	-0.009	0.007	0.087*	0.043*	-0.151*	0.160*	-0.042*	-0.013*	-0.057*	0.130*
19	WGI	-0.028*	-0.056*	-0.024*	0.095*	0.020*	0.107*	0.143*	0.125*	-0.087*	-0.169*	-0.021*
20	Law	-0.144*	-0.156*	-0.147*	0.141*	0.250*	-0.239*	0.231*	-0.107*	-0.120*	-0.246*	0.081*
21	GDP	-0.086*	-0.096*	-0.073*	0.127*	0.052*	-0.141*	0.149*	0.038*	-0.143*	-0.160*	0.106*

	Variable	12	13	14	15	16	17	18	19	20	21
12	Fsize	1									
13	ROA	0.121*	1								
14	Leverage	0.399*	-0.016*	1							
15	TobinQ	-0.344*	0.246*	-0.210*	1						
16	Capex	-0.080*	0.058*	-0.064*	0.016*	1					
17	Currentr	-0.362*	-0.198*	-0.575*	0.222*	-0.037*	1				
18	Ffloat	0.039*	-0.018*	0.024*	-0.003	-0.052*	0.035*	1			
19	WGI	-0.065*	-0.060*	-0.058*	-0.022*	0.009	0.052*	0.351*	1		
20	Law	-0.235*	-0.002	-0.070*	0.155*	0.041*	0.105*	0.281*	0.108*	1	
21	GDP	-0.060*	-0.113*	-0.026*	-0.009	-0.040*	0.096*	0.416*	0.846*	0.143*	1

This table reports the correlation coefficients among variables. *$p<0.05$

Baseline analyses

Table 5: Board attributes and aggressive CSR engagement

Independent variables	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1	(6) ESG-res1
Bgenderdiv	0.23***					0.25***
	(30.05)					(29.51)
Bindepend		-0.0078				0.072***
		(-1.35)				(8.59)
Battendance			0.17***			0.16***
			(15.07)			(14.64)
Bskills				0.030***		0.052***
				(7.64)		(11.54)
Bculturaldiv					0.068***	0.057***
					(14.56)	(11.49)
Bsize	0.12***	0.16***	0.46***	0.25***	0.15***	0.38***
	(3.92)	(5.38)	(11.64)	(7.55)	(5.05)	(9.44)
CEO	-0.67***	-0.65***	-1.73***	-0.87***	-0.61***	-1.69***
	(-3.84)	(-3.68)	(-8.61)	(-4.69)	(-3.49)	(-8.47)
Fsize	-0.70***	-0.43***	-1.12***	-0.57***	-0.61***	-1.65***
	(-10.13)	(-6.26)	(-14.40)	(-7.87)	(-8.78)	(-20.80)
ROA	-3.31***	-1.60*	-0.96	-1.37	-1.27	-2.11**
	(-3.62)	(-1.73)	(-0.98)	(-1.45)	(-1.38)	(-2.16)
Leverage	0.84*	1.05**	1.41**	1.77***	1.15**	1.49***
	(1.67)	(2.05)	(2.51)	(3.32)	(2.25)	(2.68)
TobinQ	-0.021	0.055	-0.047	0.0092	0.018	-0.22***
	(-0.34)	(0.86)	(-0.68)	(0.14)	(0.28)	(-3.22)
Capex	-7.14***	-8.83***	-12.8***	-9.73***	-8.49***	-11.1***
	(-4.85)	(-5.93)	(-8.06)	(-6.25)	(-5.72)	(-6.98)
Currentr	-0.17***	-0.24***	-0.21***	-0.20***	-0.24***	-0.14**
	(-3.19)	(-4.41)	(-3.75)	(-3.72)	(-4.46)	(-2.55)
Ffloat	0.088***	0.096***	0.11***	0.100***	0.096***	0.096***
	(21.18)	(23.02)	(22.89)	(22.82)	(22.97)	(19.62)
WGI	-1.38	-2.30***	-2.76***	-3.08***	-2.73***	-2.07*
	(-1.57)	(-2.59)	(-2.58)	(-3.20)	(-3.09)	(-1.91)
Law	-2.04**	-2.73***	-2.17**	-3.98***	-2.40***	-1.80*
	(-2.25)	(-2.98)	(-2.16)	(-4.15)	(-2.63)	(-1.76)
GDP	0.22	-0.25	-0.87	1.48**	-0.16	1.58*
	(0.33)	(-0.37)	(-1.02)	(2.08)	(-0.23)	(1.82)
Constant	8.21	4.04	14.3	-6.80	6.96	-5.61
	(1.31)	(0.64)	(1.59)	(-0.97)	(1.10)	(-0.58)
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855	27525
Adj. R^2	0.038	0.016	0.051	0.022	0.021	0.093
F-stat.	22.32***	9.75***	22.21***	12.27***	12.68***	38.30***

This table reports the association between board attributes and aggressive CSR engagement. ESG-res1 shows aggressive CSR engagement based on the residual ESG obtained from Equation (1). Bgenderdiv is the female directors' proportion on board, Bindepend is the non-executive directors' proportion on board, Battendance is the average board meeting attendance of board members, Bskills is the proportion of board members who have a sector specific background or a powerful financial background Bculturaldiv is the proportion board members associated with a cultural background different from the location of the firm headquarter. All variables are explained in Table 1. t statistics are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 6: Moderating role of CSR committee between board attributes and aggressive CSR engagement

	(1)	(2)	(3)	(4)	(5)
Independent variables	ESG-res1	ESG-res1	ESG-res1	ESG-res1	ESG-res1
CSRcom	16.0***	17.7***	18.3***	16.2***	15.2***
	(70.87)	(35.72)	(13.77)	(43.08)	(85.53)
Bgenderdiv	0.22***				
	(24.95)				
Bgenderdiv*CSRcom	-0.092***				
	(-8.14)				
Bindepend		-0.018***			
		(-3.01)			
Bindepend*CSRcom		-0.034***			
		(-5.40)			
Battendance			0.16***		
			(13.25)		
Battendance*CSRcom			-0.053***		
			(-3.53)		
Bskills				0.043***	
				(9.57)	
Bskills*CSRcom				-0.017***	
				(-2.71)	
Bculturaldiv					0.069***
					(10.31)
Bculturaldiv*CSRcom					-0.015*
					(-1.90)
Bsize	0.039	0.082***	0.28***	0.14***	0.064**
	(1.42)	(2.99)	(7.62)	(4.70)	(2.32)
CEO	-0.80***	-0.85***	-1.63***	-0.95***	-0.77***
	(-5.03)	(-5.26)	(-8.82)	(-5.66)	(-4.77)
Fsize	-2.36***	-2.19***	-2.67***	-2.39***	-2.38***
	(-35.89)	(-33.12)	(-35.77)	(-34.80)	(-35.72)
ROA	-3.52***	-2.19***	-1.46	-1.96**	-2.09**
	(-4.22)	(-2.61)	(-1.61)	(-2.28)	(-2.49)
Leverage	0.56	0.77*	1.06**	1.47***	0.87*
	(1.22)	(1.65)	(2.05)	(3.04)	(1.86)
TobinQ	-0.14**	-0.076	-0.20***	-0.12**	-0.11*
	(-2.35)	(-1.31)	(-3.22)	(-2.05)	(-1.93)
Capex	-8.59***	-10.3***	-12.8***	-11.2***	-9.78***
	(-6.39)	(-7.59)	(-8.74)	(-7.96)	(-7.23)
Currentr	-0.17***	-0.23***	-0.24***	-0.22***	-0.23***
	(-3.59)	(-4.81)	(-4.51)	(-4.49)	(-4.81)
Ffloat	0.067***	0.073***	0.088***	0.076***	0.073***
	(17.60)	(19.12)	(19.60)	(18.97)	(19.07)
WGI	-3.06***	-4.08***	-4.22***	-4.59***	-4.23***
	(-3.82)	(-5.06)	(-4.27)	(-5.26)	(-5.25)
Law	-1.59*	-2.37***	-2.31**	-3.29***	-1.88**
	(-1.91)	(-2.84)	(-2.50)	(-3.78)	(-2.26)
GDP	2.25***	2.20***	1.34*	3.33***	2.21***
	(3.71)	(3.60)	(1.70)	(5.15)	(3.62)
Constant	27.4***	23.5***	29.0***	17.9***	26.6***
	(4.77)	(4.05)	(3.48)	(2.81)	(4.59)
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.198	0.185	0.193	0.194	0.187
F-stat.	131.86***	121.53***	93.26***	118.05***	123.62***

This table reports the moderating effect of CSR committee between board attributes and aggressive CSR engagement. CSRcom is the binary variable showing the existence of a CSR committee. ESG-res1 shows aggressive CSR engagement based on the residual ESG obtained from Equation (1). Bgenderdiv is the female directors' proportion on board, Bindepend is the non-executive directors' proportion on board, Battendance is the average board meeting attendance of board members, Bskills is the proportion of board members who have a sector specific background or a powerful financial background, Bculturaldiv is the proportion board members associated with a cultural background different from the location of the firm headquarter. All variables are explained in Table 1. t statistics are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Robustness Checks

Table 7: ESG-res2 as an alternative dependent variable
Country, industry, and year FE Logistic regression analysis (Table 5)

Independent variables	(1) ESG-res2	(2) ESG-res2	(3) ESG-res2	(4) ESG-res2	(5) ESG-res2	(6) ESG-res2
Bgenderdiv	0.027***					0.030***
	(23.59)					(21.85)
Bindepend		0.0013				0.011***
		(1.54)				(7.78)
Battendance			0.019***			0.020***
			(10.66)			(10.50)
Bskills				0.0029***		0.0067***
				(4.99)		(9.09)
Bculturaldiv					0.0079***	0.0072***
					(12.05)	(9.41)
Controls	Included	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28490	36392	39855	27524
Pseudo R^2	0.032	0.020	0.034	0.023	0.023	0.058
χ^2-stat.	1511.64***	952.25***	1179.84***	991.23***	1092.98***	1910.85***

This table reports the association between board attributes and aggressive CSR engagement by using alternative dependent variable. ESG-res2 shows the upper quartile of residual ESG calculated in Equation (1). The firm-year observations in upper quartile take 1, others take 0. All variables are explained in Table 1. *t* statistics are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8: ESG-res3 as an alternative dependent variable
Country, industry, and year FE Logistic regression analysis (Table 5)

Independent variables	(1) ESG-res3	(2) ESG-res3	(3) ESG-res3	(4) ESG-res3	(5) ESG-res3	(6) ESG-res3
Bgenderdiv	0.028***					0.031***
	(26.14)					(24.33)
Bindepend		-0.00097				0.0082***
		(-1.27)				(6.53)
Battendance			0.019***			0.019***
			(11.85)			(11.34)
Bskills				0.0032***		0.0064***
				(6.10)		(9.58)
Bculturaldiv					0.0068***	0.0063***
					(10.82)	(8.46)
Controls	Included	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28490	36392	39855	27524
Pseudo R^2	0.026	0.013	0.029	0.017	0.015	0.053
χ^2-stat.	1409.78***	706.36***	1159.20***	879.58***	823.92***	2019.44***

This table reports the association between board attributes and aggressive CSR engagement by using alternative dependent variable. ESG-res3 shows the binary variable; If residual ESG calculated in Equation (1) is positive, it takes 1, otherwise 0. The firm-year observations in upper quartile take 1, others take 0. All variables are explained in Table 1. *t* statistics are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9: Moderation role of CSR committee with ESG-res3 as an alternative dependent variable
Country, industry, and year FE Logistic regression analysis (Table 6)

	(1)	(2)	(3)	(4)	(5)
Independent variables	ESG-res3	ESG-res3	ESG-res3	ESG-res3	ESG-res3
CSRcom	1.82***	1.88***	2.21***	1.77***	1.71***
	(49.47)	(23.95)	(10.18)	(29.64)	(59.09)
Bgenderdiv	0.030***				
	(21.46)				
Bgenderdiv*CSRcom	-0.012***				
	(-6.47)				
Bindepend		-0.0031***			
		(-3.27)			
Bindepend*CSRcom		-0.0025**			
		(-2.46)			
Battendance			0.021***		
			(10.16)		
Battendance*CSRcom			-0.0070***		
			(-2.85)		
Bskills				0.0045***	
				(6.51)	
Bskills*CSRcom				-0.00077	
				(-0.78)	
Bculturaldiv					0.0079***
					(7.74)
Bculturaldiv*CSRcom					-0.0020*
					(-1.68)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28490	36392	39855
Pseudo R^2	0.101	0.092	0.096	0.099	0.093
χ^2-stat.	5563.09***	5059.46***	3804.59***	4993.16***	5130.52***

This table reports the moderating effect of CSR committee between board attributes and aggressive CSR engagement by using alternative dependent variable, ESG-res3. All variables are explained in Table 1. *t* statistics are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 10: Entropy Balancing (Table 5)

	(1)	(2)	(3)	(4)	(5)
Independent variables	ESG-res1	ESG-res1	ESG-res1	ESG-res1	ESG-res1
Bgenderdiv	0.25***				
	(40.17)				
Bindepend		0.097***			
		(13.58)			
Battendance			0.049***		
			(4.87)		
Bskills				0.026***	
				(7.85)	
Bculturaldiv					0.069***
					(21.87)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.084	0.036	0.077	0.039	0.057
F-stat.	50.86***	21.39***	33.98***	21.44***	34.21***

This table reports the association between board attributes and aggressive CSR engagement by using Entropy balancing. All variables are explained in Table 1. *t* statistics are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 11: Propensity Score Matching (Table 5)

Panel A: Diagnostic check

	(1) Pre-Match Treatment (High Bgenderdiv)	(2) Post-Match Treatment (High Bgenderdiv)	(3) Pre-Match Treatment (High Bindepend)	(4) Post-Match Treatment (High Bindepend)	(5) Pre-Match Treatment (High Battendance)	(6) Post-Match Treatment (High Battendance)	(7) Pre-Match Treatment (High Bskills)	(8) Post-Match Treatment (High Bskills)	(9) Pre-Match Treatment (High Bculturaldiv)	(10) Post-Match Treatment (High Bculturaldi)
Bsize	0.00024	0.014	0.12***	0.029*	-0.082***	-0.028***	-0.061***	-0.018*	-0.0046	0.0090
	(0.040)	(1.023)	(17.993)	(1.938)	(-14.818)	(-2.918)	(-12.105)	(-1.815)	(-0.780)	(0.622)
CEO	-0.018	-0.00023	-0.10***	-0.017	-0.027	-0.031	-0.028	-0.012	-0.19***	-0.084
	(-0.573)	(-0.003)	(-3.066)	(-0.230)	(-0.865)	(-0.581)	(-0.997)	(-0.231)	(-5.543)	(-1.092)
Fsize	0.23***	0.090*	0.15***	0.020	-0.038***	-0.042	-0.11***	-0.038	0.45***	0.15*
	(19.118)	(1.677)	(11.042)	(0.703)	(-3.294)	(-1.042)	(-9.688)	(-1.515)	(34.647)	(1.802)
ROA	1.02***	0.37	0.98***	0.10	0.33**	0.12	-1.01***	-0.21	-0.34*	-0.31
	(6.419)	(1.229)	(4.804)	(0.270)	(2.209)	(0.496)	(-7.310)	(-0.903)	(-1.868)	(-0.817)
Leverage	0.32***	0.047	0.68***	0.16	-0.22**	-0.15	-0.13	-0.11	-0.13	0.100
	(3.564)	(0.265)	(6.812)	(0.770)	(-2.562)	(-1.043)	(-1.604)	(-0.724)	(-1.396)	(0.460)
TobinQ	0.076***	0.024	-0.029**	-0.0068	0.0091	-0.0044	-0.0027	0.0036	0.090***	0.049*
	(7.204)	(1.168)	(-2.098)	(-0.248)	(0.872)	(-0.274)	(-0.275)	(0.213)	(7.454)	(1.827)
Capex	-1.01***	-0.32	-0.88***	0.58	-0.34	-0.093	1.02***	0.19	-0.51*	-0.046
	(-3.592)	(-0.608)	(-2.968)	(0.969)	(-1.434)	(-0.250)	(4.522)	(0.515)	(-1.873)	(-0.080)
Currentr	-0.037***	0.00055	-0.039***	-0.0047	-0.031***	-0.021	0.017**	-0.0085	0.0040	0.0051
	(-3.747)	(0.029)	(-3.059)	(-0.190)	(-3.520)	(-1.610)	(2.154)	(-0.634)	(0.388)	(0.243)
Ffloat	0.0073***	0.0021	0.0045***	0.00041	0.0034***	0.0019	-0.0014**	-0.00055	0.0016**	0.00077
	(9.638)	(1.280)	(5.474)	(0.221)	(4.778)	(1.578)	(-1.961)	(-0.412)	(2.118)	(0.471)
WGI	0.46***	0.28	-0.21	-0.21	0.17	-0.022	-0.58***	-1.01	0.86***	0.25
	(2.824)	(0.704)	(-1.102)	(-0.452)	(1.131)	(-0.083)	(-3.718)	(-1.051)	(5.298)	(0.781)
Law	-0.046	-0.42	-1.43***	-0.47	-0.63***	-0.21	0.067	-0.34	-0.52***	-0.23
	(-0.307)	(-0.611)	(-8.413)	(-0.997)	(-4.711)	(-0.621)	(0.445)	(-0.928)	(-3.757)	(-0.674)
GDP	-1.06***	-0.57	0.63***	0.60	-0.51***	-0.17	1.09***	0.65***	-0.65***	-0.099
	(-8.005)	(-1.540)	(4.229)	(1.077)	(-4.550)	(-0.951)	(9.448)	(3.443)	(-5.051)	(-0.429)
Constant	-3.02**	0.96	-13.9***	-6.17**	8.40***	5.01***	-4.69***	-1.83	-8.09***	-3.72*
	(-2.379)	(0.321)	(-9.753)	(-2.269)	(7.276)	(2.768)	(-4.201)	(-1.010)	(-6.568)	(-1.652)
N	39855	16186	39855	14393	39746	24931	39855	19774	39765	15532
Pseudo R^2	0.262	0.038	0.317	0.056	0.322	0.129	0.195	0.039	0.289	0.041
χ^2-stat.	11978.187	68.413	13714.009	83.038	17658.924	118.271	9683.748	144.935	12987.724	125.192

Panel B: PSM

	(1)	(2)	(3)	(4)	(5)
Independent variables	ESG-res1	ESG-res1	ESG-res1	ESG-res1	ESG-res1
Bgenderdiv	0.23***				
	(22.78)				
Bindepend		0.10***			
		(7.50)			

Battendance			0.13***		
			(8.51)		
Bskills				0.023***	
				(4.42)	
Bculturaldiv					0.061***
					(11.99)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	16186	14393	13676	16311	15532
Adj. R^2	0.063	0.026	0.053	0.030	0.044
F-stat.	15.82***	6.27***	11.55***	7.86***	11.01***

This table reports the association between board attributes and aggressive CSR engagement by using Propensity Score Matching. All variables are explained in Table 1. *t* statistics are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 12: Two-Stage Least Square (2SLS) regression analysis (Table 5)

	(1) Bgenderdiv	(2) ESG-res1	(3) Bindepend	(4) ESG-res1	(5) Battendance	(6) ESG-res1	(7) Bskills	(8) ESG-res1	(9) Bculturaldiv	(10) ESG-res1
Bgenderdiv(t-1)	0.85*** (255.709)									
Bindepend(t-1)			0.67*** (162.320)							
Battendance(t-1)					0.59*** (103.899)					
Bskills(t-1)							0.61*** (133.523)			
Bculturaldiv(t-1)									0.82*** (224.492)	
InvProtection	0.14** (2.566)		-0.18* (-1.826)		0.16* (1.889)		-1.19*** (-7.413)		-0.51*** (-4.602)	
Bgenderdiv		0.29*** (12.775)								
Bindepend				0.079*** (3.634)						
Battendance						0.25*** (5.696)				
Bskills								0.0054* (1.839)		
Bculturaldiv										0.076*** (5.317)
Controls	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	27801	27801	27801	27801	19492	19492	25872	25872	27801	27801
Adj. R^2	0.822	0.038	0.850	0.012	0.702	0.033	0.598	0.016	0.764	0.018
F-stat.	5177.407***	20.628***	2023.570***	7.080***	826.468***	11.533***	1388.542***	6.857***	3872.499***	8.768***
Under-identification test:										
Kleibergen-Paap rk LM statistic		1141.844		609.833		329.270		1103.525		396.131
Weak identification tests:										
Cragg-Donald Wald F statistic		33000		13000		5416.886		8997.015		25000
Kleibergen-Paap rk Wald F statistic		13000		1921.295		479.820		3443.208		3986.853
Stock-Yogo weak ID test critical values:										
10% maximal IV size		19.930		19.930		19.930		19.930		19.930
15% maximal IV size		11.590		11.590		11.590		11.590		11.590
20% maximal IV size		8.750		8.750		8.750		8.750		8.750
25% maximal IV size		7.250		7.250		7.250		7.250		7.250
Hansen J (P-value)		0.294		0.135		0.137		0.113		0.130

This table reports the association between board attributes and aggressive CSR engagement based on the 2SLS regression analysis. All variables are explained in Table 1.
t statistics are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.
Instrumental variables: (i)One-year lag of testing variables; (ii) InvProtection

Table 13: One-year lag of testing variables (Table 5)

Independent variables	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1	(6) ESG-res1
Bgenderdiv(t-1)	0.23***					0.24***
	(27.72)					(26.05)
Bindepend(t-1)		0.038***				0.086***
		(6.17)				(9.35)
Battendance(t-1)			0.15***			0.14***
			(12.30)			(11.67)
Bskills(t-1)				0.0078*		0.033***
				(1.85)		(6.85)
Bculturaldiv(t-1)					0.061***	0.052***
					(12.35)	(9.72)
Controls	Included	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	35024	35024	24581	31715	35024	23708
Adj. R^2	0.037	0.017	0.051	0.019	0.020	0.089
F-stat.	19.41***	9.22***	19.43***	9.55***	10.82***	31.81***

This table reports the association between board attributes and aggressive CSR engagement based on the one-year lag of testing variables. All variables are explained in Table 1. t statistics are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 14: Change model (Table 5)

Independent variables	(1) ΔESG-res1	(2) ΔESG-res1	(3) ΔESG-res1	(4) ΔESG-res1	(5) ΔESG-res1	(6) ΔESG-res1
ΔBgenderdiv	0.058***					0.085***
	(6.55)					(7.96)
ΔBindepend		-0.15***				-0.044***
		(-31.36)				(-4.73)
ΔBattendance			0.061***			0.059***
			(7.07)			(6.86)
ΔBskills				0.050***		0.051***
				(16.66)		(13.78)
ΔBculturaldiv					0.040***	0.035***
					(8.44)	(6.19)
Controls	Included	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes	Yes
N	34600	34600	23326	30777	34600	22303
Adj. R^2	0.024	0.050	0.024	0.033	0.025	0.039
F-stat.	12.70***	26.09***	9.31***	15.79***	13.10***	13.54***

This table reports the association between board attributes and aggressive CSR engagement based on the change model. All variables are explained in Table 1. t statistics are reported in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01. Δ: *Xt- Xt-1*

Table 15: Heterogeneity analysis

Panel A: Fsize as a moderator

	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1
Bgenderdiv	0.40***				
	(4.893)				
Fsize	-0.57***	0.65***	-0.27	-0.54***	-0.36***
	(-6.350)	(3.173)	(-0.620)	(-4.078)	(-4.906)
Bgenderdiv*Fsize	-0.0079**				
	(-2.110)				
Bindepend		0.31***			
		(5.442)			
Bindepend*Fsize		-0.014***			
		(-5.606)			
Battendance			0.38***		
			(3.499)		
Battendance*Fsize			-0.0096**		
			(-1.974)		
Bskills				0.040	
				(0.844)	
Bskills*Fsize				-0.00044	
				(-0.204)	
Bculturaldiv					0.73***
					(12.507)
Bculturaldiv*Fsize					-0.029***
					(-11.379)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.038	0.017	0.051	0.022	0.024
F-stat.	22.081***	10.053***	21.957***	12.103***	14.304***

Panel B: EBITDA as a moderator

	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1
Bgenderdiv	0.18***				
	(17.843)				
EBITDA	11.1***	16.1***	17.9**	17.5***	16.3***
	(3.562)	(3.500)	(2.484)	(4.803)	(5.333)
Bgenderdiv*EBITDA	0.37***				
	(6.404)				
Bindepend		-0.0089			
		(-1.148)			
Bindepend*EBITDA		0.010			
		(0.218)			
Battendance			0.19***		
			(13.193)		
Battendance*EBITDA			-0.18**		
			(-2.553)		
Bskills				0.034***	
				(6.102)	
Bskills*EBITDA				-0.031	
				(-0.949)	
Bculturaldiv					0.051***
					(6.928)
Bculturaldiv*EBITDA					0.14***
					(2.854)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.039	0.016	0.051	0.023	0.022
F-stat.	22.699***	9.911***	21.700***	12.293***	12.901***

Panel C: Capex as a moderator

	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1
Bgenderdiv	0.22***				
	(22.245)				
Capex	-9.62***	13.6**	-23.4**	4.88	-9.17***
	(-4.969)	(2.156)	(-2.081)	(1.311)	(-5.800)
Bgenderdiv*Capex	0.21**				
	(1.977)				
Bindepend		0.0086			
		(1.177)			
Bindepend*Capex		-0.30***			
		(-3.654)			
Battendance			0.16***		
			(11.711)		
Battendance*Capex			0.12		
			(0.948)		
Bskills				0.045***	
				(8.596)	
Bskills*Capex				-0.25***	
				(-4.321)	
Bculturaldiv					0.062***
					(9.608)
Bculturaldiv*Capex					0.098
					(1.253)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.038	0.016	0.051	0.023	0.021
F-stat.	22.074***	9.805***	21.914***	12.361***	12.535***

Panel D: Law as a moderator

	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1
Bgenderdiv	0.19***				
	(14.994)				
Law	-3.03***	-13.7***	-9.41***	-4.09***	-2.18**
	(-3.254)	(-10.499)	(-3.705)	(-3.880)	(-2.325)
Bgenderdiv*Law	0.068***				
	(4.596)				
Bindepend		-0.062***			
		(-8.401)			
Bindepend*Law		0.14***			
		(11.827)			
Battendance			0.10***		
			(4.342)		
Battendance*Law			0.081***		
			(3.102)		
Bskills				0.029***	
				(4.297)	
Bskills*Law				0.0020	
				(0.247)	
Bculturaldiv					0.072***
					(11.091)
Bculturaldiv*Law					-0.0093
					(-1.017)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.038	0.019	0.051	0.022	0.021
F-stat.	22.316***	11.545***	22.040***	12.103***	12.528***

Panel E: WGI as a moderator

	(1) ESG-res1	(2) ESG-res1	(3) ESG-res1	(4) ESG-res1	(5) ESG-res1
Bgenderdiv	0.21***				
	(10.197)				
WGI	-1.59*	-3.92***	1.82	-1.70	-2.44***
	(-1.768)	(-3.069)	(0.761)	(-1.618)	(-2.745)
Bgenderdiv*WGI	0.017				
	(1.092)				
Bindepend		-0.034**			
		(-2.138)			
Bindepend*WGI		0.022*			
		(1.765)			
Battendance			0.23***		
			(7.341)		
Battendance*WGI			-0.052**		
			(-2.142)		
Bskills				0.066***	
				(5.647)	
Bskills*WGI				-0.028***	
				(-3.241)	
Bculturaldiv					0.11***
					(8.127)
Bculturaldiv*WGI					-0.029***
					(-3.194)
Controls	Included	Included	Included	Included	Included
Country, industry, & year FE	Yes	Yes	Yes	Yes	Yes
N	39855	39855	28491	36392	39855
Adj. R^2	0.038	0.016	0.051	0.022	0.021
F-stat.	22.036***	9.664***	21.967***	12.248***	12.654***

This table reports the outcomes of the heterogeneity analysis. All variables are explained in Table 1. t statistics are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix

Table A1: Country-level sampling distribution

	Country	Unique firms	Percent	Firm-year observations	Percent
1	Argentina	46	0.88	109	0.27
2	Australia	308	5.87	2,522	6.33
3	Austria	23	0.44	176	0.44
4	Belgium	37	0.70	304	0.76
5	Brazil	78	1.49	572	1.44
6	Canada	245	4.67	2,182	5.47
7	Chile	33	0.63	228	0.57
8	Colombia	15	0.29	75	0.19
9	Denmark	37	0.70	362	0.91
10	Finland	32	0.61	380	0.95
11	France	137	2.61	1,221	3.06
12	Germany	152	2.90	1,172	2.94
13	Greece	17	0.32	136	0.34
14	Hong Kong	187	3.56	826	2.07
15	India	112	2.13	721	1.81
16	Indonesia	33	0.63	260	0.65
17	Italy	71	1.35	460	1.15
18	Japan	375	7.14	5,122	12.85
19	Korea; Republic (S. Korea)	117	2.23	915	2.30
20	Malaysia	49	0.93	394	0.99
21	Mexico	38	0.72	276	0.69
22	Netherlands	45	0.86	389	0.98
23	New Zealand	42	0.80	287	0.72
24	Norway	54	1.03	321	0.81
25	Peru	26	0.50	90	0.23
26	Philippines	16	0.30	140	0.35
27	Portugal	15	0.29	120	0.30
28	Singapore	32	0.61	394	0.99
29	South Africa	89	1.70	732	1.84
30	Spain	56	1.07	485	1.22
31	Sweden	110	2.10	707	1.77
32	Switzerland	98	1.87	742	1.86
33	Thailand	33	0.63	244	0.61
34	Turkey	43	0.82	191	0.48
35	United Kingdom	312	5.94	3,125	7.84
36	United States of America	2,137	40.70	13,475	33.81
	Total	*5,250*	*100.00*	*39,855*	*100.00*

This table reports sample distribution across countries by documenting unique number of firms and firm-year observations.

Table A2: Multicollinearity analysis

Variable	VIF	Variable	VIF	Variable	VIF	Variable	VIF	Variable	VIF
GDP	3.07	GDP	3.06	GDP	3.37	GDP	3.35	GDP	3.08
WGI	2.79	WGI	2.79	WGI	2.68	WGI	3.08	WGI	2.89
Fsize	1.85	Fsize	1.86	Fsize	2.01	Fsize	1.88	Fsize	1.88
Currentr	1.72	Currentr	1.71	Currentr	1.72	Currentr	1.71	Currentr	1.71
Leverage	1.69	Leverage	1.70	Leverage	1.66	Leverage	1.69	Leverage	1.68
Bsize	1.47	Bsize	1.47	Bsize	1.63	Bsize	1.50	Bsize	1.47
Ffloat	1.32	Ffloat	1.32	Battendance	1.40	Ffloat	1.35	Ffloat	1.32
TobinQ	1.32	TobinQ	1.32	Ffloat	1.36	TobinQ	1.30	TobinQ	1.31
ROA	1.23	Law	1.28	TobinQ	1.30	Law	1.24	ROA	1.23
Law	1.22	ROA	1.23	ROA	1.26	ROA	1.23	Law	1.21
CEO	1.11	Bindepend	1.11	Law	1.24	CEO	1.11	CEO	1.10
Bgenderdiv	1.08	CEO	1.10	CEO	1.16	Bskills	1.11	Bculturaldiv	1.07
Capex	1.04	Capex	1.03	Capex	1.03	Capex	1.03	Capex	1.03
Mean VIF	1.61	Mean VIF	1.61	Mean VIF	1.68	Mean VIF	1.66	Mean VIF	1.61

This table reports multicollinearity analysis by documenting Variance Inflation Factors (VIFs).