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Corporate Social Responsibility Performance in the Environmental Sector: Role of Board Directors and Foreign Ownership

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ABSTRACT

Purpose : The purpose of this research is to examine and experimentally demonstrate how foreign ownership and director qualities affect CSR performance, particularly in the environmental sector. The presence of independent directors, board size, and gender diversity serve as markers of the qualities of the board. The variables controlled in this study include company size, ROA, ROE, DER, and industry sensitivity.
Method : The study utilizes a sample of 256 companies that are involved in PROPER on the IDX, except for finance. The data analysis technique used is Ordinary Least Squares (OLS) using STATA 17.
Findings : The Research results show that only board size can improve CSR performance in the environmental field. Meanwhile, gender diversity on the board, independent directors, and foreign ownership do not influence the success of CSR in the environmental field.
Novelty : The study differs from previous research by focusing specifically on corporate social responsibility performance in the environmental sector. To make sure the data used to assess CSR performance in the environmental sphere is objective and quantifiable, the researcher utilises the PROPER score that the firm received from the Ministry of Environment and Forestry.

INTRODUCTION

In recent years, there has been significant focus from both academics and practitioners globally on the initiatives related to corporate social responsibility (CSR) (Kabir & Thai, 2017; Jouber, 2021; Lin & Nguyen, 2022). This is particularly true in the wake of major CSR scandals at companies such as BP plc in 2010 and Volkswagen in 2015 (Kabir & Thai, 2017; Lin & Nguyen, 2022). CSR has become a major topic in business research, and this focus has led to a significant growth in CSR expenditure as well as the creation of CSR reports and research (Malik, 2015; Shu & Chiang, 2020, Lin & Nguyen, 2022). CSR has evolved from the perspective that it may diminish a company's profits to the understanding that it can enhance a company's success, particularly over the long term (Kumar, 2019).

The majority of scholarly articles that recognise significant benefits of effective CSR performance highlight better financial performance (Talan & Sharma, 2020; Lin & Nguyen, 2022b), and increase profitability (Hart & Ahuja, 1996; Lin & Nguyen, 2022b), and competitive advantage (Dienes et al., 2016; Lin & Nguyen, 2022b) for companies at their place of employment. In addition, after the COVID-19 pandemic and the financial crisis of 2008, businesses with strong CSR ratings tend to have more stable stock prices and better return on equity (Lins et al., 2017; Ding et al., 2021; Lin & Nguyen, 2022b). Therefore, in order to improve performance, CSR initiatives need to be created and executed as part of the business's strategic plan.

Companies have economic responsibilities to investors, such as raising stock prices and growing earnings, but they also have social responsibilities. Companies must also satisfy legal responsibilities to the government, such as paying taxes. If businesses want to be trusted and respected, they must also meet their social obligations. The volume of literature surrounding corporate social responsibility suggests an increasing interest among firms in CSR initiatives. Corporate social responsibility in Indonesia is outlined by Law 40 of 2007 about Limited Liability Companies and Government Regulation 47 of 2012 on the Social and Environmental Responsibility of Limited Liability Companies.

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According to Article 1 Paragraph 3 of Law Number 40 of 2007, "a corporation is considered socially and environmentally responsible if it commits to sustainable economic development with the goal of enhancing people's quality of life and the environment over the long term." The firm itself, the neighbourhood, and society at large are all supposed to gain from this devotion. The main objective of the social and corporate responsibility programme is to achieve sustainability across all business operations, while carefully weighing economic, social, and environmental factors. Organisations that implement CSR initiatives can positively influence both societal well-being and environmental health. CSR performance denotes the ability of a company to fulfil stakeholder expectations regarding economic, environmental, and social responsibilities (Carroll, 1979; Lin & Nguyen, 2022b).

In contrast to the previous research, in this study, the researcher looked at CSR performance from an environmental perspective where to measure it using the company performance rating assessment program (PROPER) issued by the Ministry of Environment, especially in Indonesia in the form of 5 color categories starting from gold as the best ranking, followed by green, blue, red, and for the worst ranking indicated by black. This is intended to make it easier for the public to find out the existing rankings. PROPER's evaluation component focuses on assessing the company's compliance with laws pertaining to air and water pollution control, hazardous and toxic waste management (B3), environmental impact analysis (AMDAL) obligations, the creation of an Environmental Management System (SML), conservation and resource use, and corporate social responsibility. Previous research in assessing CSR was measured based on its CSR disclosure and was perspective-based. Earlier studies that used PROPER to measure environmental performance include Kirana & Darmadji (2013), Sarumpaet et al. (2017), and Chariri et al. (2019). Cited from www.dunia-energi.com by Tantan (2012), it is mentioned that the granting of the PROPER award has proven successful in encouraging the improvement of corporate performance in environmental management. The PROPER program has been shown to encourage companies to reduce pollution loads and greenhouse gas emissions, and to motivate them to conduct community development that applies sustainable principles with the 3 bottom lines of development: profit, people, and planet. With the increase in PROPER assessments, it will generally encourage improved CSR performance as PROPER encourages companies to integrate environmental responsibility into their CSR strategies, increase transparency and accountability, and encourage continuous improvement.

Data from companies on the Indonesia Stock Exchange that participated in PROPER from 2021 to 2023 indicates a consistent annual increase in participation, but companies that received green PROPER ratings decreased in 2023, and blue ratings experienced deals in 2022. During the 3-year observation period, on average, many companies received a blue rating of PROPER. This shows that the company has met the minimum compliance requirements on environmental regulations, but without any prominent innovations. Companies that are rated Blue are seen as entities that meet legal obligations enough, but have not gone further in environmental conservation efforts. A summary of the company's PROPER ratings on the IDX for the 2021 – 2023 period can be seen in Table 1.

CSR has evolved into a widespread global occurrence. The situation regarding Environmental CSR in Indonesia reveals numerous challenges and shortcomings in the execution of corporate social responsibility, particularly concerning environmental consequences and the well-being of communities, such as the case of PT Freeport in managing its mining business which actually results in environmental damage. One of the worst damage was Lake Wanagon which broke up to three times. This is caused by the careless disposal of large capacity waste. Not inferior to the case of PT Lapindo Brantas The drilling project carried out made hot mud from the bowels of the earth continue to come out until it drowned more than 800 hectares of residential areas. Furthermore, the case of PT Medco waste pollution and bad odors that cause public poisoning, as well as the alleged misuse of CSR funds, highlights the company's lack of transparency and accountability.

This research aims to objectively analyse the correlation between environmental CSR performance, characteristics of the board of directors (including size, gender diversity, and the participation of independent directors), and foreign ownership. The processes of corporate governance, including the board of directors' makeup and the extent of foreign ownership, significantly influence the enhancement of CSR performance within the corporate sector (Lin & Nguyen, 2022a; Lin & Nguyen, 2022b). Pucheta-Martínez & Gallego-Álvarez (2016) characterise the board of directors as the key decision-makers tasked with resource allocation, engagement in corporate social responsibility, community strategy formulation, and managing stakeholder interactions within a corporation. This

Table 1. IDX Company PROPER Rating for the 2021 – 2023 Period

PROPER Rating	Score	The Quantity of Firms		
		2021	2022	2023
Gold	5	1	3	9
Green	4	6	10	8
Blue	3	64	59	69
Red	2	6	13	8
Black	1	-	-	-
Total		77	85	94

Source: The Processed Primary Data (2024)

implies that a business's CSR performance is highly influenced by the board's characteristics, which are a reflection of the general characteristics of its members, as the board is crucial in determining how the firm makes decisions (Rupley et al., 2012; Lin & Nguyen, 2022). To ensure that the company meets its CSR goals, the board plays a crucial role (Mackenzie, 2007; Sektiyani & Ghozali, 2019). Changes in individual values and beliefs can influence board discussions about CSR disclosures (Hemingway & Maclagan, 2004; Sektiyani & Ghozali, 2019).

The dependency resource theory posits that the connection between female directors on boards and Environment, Social, and Governance (ESG) activities can be attributed to distinct characteristics inherent to women (Nguyen et al., 2015). Research indicates that women exhibit a heightened sensitivity to sustainability initiatives compared to men, attributed to specific psychological traits such as helpfulness and sensitivity, as well as their educational backgrounds and professional experiences. Consequently, it appears that skilled women may exhibit a greater responsiveness to ESG issues compared to men (Arayssi et al., 2016; Menicucci & Paolucci, 2023). According to stakeholder theory, the inclusion of women on the board enhances relationships with stakeholders, leading to a greater emphasis on environmental and social objectives (Hussain et al., 2018). Liao et al. (2015) highlight that increased gender diversity brings a wealth of varied perspectives, communication styles, and life experiences, ultimately enhancing decision-making processes and boosting the overall effectiveness of the board. According to earlier research, having a diverse mix of genders on boards improves CSR effectiveness (Issa & Fang, 2019; Martín & Herrero, 2020; Orazalin & Mahmood, 2021; Singh et al. 2024; Herrera et al., 2023; Khatri, 2023). In contrast to previous studies, Kolsi & Muqattash (2020), Bananuka et al., (2022), and Lin & Nguyen (2022a) came to the conclusion that board gender diversity had no impact on CSR performance.

de Villiers et al. (2011) larger boards are believed to encourage diversity and provide easier access to more information since directors come from a more diverse variety of backgrounds, experiences, and areas of expertise. In addition, a larger board could provide better division of labour, which might be critical for enhancing the directors' capacity to oversee and manage the management team (Beiner et al., 2004; John & Senbet, 1998). A substantial board of directors may incorporate specialists in environmental issues to provide guidance and assist in navigating the uncertainties frequently associated with the execution of green initiatives (Martín & Herrero, 2020). Research by Lin & Nguyen (2022a), Menicucci & Paolucci (2023), Pucheta-Martínez & Gallego-Álvarez (2016), and Jizi et al. (2014) demonstrates that board size and CSR are positively correlated. On the other hand, Kolsi & Muqattash (2020) and Campanella et al. (2021) found that the size of the board of directors did not influence corporate social responsibility.

Independent directors serve as non-executive members who operate outside the organisation. Consequently, they are capable of offering more impartial guidance than insiders, as their actions are not influenced by financial motivations (Martín & Herrero, 2020). Aljifri et al. (2014) suggested that a higher proportion of outside non-executive directors on the board might improve the board's ability to monitor management behaviour and lessen managerial opportunism. According to Haniffa & Cooke (2005) and Kolsi & Muqattash (2020), the inclusion of independent members on the board is seen to improve its neutrality and ability to represent many viewpoints about the company's role within the community and among stakeholders. The assertion of Johnson & Greening (1999) that external directors positively influence company social performance is substantiated by evidence. According to the theoretical justification for these results, independent directors who are more dedicated to meeting stakeholder expectations may elevate their status and social position, which in turn may increase the possibility that they would support CSR activities inside the organisation. Since this improves their reputation and social position, independent directors who are more likely to uphold the firm's stakeholder commitments also tend to show a stronger commitment to stakeholder responsibility (Haniffa & Cooke, 2005; Kolsi & Muqattash, 2020). According to subsequent study by Chau & Gray (2010), Jizi et al. (2014), Jizi (2017), Orazalin & Mahmood (2021), Lin & Nguyen (2022a), and Menicucci & Paolucci (2023), having a large number of independent directors on a board tends to boost transparency and corporate social responsibility performance. Independent directors may not have much of an effect on corporate social responsibility (CSR), according to research by Singh et al. (2021).

The proportion of a company's common stock controlled by foreign-status people, corporations, and governmental bodies is known as foreign ownership (Etha 2010 in Sumilat & Destriana, 2017). Angling (2010) in Sumilat & Destriana (2017) suggests that when a company engages in contracts with foreign stakeholders regarding ownership and trade, it is likely to enhance its support for disclosing corporate social responsibility. Companies that possess a relatively large amount of foreign ownership shares will typically encounter greater issues of information asymmetry, as this is caused by barriers related to different languages and distant geographical locations, leading companies to be inclined to disclose or report their information more broadly on a voluntary basis (Sumilat & Destriana, 2017). Sumilat & Destriana (2017), Garanina & Aray (2021) and Lin & Nguyen (2022b) have all conducted studies that suggest that foreign ownership improves CSR performance. Setiawan et al. (2021) found that foreign ownership has no effect on CSR.

Agency theory, which studies problems in the interaction between principal and agent because of information asymmetry and competing interests, is an important theory in this area (Jensen & Meckling, 1976). The board of directors serves as a mechanism of corporate governance designed to mitigate agency issues by reconciling the interests of principals and agents. Furthermore, it takes into account the interests of all stakeholders affected by administrative decisions throughout its oversight efforts (Jain & Jamali, 2016; Lin & Nguyen, 2022a). The board is essential in enhancing CSR issues through its oversight of the management team (Jamali et al., 2008; Lin & Nguyen, 2022a). CSR performance can be linked to agency theory, one of the strategies and agreements among managers to enhance the company's social performance. Effective CSR performance is expected to result in more positive assessments of management, including the board of directors, by stakeholders.

Stakeholder theory broadens the scope of agency theory by asserting that boards must consider the interests of all stakeholders, rather than focusing solely on shareholders (Freeman, 1984). The board will consider all stakeholder interests during the monitoring and review of the management team's decisions. Stakeholder theory posits that a company functions not merely for its own advantage, but is also obligated to deliver benefits to its stakeholders. Pucheta-Martínez & Gallego-Álvarez (2019) propose that the involvement of the management team in CSR issues could yield advantages for stakeholders, despite potentially conflicting with the managers' own interests. Stakeholder theory is employed in the empirical literature to elucidate the influence of board qualities on CSR issues (Bolourian et al., 2021; Lin & Nguyen, 2022a). The better the CSR performance, the more satisfied it will be and will provide support for the company's activities to improve performance to achieve profits.

Next, consider the theory of legitimacy. Legitimacy theory reflects a company's objective to achieve recognition through CSR disclosure, facilitating its acceptance within the community. According to Dowling & Pfeffer (1975), the notion of legitimacy is concerned with the interplay of businesses and society. This approach emphasises the need for enterprises that manage natural resources to align with the values of the community. This is owing to the two parties having a suggested social contract. Expressing social responsibility is one strategy for companies to obtain community credibility (Ramadhani & Maresti, 2021; Mulansari et al., 2023).

In modern literature, gender diversity is a hotly debated component of board composition, particularly when it comes to environmental issues (Haque, 2017; Lu & Herremans, 2019; Nuber & Velte, 2021; Orazalin & Mahmood, 2021). Research suggests that female directors can enhance board performance, improve financial reporting accuracy, and promote ethical company practices (Pucheta-Martínez et al., 2016; Lin & Nguyen, 2022a). According to Putri & Amanah (2024), gender is a term that refers to the difference in male and female characters that related to nature, status, position and role. With these character differences, it can encourage creative and productive collaboration, due to the exploration of various views and ideas from various different gender backgrounds. Agency theory states that female directors are successful in advancing CSR projects (Pucheta-Martínez et al., 2018; Lin & Nguyen, 2022a). This is because their qualities are more sympathetic, sensitive, and attentive than those of male directors, resulting in stronger collaboration (Kim, 2013; Lin & Nguyen, 2022a). In terms of stakeholders and resource dependency, female directors often advocate for social agendas and provide more diverse perspectives, expertise, knowledge, and ideas to the company's board (Arayssi et al., 2016; Elmagrhi et al., 2019; He & Jiang, 2019; Tingbani et al., 2020; Orazalin & Mahmood, 2021). Additionally, female directors prioritise public relations tactics that support sustainability-related projects meant to improve environmental performance and exhibit a greater knowledge of stakeholder issues (Cordeiro et al., 2020; Nadeem et al., 2020; Orazalin & Mahmood, 2021; Lin & Nguyen, 2022a). Stakeholders that want a more environmentally responsible organisation will find female directors more ecologically conscious (Farida, 2019). Research shows that corporate social responsibility programmes are positively correlated with a greater number of female directors and a more diverse mix of genders on the board (Lu & Herremans, 2019; Orazalin & Mahmood, 2021; Singh et al., 2024; Herrera et al., 2023; Khatri, 2023). Thus, the following hypothesis is put out by this study:

H_1 : Board gender diversity has a positive impact on corporate social responsibility performance in the environmental sector

Based on the number of current members, the size of the board of directors measures the makeup of a company's board (Kolsi & Muqattash, 2020; Lin & Nguyen, 2022a). Research indicates that larger boards exhibit a greater diversity of skills, gender, education, and stakeholder representation compared to smaller boards, leading to enhanced performance and oversight (Laksmana, 2008; Guest, 2009; Orazalin & Mahmood, 2021). The capacity of the board to monitor and regulate the management group may be enhanced by a larger board since it is simpler to allocate tasks more efficiently (Beiner et al., 2004; John & Senbet, 1998; Lin & Nguyen, 2022a). Past studies, like those by Lin & Nguyen (2022a), Menicucci & Paolucci (2023), Pucheta-Martínez & Gallego-Álvarez (2016) and Jizi et al. (2014), have shown a positive correlation between the two components. A larger board of directors is believed to have a stronger track record of informing stakeholders about social performance and guiding management in their pursuit of CSR activities. The following hypotheses are expressed in this study:

H_2 : The size of the board of directors positively influences corporate social responsibility performance in the environmental sector

The proportion or percentage of non-executive directors in the board of directors' total composition is referred to as the independent director (Lin & Nguyen, 2022a). Independent directors serve as a crucial control and monitoring mechanism, facilitating effective corporate governance. Agency theory posits that a greater proportion of independent boards enhances the effectiveness of monitoring and managing management (Jizi et al., 2014; Orazalin & Mahmood, 2021). The projections indicate that they will be more effective in guiding management towards actions that enhance long-term business value and transparency (Jizi et al., 2014; Ortas et al., 2017; Lin

& Nguyen, 2022a). Independent directors, having less involvement in the formulation of corporate strategy and business practices, are positioned to assess management performance more effectively than executive directors (Jizi et al., 2014; Jizi, 2017; Lin & Nguyen, 2022a). In contrast to internal directors, independent directors do not get pay checks depending on how well the business does financially right now. If the company wants better oversight and control procedures to govern its operations, it needs a larger independent board of directors (Jizi et al., 2014; Lin & Nguyen, 2022a). Because of the benefits of coordinating the interests of several shareholders, monitoring management to ensure long-term value, and enhancing transparency, stakeholder theory advocates for the creation of more independent boards (Birindelli et al., 2018; Jizi et al., 2014; Lin & Nguyen, 2022a). Independent directors are generally in favour of CSR programmes, according to the research (Johnson & Greening, 1999). Liao et al. (2015) demonstrated how independent directors may improve the board's capacity to balance financial and environmental goals, as well as short-term and long-term objectives. This can assist managers align their interests with shareholders' and stakeholders'. In addition, studies have shown that boards with a large number of independent directors tend to foster more transparency and social responsibility (Cahyani & Suryaningsih, 2016; Chau & Gray, 2010; Jizi et al., 2014; Jizi, 2017; Lin & Nguyen, 2022; Menicucci & Paolucci, 2023). As a result, this study presents the hypothesis listed below:

H_3 : Independent directors have a positive impact on corporate social responsibility performance in the environmental sector

The proportion of shares held by foreign entities as a percentage of all outstanding shares is known as foreign ownership according to Cahyani & Suryaningsih (2016). Decisions about strategy, performance, and values are all profoundly affected by a company's ownership structure (Garanina & Aray, 2021; Ardiyanto & Prasetiono, 2011; Setiawan et al., 2021). According to the findings of Garanina & Aray (2021), Setiawan et al. (2021), and Lin & Nguyen (2022b), there is a positive correlation between foreign ownership and CSR performance. Amran and Haniffa (2011) in Kolsi & Muqattash (2020) posited that firms competing for resources internationally or depending on foreign shareholders are inclined to align their communication of CSR activities with the expectations of these investors. This strategy aims to retain existing investors while also appealing to potential new ones. A notable correlation was identified between sustainability reporting and the percentage of foreign share ownership (Kolsi & Muqattash, 2020). According to agency theory, foreign shareholders can monitor management actions through greater control mechanisms, such as complicated audit procedures and frequent reporting systems (Zaid et al., 2020; Lin & Nguyen, 2022b). This reduces agency costs while increasing firm performance (Lin & Nguyen, 2022b). Foreign investors frequently request that firms prioritise CSR efforts (Aksoy et al., 2020; Lin & Nguyen, 2022b). As a result, this study presents the following hypothesis:

H_4 : Foreign ownership has a positive impact on corporate social responsibility performance in the environmental sector

RESEARCH METHODS

This study's population comprises all enterprises that are registered on the IDX and have participated in the Ministry of Environment and Forestry's PROPER project during the period from 2021 to 2023. Purposive sampling was the method used to choose samples from the population. Purposive sampling is a technique for choosing samples according to predetermined standards, guaranteeing that the selected population members meet certain requirements. The unit of analysis in this study consists of 256 issuers, selected based on specific criteria between 2021 and 2023. Table 2 presents the selection details, followed by a description of the criteria used to determine the sample:

1. Every business that was listed on the IDX between 2021 and 2023, except those in the banking and financial institution industries;
2. Companies who participated in the 2021–2023 Corporate Performance Rating Assessment Programme in Environmental Management (PROPER).

This research employs quantitative approaches and secondary data collection. This study also employs panel data with the unbalanced panel approach, in which each research object has a distinct amount of time units from the others (Sihombing, 2021). The annual report, along with the sustainability report included within it, functions

Table 2. Results of Company Sample Criteria by Year

Number	Year	Unit of Analysis
1.	2021	77
2.	2022	85
3.	2023	94
	Total company	256

Source: The Processed Primary Data (2024)

Table 3. Variable Measurement

Variabel	Mnemonics	Role	Measurement
CSR performance in the environmental sector	CSRP	Dependent	PROPER rating by providing the following score assessments: a. Score 5 for companies with a GOLD rating b. Score 4 for the GREEN rating c. Score 3 for BLUE rating d. Score 2 for RED rating e. Score 1 for BLACK rating Gold indicates that the company has exceeded environmental management criteria and is committed to the creation of a sustainable society. Green means the company has developed an environmental management system and made efficient use of resources above and above the regulations, so efficiently fulfilling its social obligation. The categorization of a company's environmental management as blue indicates full compliance with all applicable regulations. If the company takes environmental management measures in accordance with applicable legislative provisions, then it is considered red. A company's actions or inactions labelled as "black" indicate a deliberate violation of regulations, resulting in pollution or environmental damage. (Sarumpaet et al., 2017; Chariri et al., 2019)
Board Gender Diversity	BGD	Independent	The overall number of directors was correlated with the proportion of female directors as noted by (Kolsi & Muqattash, 2020).
Board of Directors Size	BDS		Total count of directors (Kolsi & Muqattash, 2020; Lin & Nguyen, 2022a).
Independent Director	IND		The count of non-executive directors classified as independent (Lin & Nguyen, 2022a)
Foreign Ownership	FOWN		The fraction of outstanding shares owned by investors outside of the country relative to the total number of shares (Cahyani & Suryaningsih, 2016)
Firm Size	FSIZE	Control	Ln of total assets (Martín & Herrero, 2020)
Return on Asset	ROA		The proportion of net income to total assets (Lin & Nguyen, 2022a)
Return on Equity	ROE		The proportion of a company's nett income relative to its total shareholders' equity (Menicucci & Paolucci, 2023)
Debt Equity Ratio	DER		Ratio of total debt to own capital (Kolsi & Muqattash, 2020)
Industry Sensitivity	INSV		Assign a value of 1 if the company operates within eco-sensitive sectors, and a value of 0 if it does not. The sectors that exhibit the highest level of environmental sensitivity include oil and gas, basic materials, manufacturing, and utilities. Other sectors apart from those mentioned above are considered to be less sensitive industries (Lin & Nguyen, 2022a).

as the primary source of research data. The data is available via OSIRIS data, the PROPER website (https://proper.menlhk.go.id), and the Indonesia Stock Exchange website (www.idx.co.id).

The success or failure of CSR initiatives is the focus of this research. Here, the independent variables include things like the number of independent directors, the board's size, the board's gender diversity, and the proportion of foreign ownership. Industry sensitivity, company size, return on assets (ROA), debt equity ratio (DER), and return on equity (ROE) are all factors that the research uses as control variables. You may get the values of these variables in Table 3.

The examination of the data for this research involves applying multiple linear regression techniques to test

Table 4. Result of Descriptive Statistical Tests

Variable	Obs	Mean	Std. Dev.	Min	Max
CSRP	252	3.10	0.63	2	5
BGD	256	0.12	0.17	0	0.75
BDS	256	5.33	2.29	2	15
IND	256	0.63	0.38	0	1
FOWN	255	0.31	0.33	0	0.998
FSIZE	256	26.92	4.39	13.30	32.67
ROA	256	0.04	0.36	-5.39	0.59
ROE	255	0.11	0.22	-0.94	1.42
DER	256	0.75	1.02	-4.86	5.64
INSV	256	0.20	0.40	0	1

Source: The Processed Primary Data (2024)

all four hypotheses (H_1, H_2, H_3, and H_4) utilising panel data. In Stata version 17, the examination of the direct effect of variables is conducted through Ordinary Least Squares (OLS). The regression model used in this study is presented in Equation 1 as follows:

$$CSRP = \alpha + \beta_1 (BGD) + \beta_2 (BDS) + \beta_3 (IND) + \beta_4 (FOWN) + \beta_5 (FSIZE) + \beta_6 (ROA) + \beta_7 (ROE) + \beta_8 (DER) + \beta_9 (INSV) + e \quad \text{......} 1$$

RESULTS AND DISCUSSIONS

Table 4 shows that the CSRP value proxied by the PROPER rating has the lowest score (2 with a red rating) and the best score (5 with a gold rating). The data indicates variations, presenting a mean value of 3.10 for the CSRP variable, which exceeds the standard deviation of 0.63. Additionally, the data reveals a consistent pattern regarding the gender diversity variable on boards, indicated by an average value of 0.12 and a standard deviation of 0.17. With a mean of 5.32 and a standard deviation of 2.29, the data shows variety in the board of directors' composition, which may range from two to fifteen members. With a mean of 0.63, above the standard deviation of 0.38, and a maximum of one person, the independent directors variable shows diversity in the data. The foreign ownership variable's mean value of 0.31, which is less than the standard deviation of 0.33, indicates that the data is comparatively stable and has a small volatility.

Table 5 shows that each variable's mean value grew from 2021 to 2023. Unless the foreign ownership variable reduces by 2023. The following test is the pairwise correlations test. The pairwise correlations test is designed to guarantee that the model does not exhibit multicollinearity. In a regression model, multicollinearity is a condition of linear relationships between one independent variable and another. Examining the correlation coefficient, which should not exceed 0.8, is one method of determining if multicollinearity exists (Gujarati, 2003). Table 6 shows that no independent variables in any model exhibit multicollinearity, since all of them have correlation coefficients below 0.8. Since the model's independent variables do not seem to be associated with one another, the results may be biassed.

With the help of STATA version 17, we will conduct an Ordinary Least Squares (OLS) analysis to test the study's premise. In order to put the previously stated theory to the test empirically, hypothesis testing is used. Board size has a substantial impact on CSR performance at the1%, 5%, and 10% levels, as seen in Table 7. The study also failed to find a correlation between CSR outcomes and factors like gender diversity on the board, the number of independent directors, or the proportion of foreign ownership. At the 1% and 5% levels, corporate size has a considerable impact on CSR performance as a control variable. At the 5% level, the ROE variable had a substantial effect on CSR performance, as did the industry sensitivity variable at the 1% level. Meanwhile, neither the ROA nor the DER control variables affected CSR.

The results of a second analysis of CSR performance using other metrics are shown in Table 8. Board gender diversity (BGD), board size (BDS), independent directors (IND), foreign ownership (FOWN), and corporate social responsibility performance in the environmental field (CSRP) are all covered in this area. According to our analysis

Table 5. Statistical Test Results by Year

	CSRP	BGD	BDS	IND	FOWN	FSIZE	ROA	ROE	DER	INSV
2021	3.04	0.12	5.26	0.61	0.32	26.80	0.057	0.136	0.624	0.23
2022	3.04	0.12	5.32	0.63	0.33	26.91	0.014	0.106	0.713	0.20
2023	3.22	0.13	5.36	0.65	0.28	27.03	0.054	0.096	0.886	0.17

Source: The Processed Primary Data (2024)

Table 6. Results from Pairwise Correlations Test

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CSRP	1.000									
BGD	-0.042	1.000								
BDS	0.177*	-0.062	1.000							
IND	0.019	0.181*	-0.033	1.000						
FOWN	-0.094	-0.019	0.004	0.047	1.000					
FSIZE	0.150	0.159	0.217*	-0.117	-0.207*	1.000				
ROA	0.061	-0.112	-0.017	-0.066	0.099	0.078	1.000			
ROE	0.142	0.186*	0.111	-0.011	0.205*	0.119	0.221*	1.000		
DER	-0.019	0.107	0.161*	0.065	0.040	0.103	-0.017	-0.070	1.000	
INSV	0.536*	-0.049	0.064	0.088	-0.038	-0.058	0.068	0.056	-0.025	1.000

** shows significance at p<.01*

Source: The Processed Primary Data (2024)

of columns (1) through (3), a 10% CSRP was linked to a size-related positive effect of the board of directors on the firm's performance. There is some evidence that companies with more directors on the board are better at CSR performance. The findings of this robustness test suggest that a number of factors, including foreign ownership, independent directors, board size, and gender diversity, all have a complex impact on CSR effectiveness. Furthermore, there is a consistent enhancement in CSR outcomes associated with a larger board of directors.

Board Gender Diversity and Corporate Social Responsibility Performance in the Environmental Sector

Hypothesis 1, which claims that the gender diversity of councils improves CSR performance in the environmental sector, is rejected. Based on descriptive statistical data, The average representation of female directors on boards stands at approximately 12.3%, with a notable peak of around 13.1% observed in 2023. Singh et al. (2021) suggest that the representation of female directors on the board is minimal and that this lack of representation does not influence CSR policy. Compared to developed countries, boards of directors in this region exhibit a notably higher representation of women in senior management positions. Women continue to face significant barriers in accessing executive positions and contributing to company goals, largely due to enduring gender stereotypes and prejudice (Galbreath, 2011; Issa & Fang, 2019). As a result, the quota of female directors on boards of directors in charge of CSR must be enhanced (Yaseen et al., 2018). Previous studies corroborating these findings include Kolsi & Muqattash (2020), Bananuka et al., (2022), and Lin & Nguyen (2022a). However, contrary to the findings of Issa & Fang (2019), Martín & Herrero (2020), Orazalin & Mahmood (2021), Singh et al., (2024), Herrera et al., (2023), and Khatri (2023), a more diverse board, including more women on it, is associated with more effective corporate social responsibility (CSR) activities.

The Size of the Board of Directors and the Performance of Corporate Social Responsibility in the Environmental Sector

There is a favourable correlation between board size and CSR success in the environmental sector, according to the second hypothesis. According to descriptive statistics, there should be no more than fifteen directors and no less than two. According to OJK Regulation Number 33 of 2014, every public business must have at least two board members, one of whom serves as president director or managing director (Otoritas Jasa Keuangan, 2014). This demonstrates that board members' engagement in the company is significant enough to impact the policy of implementing CSR activities. The extensive board of directors provides further information. The board of directors demonstrates proficiency in addressing various areas, including gender, educational background, skill set, and work experience. Furthermore, it strengthens and improves the monitoring function, which is particularly crucial for CSR programmes and the advancement of sustainable performance. Management seeks to obtain legitimacy from stakeholders, which aligns with the principle of legitimacy, thus providing a rational basis for this approach. The board of directors occupies the highest position within any organisation, and their responsibility is to verify the legitimacy of all participants involved (Mulansari et al., 2023). Previous research, including Lin & Nguyen (2022a), Menicucci & Paolucci (2023), Pucheta-Martínez & Gallego-Álvarez (2016), and Jizi et al. (2014), A correlation has been identified between a larger board and improved CSR outcomes. According to other studies, board size has little impact on CSR performance (Yaseen et al., 2018; Campanella et al., 2021; Orazalin & Mahmood, 2021; Kolsi & Muqattash, 2020).

Independent Director and Corporate Social Responsibility Performance in the Environmental Sector

This finding contradicts the third hypothesis, which held that independent directors do not improve environmental CSR performance. These findings are likely to encourage more CSR initiatives among companies, even

Table 7. OLS regression findings of CSR Performance

	(1)	(2)	(3)
	CSRP	**CSRP**	**CSRP**
Intercept	2.147***	2.252***	2.885***
	(9.562)	(9.827)	(21.940)
BGD	-0.234	-0.211	-0.147
	(-1.188)	(-1.039)	(-0.721)
BDS	0.028**	0.029*	0.048***
	(1.996)	(1.924)	(3.042)
IND	-0.005	0.008	0.060
	(-0.059)	(0.085)	(0.541)
FOWN	-0.094	-0.115	-0.186*
	(-0.989)	(-1.244)	(-1.967)
FSIZE	0.022***	0.021**	
	(2.690)	(2.556)	
ROA	-0.032	-0.015	
	(-1.007)	(-0.494)	
ROE	0.329**	0.301**	
	(2.512)	(2.310)	
DER	-0.028	-0.018	
	(-1.225)	(-0.752)	
INSV	0.837***	0.821***	
	(7.814)	(7.382)	
Year effect	Yes	No	No
Adj.R2	0.35	0.32	0.03
N	250	250	251
F-stat	8.377	8.797	3.984

t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Source: The Processed Primary Data (2024)

Table 8. Robustness Test Using GLS

	(1)	(2)	(3)
	CSRP	**CSRP**	**CSRP**
Intercept	2.147***	2.252***	2.885***
	(9.408)	(9.810)	(23.073)
BGD	-0.234	-0.211	-0.147
	(-1.171)	(-1.030)	(-0.628)
BDS	0.028**	0.029**	0.048***
	(1.973)	(1.985)	(2.851)
IND	-0.005	0.008	0.060
	(-0.063)	(0.086)	(0.577)
FOWN	-0.094	-0.115	-0.186
	(-0.926)	(-1.112)	(-1.565)
FSIZE	0.022***	0.021***	
	(2.811)	(2.679)	
ROA	-0.032	-0.015	
	(-0.355)	(-0.162)	
ROE	0.329**	0.301*	
	(2.130)	(1.903)	
DER	-0.028	-0.018	
	(-0.890)	(-0.552)	
INSV	0.837***	0.821***	
	(10.534)	(10.084)	
N	250	250	251

t statistics in parentheses
* p<0.10, ** p<0.05, *** p<0.01

Source: The Processed Primary Data (2024)

though they contradict the stakeholder theory, which holds that boards should have more autonomy in order to align the interests of various stakeholders, supervise management for long-term value, and improve transparency (Birindelli et al., 2018). The insignificance of the study's findings could be attributed to the independent director's concentration on enhancing the company's profitability, given that CSR activities incur costs when implemented. The corporation may have engaged in CSR activities, but the average corporate CSR performance remains below the green standard (score 4). Singh et al. (2021) along with various earlier studies have demonstrated comparable findings. However, this contradicts the findings of multiple studies, such as those conducted by Chau & Gray (2010), Jizi et al. (2014), Jizi (2017), Orazalin & Mahmood (2021), Lin & Nguyen (2022a), and Menicucci & Paolucci (2023), which all came to the conclusion that increased independent director representation on boards of directors improves CSR performance and openness.

Foreign Ownership and Corporate Social Responsibility Performance in the Environmental Sector

The fourth hypothesis, indicating that foreign ownership positively influences environmental CSR performance, lacks support. The findings of the study appear to be minimally influenced, as only approximately 30.6% of the sample's shares were held by foreign entities relative to the total shares outstanding, and the overall average CSR performance has not increased but has been implemented, resulting in a non-significant relationship. These findings contradict the stakeholder approach, which contends that foreign ownership has better expertise and understanding of corporate social issues, making it more likely to demonstrate social responsibility (Mulansari et al., 2023). This study's findings are consistent with those of Cahyani & Suryaningsih (2016), Julekhah & Rahmawati (2019), Kolsi & Muqattash (2020), and Lin & Nguyen (2022b). In contrast to the findings of Setiawan et al. (2021), It has been identified that CSR gains advantages from foreign ownership.

Control Variables

The size of a company is a variable that may influence its CSR performance, serving as a control variable in the analysis. Kolsi & Muqattash (2020), Setiawan et al. (2021), and Singh et al. (2021) arrive at comparable conclusions. Enhancing return on equity positively influences corporate social responsibility scores. This runs counter to Kolsi & Muqattash's (2020) study, which found no relationship between CSR and return on equity. Consequently, CSR performance benefits from industry sensitivity (Lin & Nguyen, 2022b). According to research by Lin & Nguyen (2022a) and Jizi et al. (2014), CSR performance is unaffected by the debt-to-equity ratio. The return on asset variable does not significantly impact CSR performance, as shown in Lin & Nguyen (2022a) and Lin & Nguyen (2022b) studies.

CONCLUSIONS

Through the lenses of agency theory, stakeholder theory, and legitimacy theory, this research aims to investigate and improve our knowledge of CSR performance in Indonesia's environmental sector. It will examine board attributes such as independent directors, size, gender diversity, and the effect of foreign ownership. Companies listed on the Indonesia Stock Exchange that engage in PROPER and achieve an environmental sector CSR performance score of 3 (blue rating) for the period 2021–2023 demonstrate, through descriptive statistical analysis, their adherence to environmental management in accordance with applicable regulations. However, it receives a score of 4 due to the company's CSR practices not being environmentally friendly. The results of the regression analysis indicate that a bigger board of directors can lead to higher CSR performance in the environmental sector. It is more probable that management would engage in CSR initiatives and provide stakeholders enough information about the company's social and environmental performance if there are more directors on the board. The impact of environmental CSR remains unchanged regardless of the presence of female directors, independent shareholders, or foreign ownership. Here are some suggestions and a rundown of the research's shortcomings: The major focus of this research is the perspective of the board of directors on how corporate social responsibility (CSR) affects environmental performance. To expand upon this study, future research may compare and contrast the boards of directors and commissioners. Law No. 40 of 2007, which governs Indonesian Limited Liability Companies, established a two-tier corporate governance system, clearly defining a hierarchical separation. The Board of Directors is in charge of running the company, while the Board of Commissioners oversees its activities. The organization's highest governing body is the Board of Commissioners. As a result, this study will be able to demonstrate a more comprehensive approach, particularly a board that performs executive responsibilities and oversight simultaneously in the research setting. Second, this study exclusively considered foreign ownership data to calculate CSR performance. This research can be expanded to include institutional ownership and management. Thus, this study will be able to show the impact of ownership structures in public companies on CSR performance in the environmental sector. Third, this study uses the PROPER rating to measure the performance of CSR in the environmental sector. Further research can use other and comprehensive measurements in assessing CSR performance and measurable.

REFERENCES

Aksoy, M., Yilmaz, M. K., Tatoglu, E., & Basar, M. (2020). Antecedents of corporate sustainability performance in Turkey: The effects of ownership structure and board attributes on non-financial companies. *Journal of Cleaner Production*, *276*, 124284. https://doi.org/10.1016/j.jclepro.2020.124284

Aljifri, K., Alzarouni, A., Ng, C., & Tahir, M. I. (2014). The association between firm characteristics and corporate financial disclosures: evidence from UAE Companies. *The International Journal of Business and Finance Research*, *8*(2), 101–124.

Arayssi, M., Dah, M., & Jizi, M. (2016). Women on boards, sustainability reporting and firm performance. *Sustainability Accounting, Management and Policy Journal*, *7*(3), 376–401. https://doi.org/10.1108/SAMPJ-07-2015-0055

Ardiyanto, F. D., & Prasetiono. (2011). Prediksi Rasio Keuangan Terhadap Kondisi Financial Distress Perusahaan Manufaktur Yang Terdaftar Di BEI. *Jurnal Dinamika Ekonomi Dan Bisnis*, *8*(1), 1–14. https://ejournal.unisnu.ac.id/JDEB/article/view/96

Bananuka, J., Nkundabanyanga, S. K., Kaawaase, T. K., Mindra, R. K., & Kayongo, I. N. (2022). Sustainability performance disclosures: the impact of gender diversity and intellectual capital on GRI standards compliance in Uganda. *Journal of Accounting in Emerging Economies*, *12*(5), 840–881. https://doi.org/10.1108/JAEE-09-2021-0301

Beiner, S., Drobetz, W., Schmid, F., & Zimmermann, H. (2004). Is board size an independent corporate governance mechanism? *Kyklos*, *57*(3), 327–356. https://doi.org/10.1111/j.0023-5962.2004.00257.x

Birindelli, G., Dell'Atti, S., Iannuzzi, A. P., & Savioli, M. (2018). Composition and activity of the board of directors: Impact on ESG performance in the banking system. *Sustainability*, *10*(12), 4699. https://doi.org/10.3390/su10124699

Bolourian, S., Angus, A., & Alinaghian, L. (2021). The impact of corporate governance on corporate social responsibility at the board-level: A critical assessment. *Journal of Cleaner Production*, *291*, 125752. https://doi.org/10.1016/j.jclepro.2020.125752

Cahyani, C., & Suryaningsih, R. (2016). The effect of leverage, board of commissioner, foreign ownership, company age, and company size towards the disclosure of corporate social responsibility (CSR) implementation. *Accounting and Finance Review*, *1*(1), 27–33. https://doi.org/10.35609/afr.2016.1.1(4)

Campanella, F., Serino, L., Crisci, A., & D'Ambra, A. (2021). The role of corporate governance in environmental policy disclosure and sustainable development. Generalized estimating equations in longitudinal count data analysis. *Corporate Social Responsibility and Environmental Management*, *28*(1), 474–484. https://doi.org/10.1002/csr.2062

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, *4*(4), 497–505. https://doi.org/10.2307/257850

Chariri, A., Nasir, M., Januarti, I., & Daljono, D. (2019). Determinants and consequences of environmental investment: an empirical study of Indonesian firms. *Journal of Asia Business Studies*, *13*(3), 433–449. https://doi.org/10.1108/JABS-05-2017-0061

Chau, G., & Gray, S. J. (2010). Family ownership, board independence and voluntary disclosure: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, *19*(2), 93–109. https://doi.org/10.1016/j.intaccaudtax.2010.07.002

Cordeiro, J. J., Profumo, G., & Tutore, I. (2020). Board gender diversity and corporate environmental performance: The moderating role of family and dual-class majority ownership structures. *Business Strategy and the Environment*, *29*(3), 1127–1144. https://doi.org/10.1002/bse.2421

de Villiers, C., Naiker, V., & van Staden, C. J. (2011). The effect of board characteristics on firm environmental performance. *Journal of Management*, *37*(6), 1636–1663. https://doi.org/10.1177/0149206311411506

Dienes, D., Sassen, R., & Fischer, J. (2016). What are the drivers of sustainability reporting? A systematic review. *Sustainability Accounting Management and Policy Journal*, *7*(2), 154–189. https://doi.org/10.1108/SAMPJ-08-2014-0050

Ding, W., Levine, R., Lin, C., & Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. *Journal of Financial Economics*, *141*(2), 802–830. https://doi.org/10.1016/j.jfineco.2021.03.005

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: social values and organizational behavior. *The Pacific Sociological Review*, *18*(1), 122–136. https://doi.org/10.2307/1388226

Elmagrhi, M. H., Ntim, C. G., Elamer, A. A., & Zhang, Q. (2019). A study of environmental policies and regulations, governance structures, and environmental performance: The role of female directors. *Business Strategy and the Environment*, *28*(1), 206-220. https://doi.org/10.1002/bse.2250

Farida, D. N. (2019). Pengaruh diversitas gender terhadap pengungkapan sustainability development goals. *Jurnal Akuntansi Indonesia*, *8*(2), 89–107. https://doi.org/10.30659/jai.8.2.89-107

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Prentice-Hall.

Galbreath, J. (2011). Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *Journal of Management and Organization*, *17*(1), 17–38. https://doi.org/10.1017/s1833367200001693

Garanina, T., & Aray, Y. (2021). Enhancing CSR disclosure through foreign ownership, foreign board members, and cross-listing: Does it work in Russian context? *Emerging Markets Review*, *46*(100754), 1–36. https://doi.org/10.1016/j.ememar.2020.100754

Guest, P. M. (2009). The Impact of Board Size on Firm Performance: Evidence from the UK. *The European Journal of Finance*, *15*(4), 385–404. https://doi.org/10. 1080/13518470802466121

Gujarati, D. N. (2003). *Basic econometrics*. NY: McGraw-Hill.

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, *24*(5), 391–430. https://doi.org/10.1016/j.jaccpubpol.2005.06.001

Haque, F. (2017). The effects of board characteristics and sustainable compensation policy on carbon performance of UK firms. *British Accounting Review*, *49*(3), 347–364. https://doi.org/10.1016/j.bar.2017.01.001

Hart, S. L., & Ahuja, G. (1996). Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance. *Business Strategy and the Environment*, *5*(1), 30–37. https://doi.org/10.1002/(SICI)1099-0836(199603)5:1<30::AID-BSE38>3.0.CO;2-Q

He, X., & Jiang, S. (2019). Does gender diversity matter for green innovation? *Business Strategy and the Environment*, *28*(7), 1341–1356. https://doi.org/10.1002/bse.2319

Hemingway, C. A., & Maclagan, P. W. (2004). Managers' personal values as drivers of corporate social responsibility. *Journal of Business Ethics*, *50*(1), 33–44. https://doi.org/http://dx.doi.org/10.1023/B:BUSI.0000020964.80208.c9

Herrera, L., Fanjul, A. P., & Muñoz-Doyague, M. F. (2023). Corporate sustainability: The pivotal role of corporate scientists and gender diversity. *Cogent Social Sciences*, *9*(2), 1–14. https://doi.org/10.1080/23311886.2023.2271258

Hussain, N., Rigoni, U., & Orij, R. P. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of Business Ethics*, *149*(2), 411–432.

Issa, A., & Fang, H. X. (2019). The impact of board gender diversity on corporate social responsibility in the Arab Gulf states. *Gender in Management*, *34*(7), 577–605. https://doi.org/10.1108/GM-07-2018-0087

Jain, T., & Jamali, D. (2016). Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corporate Governance: An International Review*, *24*(3), 253–273. https://doi.org/10.1111/corg.12154

Jamali, D., Safieddine, A. M., & Rabbath, M. (2008). Corporate governance and corporate social responsibility synergies and interrelationships. *Corporate Governance: An International Review*, *16*(5), 443–459. https://doi.org/10.1111/j.1467-8683.2008.00702.x

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency cost and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360.

Jizi, M. (2017). The influence of board composition on sustainable development disclosure. *Business Strategy and the Environment*, *26*(5), 640–655. https://doi.org/10.1002/bse.1943

Jizi, M. I., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate Governance and Corporate Social Responsibility Disclosure: Evidence from the US Banking Sector. *Journal of Business Ethics*, *125*(4), 601–615. https://doi.org/10.1007/s10551-013-1929-2

John, K., & Senbet, L. W. (1998). Corporate governance and board effectiveness. *Journal of Banking & Finance*, *22*(4), 371–403. https://doi.org/10.1016/ S0378-4266(98)00005-3

Johnson, R. A., & Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *The Academy of Management Journal*, *42*(5), 564–576. https://doi.org/10.2307/256977

Jouber, H. (2021). Is the effect of board diversity on CSR diverse? new insights from one-tier vs two-tier corporate board models. *Corporate Governance: The International Journal of Business in Society*, *21*(1), 23–61. https://doi.org/http://dx.doi.org/10.1108/CG-07-2020-0277

Julekhah, F., & Rahmawati, E. (2019). Pengaruh media exposure, sensitivitas industri, kepemilikan asing, kepemilikan publik dan profitabilitas terhadap environmental disclosure dan dampaknya terhadap nilai perusahaan. *Reviu Akuntansi Dan Bisnis Indonesia*, *3*(1), 50–66. https://doi.org/10.18196/rab.030136

Kabir, R., & Thai, H. M. (2017). Does Corporate Governance Shape The Relationship Between Corporate Social Responsibility and Financial Performance? *Pacific Accounting Review*, *29*(2), 227–258. https://doi.org/http://dx.doi.org/10.1108/PAR-10-2016-0091

Khatri, I. (2023). Board gender diversity and sustainability performance: Nordic evidence. *Corporate Social Responsibility and Environmental Management*, *30*(3), 1495–1507. https://doi.org/10.1002/csr.2432

Kim, H. (2013). *Glass fence thicker than glass ceiling: The puzzling gaps of women's leadership in Korea* (In J. Raja). Palgrave Macmillan.

Kirana, I., & Darmadji, S. H. (2013). Peranan corporate social responsibility (CSR) bidang lingkungan dalam menunjang porolehan program penilaian peringkat kinerja perusahaan (PROPER) PT. Surya Kertas. *Calyptra: Jurnal Ilmiah Mahasiswa Universitas Surabaya*, *2*(2), 1–18.

Kolsi, M. C., & Muqattash, R. (2020). Board characteristic, ownership structure and corporate social responsibility disclosures: evidence from ADX-listed companies. *The IUP Journal of Corporate Governance*, *19*(2), 7–31.

Kumar, N. (2019). Corporate social responsibility: an analysis of impact and challenges in India. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, *3*(2), 53–63.

Laksmana, I. (2008). Corporate board governance and voluntary disclosure of executive compensation practices. *Contemporary Accounting Research*, *25*(4), 1147–1182. https://doi.org/10.1506/car.25.4.8

Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *The British Accounting Review*, *47*(4), 409–424. https://doi.org/10.1016/j.bar.2014.01.002

Lin, C.-C., & Nguyen, T. P. (2022a). Board attributes and corporate social responsibility performance : evidence from vietnam. *Cogent Business & Management*, *9*(1), 1–16. https://doi.org/10.1080/23311975.2022.2087461

Lin, C.-C., & Nguyen, T. P. (2022b). The impact of ownership structure on corporate social responsibility performance in Vietnam. *Sustainability*, *14*(19), 1–13. https://doi.org/10.3390/su141912445

Lins, K. V, Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *The Journal of Finance*, *72*(4), 1785–1824. https://doi.org/10.1111/jofi.12505

Lu, J., & Herremans, I. M. (2019). Board gender diversity and environmental performance: An industries perspective. *Business Strategy and the Environment*, *28*(7), 1449– 1464. https://doi.org/10.1002/bse.2326

Mackenzie, C. (2007). Boards, incentives and corporate social responsibility: The case for a change of emphasis. *Journal Compilation*, *15*(5), 935–943. https://doi.org/http://dx.doi.org/10.1111/j.1467-8683.2007.00623.x

Malik, M. (2015). Value-enhancing capabilities of CSR: A brief review of contemporary literature. *Journal of Business Ethics*, *127*(2), 419–438. https://doi.org/10.1007/s10551-014-2051-9

Martín, C. J. G., & Herrero, B. (2020). Do board characteristics affect environmental performance? A study of EU firms. *Corporate Social Responsibility and Environmental Management*, *27*(1), 74–94. https://doi.org/10.1002/csr.1775

Menicucci, E., & Paolucci, G. (2023). The influence of italian board characteristics on environmental, social and governance dimensions. *Management Decision*, *61*(10), 3082–3105. https://doi.org/10.1108/MD-09-2022-1224

Mulansari, I., Harsanti, P., & Delima, Z. M. (2023). Pengaruh kepemilikan asing dan faktor lainnya terhadap pengungkapan tanggung jawab sosial. *Jurnal Akuntansi Dan Keuangan (JAK)*, *28*(2), 109–121. https://doi.org/10.23960/jak.v28i2.880

Nadeem, M., Gyapong, E., & Ahmed, A. (2020). Board gender diversity and environmental, social, and economic value creation: Does family ownership matter? *Business Strategy and the Environment*, *29*(3), 1268–1284. https://doi.org/10.1002/bse.2432

Nguyen, T., Locke, S., & Reddy, K. (2015). Does boardroom gender diversity matter? Evidence from a transitional economy. *International Review of Economics & Finance*, *37*, 184–202. https://doi.org/10.1016/j.iref.2014.11.022

Nuber, C., & Velte, P. (2021). Board gender diversity and carbon emissions: European evidence on curvilinear relationships and critical mass. *Business Strategy and the Environment*, *30*(4), 1958–1992. https://doi.org/10.1002/bse.2727

Otoritas Jasa Keuangan. (2014). *Peraturan Otoritas Jasa Keuangan Nomor 33/POJK.04/2014 tentang Direksi dan Dewan Komisaris Emiten atau Perusahaan Publik*. https://www.ojk.go.id

Orazalin, N., & Mahmood, M. (2021). Toward sustainable development: Board characteristics, country governance quality, and environmental performance. *Business Strategy and the Environment*, *30*(8), 3569–3588. https://doi.org/10.1002/bse.2820

Ortas, E., Álvarez, I., & Zubeltzu, E. (2017). Firms' board independence and corporate social performance: A meta-analysis. *Sustainability*, *9*(6), 1006. https://doi.org/10.3390/su9061006

Pucheta-Martínez, M. C., Bel-Oms, I., & Olcina-Sempere, G. (2016). Corporate governance, female directors and quality of financial information. *Business Ethics: A European Review*, *25*(4), 363–385. https://doi.org/10.1111/beer.12123

Pucheta-Martínez, M. C., Bel-Oms, I., & Olcina-Sempere, G. (2018). The association between board gender diversity and financial reporting quality, corporate performance and corporate social responsibility disclosure: A literature review. *Academia Revista Latinoamericana de Administración*, *31*(1), 177–194. https://doi.org/10. 1108/ARLA-04-2017-0110

Pucheta-Martínez, M. C., & Gallego-Álvarez, I. (2016). An international approach of the relationship between board attributes and the disclosure of corporate social responsibility issues. *Corporate Social Responsibility and Environmental Management*, *26*(3), 612–627. https://doi.org/10.1002/csr.1707

Pucheta-Martínez, M. C., & Gallego-Álvarez, I. (2019). An international approach of the relationship between board attributes and the disclosure of corporate social responsibility issues. *Corporate Social Responsibility and Environmental Management*, *26*(3), 612–627. https://doi.org/10.1002/csr.1707

Putri, E. M., & Amanah, L. (2024). Pengaruh gender diversity dan age diversity dan educational background terhadap kinerja keuangan perusahaan. *Jurnal Ilmu Dan Riset Akuntansi*, *13*(3), 1–18.

Ramadhani, R., & Maresti, D. (2021). Pengaruh leverage dan ukuran dewan direksi terhadap pengungkapan CSR. *Ekonomis: Journal of Economics and Business*, *5*(1), 78–83. https://doi.org/10.33087/ekonomis.v5i1.262

Rupley, K. H., Brown, D., & Marshall, S. (2012). Governance, media and the quality of environmental disclosure. *Journal of Accounting and Public Policy*, *31*(6), 610–640. https://doi.org/10.1016/j.jaccpubpol.2012.09.002

Sarumpaet, S., Nelwan, M. L., & Dewi, D. N. (2017). The value relevance of environmental performance: evidence from Indonesia. *Social Responsibility Journal*, *13*(4), 817–827. https://doi.org/10.1108/SRJ-01-2017-0003

Sektiyani, W., & Ghozali, I. (2019). Pengaruh karakteristik dewan terhadap pengungkapan CSR (Studi empiris seluruh perusahaan yang terdaftar di bursa efek indonesia pada tahun 2017). *Diponegoro Journal of Accounting*, *8*(3), 1–13.

Setiawan, D., Widawati, M. W., & Rizky, H. P. (2021). The role of foreign ownership in the CSR performance of agriculture listed firms in Indonesia. *IOP Conference Series: Earth and Environmental Science*, *905*(1), 1–6. https://doi.org/10.1088/1755-1315/905/1/012012

Shu, P. G., & Chiang, S. J. (2020). The impact of corporate governance on corporate social performance: cases from listed firms in Taiwan. *Pacific-Basin Finance Journal*, *61 (C)*, 101332. https://doi.org/10.1016/j.pacfin.2020.101332

Sihombing, P. R. (2021). Analisis regresi data panel. In *Statistik multivariat dalam riset* (pp. 95–112). Widina Bhakti Persada. https://www.researchgate.net/publication/357051571

Singh, A. K., Kota, H. B., Sandana, V., & Singhania, S. (2021). Does gender diversity on board promote corporate social responsibility? An empirical analysis of sustainable development goals. *Australasian Accounting, Business and Finance Journal*, *15*(5), 22–40. https://doi.org/10.14453/aabfj.v15i5.3

Singh, J., Sardana, V., & Singhania, S. (2024). Beyond compliance: the business case for gender diversity on boards and sustainability reporting in India. *International Journal of System Assurance Engineering and Management*. https://doi.org/10.1007/s13198-023-02242-2

Sumilat, H., & Destriana, N. (2017). Faktor-faktor yang mempengaruhi pengungkapan corporate social responsibility. *Jurnal Bisnis Dan Akuntansi*, *19*(1a), 129–140.

Talan, G., & Sharma, G. D. (2020). From business goals to societal goals via sustainable investment: an integrative review and research agenda. *World Review of Entrepreneurship, Management and Sustainable Development (WREMSD)*, *16*(1), 108–124. https://doi.org/10.1504/WREMSD.2020.105530

Tantan, H. (2012, November). PROPER berhasil mendorong peningkatan kinerja lingkungan. *Www.Dunia-Energi.Com*. https://www.dunia-energi.com/proper-berhasil-mendorong-peningkatan-kinerja-lingkungan/

Tingbani, I., Chithambo, L., Tauringana, V., & Papanikolaou, N. (2020). Board gender diversity, environmental committee and greenhouse gas voluntary disclosures. *Business Strategy and the Environment*, *29*(6), 2194–2210. https://doi.org/10.1002/bse.2495

Yaseen, H., Al-amarneh, A., & Iskandrani, M. M. (2018). Board diversity and social responsibility: The case of Jordanian commercial banks. *Corporate Ownership & Control*, *15*(2), 139–147. https://doi.org/10.22495/cocv15i2c1p1

Zaid, M. A. A., Abuhijleh, S. T. F., & Pucheta-Martínez, M. C. (2020). Ownership structure, stakeholder engagement, and corporate social responsibility policies: The moderating effect of board independence. *Corporate Social Responsibility and Environmental Management, 27*(3), 1344–1360. https://doi.org/10.1002/csr.1888