

Board Diversity and Financial Performance: The Mediating Role of ESG in Indonesian Regional Development Banks

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Abstract

This study aims to examine the effect of board characteristics on financial performance with ESG performance as a mediating variable in Indonesian Regional Development Banks (BPD). A quantitative approach was employed using secondary data obtained from annual and sustainability reports during the 2021–2024 period. The data were analyzed using multiple regression and path analysis with SPSS software. The findings indicate that board size and gender diversity negatively and significantly affect Return on Assets (ROA), while age diversity positively and significantly affects ROA, and educational diversity shows no significant effect. Furthermore, ESG performance does not significantly affect ROA and does not mediate the relationship between board characteristics and financial performance. These findings suggest that governance efficiency plays a more dominant role than ESG in determining short-term financial performance in BPDs. This study contributes to the literature by providing empirical evidence on the limited mediating role of ESG in the context of regional banking in Indonesia. The findings also provide implications for improving governance effectiveness and ESG integration in regional banking institutions.

Keywords: Board diversity, financial performance, ESG, ROA, corporate governance, regional banks

Article Information

Received: Mei 2026

Revised: Mei 2026

Accepted: August 2026

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INTRODUCTION

The banking sector plays an important role in supporting economic growth and maintaining financial stability. In Indonesia, Regional Development Banks (BPDs) have a strategic function in promoting regional economic development through financing micro, small, and medium enterprises (MSMEs) and supporting local government programs. Due to their

close relationship with regional economies, BPDs are expected not only to maintain financial performance but also to support sustainable development.

In recent years, BPDs have faced increasing challenges arising from macroeconomic uncertainty, regulatory changes, interest rate fluctuations, and credit risk pressures, which significantly affect banking profitability and stability (Yuan et al., 2022). In the banking industry, financial performance is commonly measured using Return on Assets (ROA) because it reflects the bank's ability to generate profit from its total assets and is considered more relevant for asset-based industries such as banking.

Corporate governance, particularly the role of the board of directors, is considered an important determinant of bank performance. Board characteristics such as board size, gender diversity, age diversity, and educational background diversity may influence strategic decision-making and organizational effectiveness. Diverse boards are expected to provide broader perspectives, experience, and expertise that may improve governance quality and financial outcomes.

Prior studies provide contrasting evidence regarding the relationship between board diversity and financial performance. Several studies report that board size and gender diversity positively influence bank performance through stronger monitoring and improved governance practices (Abdul Gafoor et al., 2018; Cardillo et al., 2021; Krasnov et al., 2023). However, other studies suggest that larger boards and diversity may create coordination problems and reduce decision-making efficiency (Staikouras et al., 2007; Pathan & Faff, 2012; Lindhiasiari & Muazzaroh, 2024). Similarly, educational and age diversity have shown inconsistent relationships with financial performance across different institutional contexts (Elsharkawy et al., 2018; Janahi et al., 2023; Pereira & Filipe, 2022).

Beyond financial performance, Environmental, Social, and Governance (ESG) performance has become increasingly important in the banking sector. ESG reflects a company's commitment to sustainability, social responsibility, and good governance. Previous studies indicate that board characteristics may influence ESG performance, while ESG implementation may improve corporate reputation, transparency, and stakeholder trust (Birindelli et al., 2018; Buallay, 2019; Menicucci & Paolucci, 2022). However, ESG practices may also involve substantial short-term costs, causing the relationship between ESG and financial performance to remain inconclusive.

Despite the growing literature on board diversity, ESG, and financial performance, several research gaps remain. First, previous studies provide inconsistent evidence regarding the relationship between board diversity and financial performance. Second, limited studies investigate ESG performance as a mediating mechanism linking board characteristics and financial performance, particularly in the banking sector. Third, most prior studies focus on commercial or listed banks, while empirical evidence from Indonesian Regional Development Banks (BPDs) remains limited.

Therefore, this study aims to examine the effect of board characteristics on financial performance through ESG performance in Indonesian Regional Development Banks (BPDs). Board characteristics include board size, gender diversity, age diversity, and educational background diversity, while financial performance is measured using ROA. This study contributes to the literature on corporate governance and sustainability by providing empirical evidence regarding the mediating role of ESG performance in the relationship between board diversity and financial performance within the context of regional banking in Indonesia.

THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT

Upper Echelons Theory

Upper Echelons Theory explains that organizational outcomes are influenced by the values, experiences, and characteristics of top executives. According to Hambrick and Mason (1984), strategic decisions and firm performance reflect the cognitive bases and background characteristics of top management. In this study, board characteristics such as board size, gender diversity, age diversity, and educational background diversity are considered important factors that may influence financial performance and ESG performance. Therefore, the diversity of board members is expected to affect how banks formulate strategies and achieve organizational performance.

Stakeholder Theory

Stakeholder Theory states that companies should not only focus on shareholders but also consider the interests of various stakeholders, including employees, customers, regulators, communities, and society. Freeman (1984) defines stakeholders as groups or individuals who can affect or are affected by organizational objectives. In the context of Regional Development Banks, stakeholder pressure is highly relevant because BPDs have both financial and regional development responsibilities. Board diversity may improve the ability of banks to understand stakeholder expectations related to environmental, social, and governance issues, thereby supporting better ESG performance and financial outcomes.

Diversity Theory

Diversity Theory suggests that diversity within an organization can create competitive advantages through broader perspectives, creativity, innovation, and better decision-making. Cox and Blake (1991) argue that diversity may improve organizational effectiveness when it is properly managed. In corporate governance, diversity in gender, age, education, and board size may provide different knowledge and experience that strengthen strategic decisions. However, diversity may also create coordination challenges if differences among board members are not effectively integrated. Therefore, the effect of board diversity on financial performance and ESG performance may depend on the organizational context.

Board Size and Financial Performance

Board size refers to the number of board members involved in strategic decision-making. A larger board may improve financial performance because it provides broader expertise, stronger monitoring, and better resource access. Abdul Gafoor et al. (2018) found that board characteristics may affect bank performance. Similarly, Mustahidda and Wahyono (2022) found that board size significantly influences banking performance in Indonesia. However, larger boards may also create coordination problems and slower decision-making, which can reduce performance (Staikouras et al., 2007; Pathan & Faff, 2012). In this study, board size is expected to influence ROA because the board plays a key role in determining banking strategy and operational efficiency.

H1: Board size has a positive effect on financial performance.

Gender Diversity and Financial Performance

Gender diversity refers to the proportion of female members on the board. The presence of women on boards may improve decision-making quality, risk control, and governance effectiveness. Previous studies generally suggest that gender diversity improves governance quality and bank performance (Mustahidda & Wahyono, 2022; Lindhiasiari &

Muazzaroh, 2024). This indicates that the effect of gender diversity may depend on board participation, authority, and institutional context. In this study, gender diversity is expected to affect ROA through better governance and strategic decision-making.

H2: Gender diversity has a positive effect on financial performance.

Age Diversity and Financial Performance

Age diversity reflects differences in age among board members. Older directors may contribute experience, prudence, and risk management ability, while younger directors may bring innovation, adaptability, and new perspectives. Janahi et al. (2023) found that age diversity may improve the monitoring role of boards in banks. However, Lindhiasiari and Muazzaroh (2024) found that age diversity may negatively affect banking performance in Indonesia. This mixed evidence suggests that age diversity may create both benefits and challenges. In this study, age diversity is expected to influence financial performance because the combination of experience and innovation may affect the quality of strategic decisions.

H3: Age diversity affects financial performance.

Educational Background Diversity and Financial Performance

Educational background diversity refers to differences in academic disciplines among board members. Directors with diverse educational backgrounds may contribute various perspectives in strategic decision-making. Pereira and Filipe (2022) found that educational background may influence bank performance, although the effect can be negative when formal education does not match practical banking needs. Mustahidda and Wahyono (2022) also found that educational background does not always significantly affect financial performance. Therefore, educational diversity may improve performance only when it is supported by relevant expertise and effective coordination among board members.

H4: Educational background diversity affects financial performance.

Board Diversity and ESG Performance

Board diversity is also expected to influence ESG performance. Diverse boards may be more sensitive to environmental, social, and governance issues because they represent broader perspectives and stakeholder concerns. Birindelli et al. (2018) found that board size, gender diversity, and CSR committees contribute to ESG performance in banks. Menicucci and Paolucci (2022) also found that board diversity influences ESG performance in Italian banks. Agnese et al. (2024) showed that board knowledge and expertise matter for ESG performance in the European banking industry. Therefore, board characteristics are expected to influence how banks implement and disclose ESG practices.

H5: Board size has a positive effect on ESG performance.

H6: Gender diversity has a positive effect on ESG performance.

H7: Age diversity affects ESG performance.

H8: Educational background diversity affects ESG performance.

ESG Performance and Financial Performance

ESG performance reflects a company's commitment to environmental responsibility, social responsibility, and good governance. In banking, ESG implementation can improve transparency, reputation, stakeholder trust, and risk management. Buallay (2019) found that ESG disclosure is associated with bank performance. Gangwani and Kashiramka (2024) also showed that ESG performance may influence value and risk-taking in banks. However, ESG implementation may require substantial costs in the short term, so its effect on financial

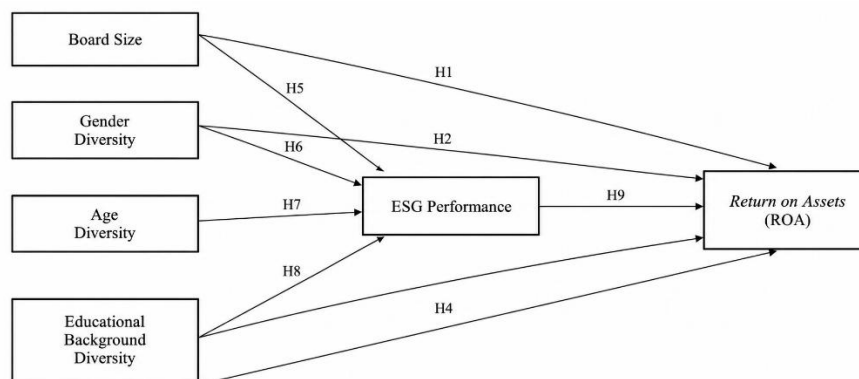
performance may not appear immediately. In this study, ESG performance is expected to influence ROA because sustainable practices may support long-term profitability and operational resilience.

H9: ESG performance has a positive effect on financial performance.

The Mediating Role of ESG Performance

Board diversity may influence financial performance directly through strategic decisions and indirectly through ESG performance. Diverse boards may encourage better sustainability practices by considering broader stakeholder interests and improving governance quality. ESG performance may then enhance financial performance through better reputation, stakeholder trust, and risk management. Birindelli et al. (2018) found that board characteristics influence ESG performance, while Buallay (2019) and Gangwani and Kashiramka (2024) found that ESG may affect financial performance. Therefore, ESG performance is expected to mediate the relationship between board diversity and financial performance.

Figure 1
Conceptual Framework



H10: ESG performance mediates the effect of board size on financial performance.

H11: ESG performance mediates the effect of gender diversity on financial performance.

H12: ESG performance mediates the effect of age diversity on financial performance.

H13: ESG performance mediates the effect of educational background diversity on financial performance.

RESEARCH METHODS

This study employs a quantitative approach using a causal research design to examine the effect of board diversity on financial performance with ESG performance as a mediating variable. A causal research design is appropriate because this study aims to test the effect of independent variables on dependent and mediating variables (Sekaran & Bougie, 2016).

This study uses secondary data obtained from the annual reports and sustainability reports of Regional Development Banks (BPDs) in Indonesia during the 2021–2024 period. The population consists of all Regional Development Banks in Indonesia. The sample was selected using purposive sampling with the following criteria: (1) BPDs operating under a conventional banking system, (2) BPDs that publish ESG or sustainability-related information, and (3) BPDs that provide complete information on board characteristics, including board size, gender diversity, age diversity, and educational background diversity. Based on these criteria, 12 BPDs were selected as the research sample. Since the study covers four years of observation, the total number of observations is 48.

The variables used in this study consist of board size, gender diversity, age diversity, and educational background diversity as independent variables. Financial performance, measured by Return on Assets (ROA), is used as the dependent variable, while ESG performance is used as the mediating variable. Board size is measured by the total number of board members. Gender diversity is measured by the proportion of female board members to total board members. Age diversity is measured using the standard deviation of board members' ages. Educational background diversity is measured using the Blau index. ROA is calculated by dividing profit before tax by total assets. ESG performance is measured through content analysis based on the Global Reporting Initiative (GRI) Standards.

ESG disclosure is assessed using a scoring method. Each ESG disclosure item reported by the bank is given a score of 1, while an undisclosed item is given a score of 0. The ESG score is calculated by dividing the total number of disclosed items by the total disclosure items and multiplying the result by 100 percent. This method reflects the extent to which each bank discloses environmental, social, and governance information in its annual or sustainability reports.

The formulas used in this study are presented as follows:

$$\text{ROA} = (\text{Profit Before Tax} / \text{Total Assets}) \times 100\%$$

$$\text{Gender Diversity} = (\text{Number of Female Board Members} / \text{Total Board Members}) \times 100\%$$

$$\text{Age Diversity} = \text{Standard Deviation of Board Members' Age}$$

$$\text{Educational Diversity} = 1 - \sum(\text{pi}^2)$$

$$\text{ESG} = (\text{Number of Disclosed Items} / \text{Total Disclosure Items}) \times 100\%$$

Data analysis was conducted using multiple linear regression and path analysis with SPSS software. Multiple linear regression was used to examine the direct effects of board diversity and ESG performance on financial performance, while path analysis was used to evaluate the mediating role of ESG performance. The regression models used in this study are as follows:

$$\text{ROA} = \alpha + \beta_1 \text{BoardSize} + \beta_2 \text{Gender} + \beta_3 \text{Age} + \beta_4 \text{Education} + \beta_5 \text{ESG} + \varepsilon$$

$$\text{ESG} = \alpha + \beta_1 \text{BoardSize} + \beta_2 \text{Gender} + \beta_3 \text{Age} + \beta_4 \text{Education} + \varepsilon$$

$$\text{ROA} = \alpha + \beta \text{ESG} + \varepsilon$$

Before conducting regression analysis, classical assumption tests were performed, including normality, multicollinearity, and heteroscedasticity tests. Normality was tested using the Kolmogorov–Smirnov test, multicollinearity was assessed using the Variance Inflation Factor (VIF), and heteroscedasticity was examined using the Glejser test. These tests were conducted to ensure that the regression model met the required statistical assumptions.

The mediation effect was tested using path analysis and the Sobel test. The Sobel test was used to determine whether ESG performance significantly mediates the relationship between board diversity and financial performance. A mediation effect is considered significant when the Sobel test value exceeds the critical value or when the significance level is below 0.05.

RESULTS AND DISCUSSION

Results

This study analyzes the effect of board characteristics, namely board size, gender diversity, age diversity, and educational background diversity, on financial performance measured by Return on Assets (ROA), with ESG performance as an intervening variable. The sample consists of 48 observations from 12 Regional Development Banks (BPD) in Indonesia during the period 2021–2024.

Descriptive Analysis

Classical Assumption Tests

Prior to regression analysis, classical assumption tests were conducted to ensure that the regression model met the required statistical assumptions. The normality test using the Kolmogorov–Smirnov method shows a significance value above 0.05, indicating that the data are normally distributed. The multicollinearity test indicates that all Variance Inflation Factor (VIF) values are below 10, suggesting the absence of multicollinearity. In addition, the Glejser test shows significance values above 0.05, indicating that no heteroscedasticity problem exists in the regression model. Descriptive statistics are presented to provide an overview of the data distribution.

Table 1. Descriptive Statistics

Variable	N	Mean	Std. Dev	Min	Max
Board Size	48	5.000	1.429	3.000	9.000
Gender Diversity	48	0.158	0.167	0.000	0.750
Age Diversity	48	3.924	1.813	0.500	7.790
Educational Diversity	48	0.227	0.222	0.000	0.610
ROA	48	0.019	0.005	0.001	0.030
ESG	48	0.318	0.106	0.007	0.510

The results indicate that board size is relatively stable with an average of five members. Gender diversity remains low, reflecting limited female representation in BPD boards. Age diversity shows moderate variation, while educational diversity is relatively low, indicating homogeneous educational backgrounds.

The average ROA of 0.0189 suggests stable profitability across banks, while ESG performance at 0.318 indicates moderate adoption of sustainability practices.

The first model examines the influence of board characteristics on ESG performance.

Table 2. Regression Results for ESG Performance

Variable	Coefficient (β)	t-value	Sig.
Board Size	0.014	1.241	0.221
Gender Diversity	-0.070	-0.711	0.481
Age Diversity	-0.009	-0.912	0.367
Educational Diversity	0.086	-1.134	0.263
Model Statistics		Value	
R ²		0.092	
F-value		1.089	
Sig. F		0.806	

The F-test result ($F = 1.089$; $\text{Sig.} = 0.806$) indicates that all independent variables jointly do not significantly affect ESG performance. The R^2 value of 0.092 suggests that only 9.2% of ESG variation is explained by board characteristics.

This finding indicates that ESG performance in BPDs is not significantly influenced by board diversity. Instead, ESG practices may be driven more by external pressures such as regulatory compliance and stakeholder expectations. This result is consistent with prior studies suggesting that ESG adoption in emerging markets is often compliance-oriented rather than strategy-driven.

The second model evaluates the impact of board characteristics and ESG performance on ROA.

Table 3. Regression Results for Financial Performance (ROA)

Variable	Coefficient (β)	t-value	Sig.
Board Size	-0.001	-3.447	0.001
Gender Diversity	-0.015	-4.069	0.000
Age Diversity	0.001	2.948	0.005
Educational Diversity	-0.001	-0.180	0.858
ESG	-0.009	-1.560	0.126
Model Statistics		Value	
R ²		0.472	
F-value		7.512	
Sig. F		< 0.05	

The model is statistically significant, indicating that board characteristics and ESG jointly influence financial performance. The R² value of 0.472 suggests that 47.2% of ROA variation is explained by the model.

Board size has a negative and significant effect on ROA, indicating that larger boards reduce financial performance due to coordination inefficiencies. Gender diversity also shows a negative and significant effect, suggesting that current female representation may not yet reach a level that positively influences financial outcomes.

In contrast, age diversity has a positive and significant effect on ROA, indicating that a mix of experience and innovation enhances decision-making quality. Educational diversity does not significantly affect ROA, suggesting that general educational variation is less important than specific expertise in banking.

ESG performance is not significantly associated with ROA, indicating that sustainability practices have not yet translated into short-term financial gains. This supports prior findings that ESG impacts financial performance in the long term rather than immediately. To examine the mediating role of ESG, path analysis was conducted.

Table 4. Indirect Effects (Sobel Test)

Path	Indirect Effect	t-Sobel	Conclusion
X ₁ → ESG → ROA	-0.0001	0.9719	Not Significant
X ₂ → ESG → ROA	0.0006	0.6470	Not Significant
X ₃ → ESG → ROA	0.0001	0.7873	Not Significant
X ₄ → ESG → ROA	-0.0008	0.9172	Not Significant

The results show that all indirect effects are not significant, indicating that ESG does not mediate the relationship between board characteristics and ROA.

This suggests that the influence of board diversity on financial performance occurs directly rather than through ESG. The lack of mediation is explained by the insignificant relationship between board characteristics and ESG, as well as between ESG and ROA.

Discussion

The findings of this study provide empirical evidence regarding the relationship between board characteristics, ESG performance, and financial performance in Regional Development Banks (BPD) in Indonesia. Overall, the results indicate that the effect of board characteristics on financial performance is not uniform, while ESG performance does not function as a mediating mechanism in the short term.

First, the results show that board size has a negative and significant effect on financial performance (ROA). This finding supports the argument that larger boards may reduce decision-making efficiency due to coordination problems and slower strategic responses (Staikouras et al., 2007; Pathan & Faff, 2012). Although previous studies suggest that larger

boards can provide broader expertise (Abdul Gafoor et al., 2018), the findings of this study indicate that in the context of BPD, a larger board tends to create inefficiencies rather than improving performance. This result is consistent with the institutional characteristics of BPD, where decision-making processes are often more complex due to bureaucratic structures.

Second, gender diversity is found to have a negative and significant effect on ROA. This result contrasts with studies that suggest a positive relationship between gender diversity and bank performance (Cardillo et al., 2021; Mansour et al., 2024). However, it supports findings in the Indonesian context that gender diversity does not always improve financial performance (Mustahidda & Wahyono, 2022; Lindhiasiari & Muazzaroh, 2024). This may indicate that the presence of women on boards in BPD has not yet been accompanied by strong strategic roles or sufficient representation to influence decision-making outcomes effectively.

Third, age diversity has a positive and significant effect on financial performance. This finding supports the argument that a combination of experience and innovation can enhance decision-making quality (Janahi et al., 2023). The presence of both senior and younger directors allows for better strategic balance between risk management and innovation. This result aligns with the Upper Echelons Theory, which emphasizes that organizational outcomes are influenced by the characteristics of top management.

Fourth, educational background diversity is found to have no significant effect on financial performance. This result is consistent with previous studies suggesting that educational diversity alone is insufficient to improve performance without relevant competencies (Pereira & Filipe, 2022; Mustahidda & Wahyono, 2022). This indicates that the effectiveness of board members depends more on the relevance of their expertise rather than the diversity of educational backgrounds.

Furthermore, the results show that board characteristics do not significantly affect ESG performance. Board size, gender diversity, age diversity, and educational background diversity are all found to have no significant relationship with ESG performance. These findings contrast with previous studies that highlight the importance of board characteristics in improving ESG performance (Birindelli et al., 2018; Menicucci & Paolucci, 2022; Agnese et al., 2024). This suggests that in the context of BPD, ESG implementation is still largely compliance-driven and has not been fully integrated into strategic decision-making processes. This condition may reflect the institutional characteristics of BPDs as regional government-owned banks that prioritize public service responsibilities and regulatory compliance over market-based sustainability competitiveness. Consequently, ESG disclosure may function more as a formal reporting requirement than as a strategic tool for improving financial performance.

In addition, ESG performance is found to have no significant effect on financial performance (ROA). This result supports the argument that ESG implementation may not produce immediate financial benefits, as it often requires significant investment in the short term (Buallay, 2019; Gangwani & Kashiramka, 2024). In the case of BPD, ESG practices may still be in the early stages of implementation, with limited impact on profitability.

The mediating role of ESG is also not supported in this study. ESG performance does not mediate the relationship between board characteristics and financial performance. This finding indicates that the influence of board characteristics on financial performance occurs directly rather than through ESG mechanisms. This result reinforces the idea that ESG in BPD has not yet reached a level where it can function as a strategic intermediary linking governance and financial outcomes. The findings of this study provide several managerial implications for Regional Development Banks. First, BPD management should focus on improving board

effectiveness and decision-making quality rather than merely increasing board size or diversity composition. Second, ESG implementation should be integrated into long-term strategic planning and operational practices rather than treated solely as a regulatory compliance requirement. Strengthening the strategic role of ESG may improve stakeholder trust, organizational reputation, and long-term financial sustainability.

Overall, these findings address the research gaps identified in the introduction. First, the study confirms that the relationship between board characteristics and financial performance is inconsistent and context-dependent. Second, the results show that ESG does not act as a mediating variable in the BPD context, highlighting the limited role of ESG in influencing financial performance in the short term. Third, this study provides empirical evidence from Regional Development Banks in Indonesia, contributing to the limited literature on governance and sustainability in regional banking institutions. These findings highlight the importance of institutional context in understanding the effectiveness of corporate governance and sustainability practices in regional banking institutions.

CONCLUSION

This study aims to examine the effect of board characteristics on financial performance and ESG performance in Regional Development Banks (BPDs) in Indonesia, as well as to test the mediating role of ESG. The findings indicate that board characteristics have varying effects on financial performance, while ESG has not yet functioned as an effective mediating variable.

Specifically, board size and gender diversity are found to have a negative and significant effect on financial performance (ROA), suggesting that larger boards and low-effectiveness gender diversity may reduce decision-making efficiency. In contrast, age diversity has a positive and significant effect, indicating that a combination of experience and innovation contributes positively to firm performance. Meanwhile, educational diversity does not significantly affect financial performance, suggesting that general educational variation is less important than relevant expertise.

Furthermore, none of the board characteristics significantly influence ESG performance. This finding indicates that ESG practices in BPDs are not primarily driven by internal board structure but are more likely influenced by external factors such as regulatory requirements and stakeholder pressure. In addition, ESG performance does not have a significant effect on ROA, suggesting that the financial benefits of ESG have not yet materialized in the short term.

The mediation analysis shows that ESG does not mediate the relationship between board characteristics and financial performance. This implies that the influence of board diversity on financial performance occurs directly rather than through sustainability performance.

Overall, the study concludes that governance efficiency plays a more critical role than ESG in determining financial performance in BPDs. These findings indicate that ESG implementation in BPDs remains relatively compliance-driven and has not yet fully functioned as a strategic driver of financial performance. Therefore, future efforts should focus on integrating ESG into long-term business strategies and strengthening board effectiveness to enhance both sustainability and financial performance. The findings imply that BPD management should prioritize improving board effectiveness, decision-making quality, and strategic coordination rather than merely increasing board size or diversity composition. In addition, ESG practices should be integrated into long-term strategic planning to strengthen sustainability performance and stakeholder trust.

Future studies are recommended to expand the observation period, include other banking sectors, and apply alternative ESG measurement approaches. Further research may also consider additional governance variables, such as board independence, ownership structure, or managerial expertise, to better explain financial and sustainability performance.

ACKNOWLEDGMENT

The author would like to thank the Higher Education Service Institute of Region VII of the Ministry of Education, Culture, Research and Technology and the Directorate of Research, Technology and Community Service, Directorate General of Higher Education, Research and Technology for funding this research with research contract number 088/LL7/DT.05.00/PL-BARU/2026

REFERENCES

- Abdul Gafoor, C. P., Mariappan, V., & Thyagarajan, S. (2018). Board characteristics and bank performance in India. *IIMB Management Review*, 30(2), 160–167. <https://doi.org/10.1016/j.iimb.2018.01.007>
- Agnese, P., Arduino, F. R., Cerciello, M., & Taddeo, S. (2024). Does board knowledge matter for ESG performance in the European banking industry? *Corporate Social Responsibility and Environmental Management*, 31(5), 4454–4468. <https://doi.org/10.1002/csr.2811>
- 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>
- Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, 30(1), 98–115. <https://doi.org/10.1108/MEQ-12-2017-0149>
- Cardillo, G., Onali, E., & Torluccio, G. (2021). Does gender diversity on banks’ boards matter? Evidence from public bailouts. *Journal of Corporate Finance*, 71, 101560. <https://doi.org/10.1016/j.jcorpfin.2020.101560>
- Cox, T., & Blake, S. (1991). Managing cultural diversity: Implications for organizational competitiveness. *Academy of Management Executive*, 5(3), 45–56. <https://doi.org/10.5465/ame.1991.4274465>
- Elsharkawy, M., Paterson, A. S., & Sherif, M. (2018). Now you see me: Diversity, CEO education, and bank performance in the UK. *Investment Management and Financial Innovations*, 15(1), 277–291. [https://doi.org/10.21511/imfi.15\(1\).2018.23](https://doi.org/10.21511/imfi.15(1).2018.23)
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Gangwani, M., & Kashiramka, S. (2024). Does ESG performance impact value and risk-taking by commercial banks? Evidence from emerging market economies. *Business Strategy and the Environment*, 33(7), 7562–7589. <https://doi.org/10.1002/bse.3882>
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206. <https://doi.org/10.2307/258434>
- Janahi, M., Millo, Y., & Voulgaris, G. (2023). Age diversity and the monitoring role of corporate boards: Evidence from banks. *Human Relations*, 76(10), 1599–1633. <https://doi.org/10.1177/00187267221108729>
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

- Krasnov, A. N., Balynin, I. V., & Shmeleva, L. A. (2023). Impact of the board of directors' structure on the company's financial results. *Finance: Theory and Practice*, 27(3), 189–198. <https://doi.org/10.26794/2587-5671-2023-27-3-189-198>
- Lindhiasari, S., & Muazzaroh. (2024). Pengaruh diversitas dewan direksi terhadap kinerja perusahaan. *Dialektika: Jurnal Ekonomi dan Ilmu Sosial*, 9(2). <https://doi.org/10.36636/dialektika.v9i2.3938>
- Mansour, M., Al Zobi, M., E'leimat, D. A., Alim, S. A., & Marei, A. (2024). Board gender diversity and bank performance in Jordan. *Banks and Bank Systems*, 19(1), 183–194. [https://doi.org/10.21511/bbs.19\(1\).2024.16](https://doi.org/10.21511/bbs.19(1).2024.16)
- Menicucci, E., & Paolucci, G. (2022). Board diversity and ESG performance: Evidence from the Italian banking sector. *Sustainability*, 14(20), 13447. <https://doi.org/10.3390/su142013447>
- Mustahidda, R., & Wahyono, A. T. (2022). Pengaruh karakteristik dewan direksi terhadap kinerja perusahaan perbankan di Bursa Efek Indonesia. *Jurnal Jebaku*, 2(1).
- Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches* (7th ed.). Pearson Education Limited.
- Nuridin, I., Hartati, S., & others. (2019). *Metodologi penelitian sosial*. Media Sahabat Cendekia.
- Pathan, S., & Faff, R. (2013). Does board structure in banks really affect their performance? *Journal of Banking and Finance*, 37(5), 1573–1589. <https://doi.org/10.1016/j.jbankfin.2012.12.016>
- Pereira, V. M. M., & Filipe, J. A. C. B. (2022). Board members' educational background and financial performance: Evidence from Eurozone banks. *Journal of Central Banking Theory and Practice*, 11(3), 203–227. <https://doi.org/10.2478/jcbtp-2022-0030>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- Staikouras, P. K., Staikouras, C. K., & Agoraki, M. E. K. (2007). The effect of board size and composition on European bank performance. *European Journal of Law and Economics*, 23(1), 1–27. <https://doi.org/10.1007/s10657-007-9001-2>
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Yuan, D., Gazi, M. A. I., Harymawan, I., Dhar, B. K., & Hossain, A. I. (2022). Profitability determining factors of banking sector: Panel data analysis of commercial banks in South Asian countries. *Frontiers in Psychology*, 13, 1000412. <https://doi.org/10.3389/fpsyg.2022.1000412>
- Zaidi, N., Azouzi, M. A., & Sadraoui, T. (2021). CEO financial education and bank performance. *Journal of Entrepreneurship Education*, 24(2).