

THE IMPACT OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) ON BANKING FINANCIAL PERFORMANCE IN ASEAN

Ervina Vania Wijaya^{1*}, Lauw Tjun Tjun²

^{1,2}Accounting Study Program, Faculty of Digital Business and Law, Universitas Kristen
Maranatha, Indonesia

*Corresponding Author:

ervinavw@gmail.com

Abstract

This study examines the effect of ESG performance on financial performance in banking institutions across five ASEAN countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) during the 2021–2024 period. The study is motivated by the increasing importance of ESG practices in the banking sector and the need to understand how ESG disclosure influences financial outcomes in emerging market contexts, where stakeholder expectations and regulatory environments are evolving rapidly. The sample consists of 46 banks with 180 firm-year observations selected using purposive sampling. Panel data regression with the Random Effect Model was employed to test the proposed hypothesis. The results indicate that ESG performance has a positive and significant effect on financial performance, suggesting that banks with higher ESG disclosure levels tend to achieve better profitability. The model with control variables (firm size, Big Four auditors, and non-performing loans) explains approximately 14.01% of the variation in financial performance. The negative relationship between non-performing loans and financial performance underscores the importance of effective credit risk management. These findings suggest that proactive ESG disclosure enhances stakeholder trust and contributes to improved financial performance in ASEAN banking institutions, providing valuable insights for bank management, regulators, and investors in assessing the role of ESG practices in financial outcomes.

Keywords: ESG Performance, Financial Performance, Banking Sector, ASEAN Countries, Stakeholder Theory

1. Introduction

Over the last twenty years, business sustainability policies have developed from optional projects to a strategic consideration for investors, regulators and management. This paradigm shift has been further accelerated since the COVID-19 pandemic, not solely through financial profitability, but equally through it's the environmental, social, and governance (ESG) performance based on ESG has developed into a holistic assessment system to evaluate the degree to which a company, especially a bank, incorporates sustainability concepts into its strategy and operations. It is believed that commitment to ESG affects financial performance by improving operational efficiency, attracting responsible investments, mitigating reputational and regulatory concerns, and improving stakeholder loyalty. banking sector participates in the in the sustainable financial ecology. Banks are not only sources of credit but custodians of allocation of capital to prudent economic activities. The role of the banking industry as a key player in channelling capital towards sustainable development, makes the awareness of the influence for environmental, social and governance (ESG) in the monetary health of banks progressively. The core question of whether more ESG commitment helps improve

financial conclusion has still unresolved for both scholars and practitioners. This issue is relevant to investigate because empirical results differ between studies, especially in developing regions such as Southeast Asia.

The ASEAN 5 region of Indonesia, Malaysia, Singapore, Thailand and the Philippines represents an appealing but complicated landscape for banking ESG research (ESGpedia, 2024). Capital market development, financial system depth and sophistication of ESG regulation vary considerably among these five countries. Singapore is a regional leader in ESG standardisation. From fiscal year 2025, all listed issuers on the Singapore Exchange (SGX) will be required to disclose climate data based on ISSB standards, with the intention of expanding to full ESG reporting by fiscal year 2026. Malaysia, in contrast, has rolled out the National Sustainability Reporting Framework (NSRF) which is aligned with ISSB standards and will mandate ESG reporting for large companies listed on the Main Market starting 2025, and SEDG requirements for SMEs. At present, Currently, the public listed companies in the Philippines with 50% or more public float are required to submit annual ESG reports using the SEC 2019 criteria based on GRI. The multitude of rules creates a heterogeneous landscape that results in deviations of ESG rankings for commercial banks while their effect upon financial health. Earlier research means a corresponding that the controversy continues. The study (Nathania & Ekawati, 2024) used multiple linear regression on 26 banks from 5 ASEAN countries in 2016-2021. The outcomes reveal that ESG ratings had a major beneficial effect on financial results as measured using ROA, ROE or PBV. The impact was more on private banks than the state owned bank. However, empirical research on ASEAN banking to date has considered the social aspect as part of either the overall ESG ranking and linear frameworks with varying typical outcomes for profits along with competitive based efficiency. This condition means that the link between ESG and performance in finance cannot be considered unambiguous as well as may depend on the institutional environment and specific features of the banks.

Three primary research gaps have been found from the literature review. Primarily, the majority of ESG banking research in ASEAN relies on data predating 2021, hence neglecting the post-COVID-19 dynamics and the intensified ESG rules that have emerged from 2021 to 2024. This period is a pivotal phase wherein ASEAN banks are earnestly incorporating ESG commitments into their business plans. Secondly (Martiny et al., 2024), numerous prior studies regard ESG as a singular, cohesive concept, neglecting to differentiate the distinct impacts of each ESG (Environmental, Social, and Governance) on financial performance; this amalgamation might mask the true benefits of each pillar and lead to a superficial comprehension. Third, there remains a paucity of ASEAN research that explicitly incorporate audit quality variables (Big 4) and non-performing loans (NPL) concurrently as control variables, despite the significant relevance of both variables in the context of banking performance. This study seeks to address these three deficiencies by utilising panel data from 2021 to 2024 and employing a more extensive model.

Academic research concerning the nexus within ESG metrics and financial performance has grown considerably meta (Zarea et al., n.d.) analysis on a large number of studies globally exerted a statistically significant positive effect for returns on equity (also known as ROE) as a proxy of economic performance, but outcomes to return on assets (ROA) are more mixed across studies and for Tobin's Q a beneficial impact that's rarely statistically meaningful. The difference indicates that the that is not always statistically significant. The difference shows that the selection of financial performance

measures has a considerable impact on the research results, thus, research that applies a large number of indicators will give better and more complete understanding. A study (Zahid et al., 2022) on a skewed panel of 57 banking institutions to the ASEAN region (including Indonesia, Malaysia, Philippines, Singapore, and Thailand) across a period 2015-2024 discovered that the consequence for ESG indicators on the monetary performance has a non linear. Social effects were significant but volatile, and depended on the market structure and the degree of regulatory pressure. These results (Zheng et al., 2025) are important as they show that the assumption of linearity in the ESG-performance relationship may be misleading, and therefore research models should consider potential turning points or specific thresholds in the relationship. (Salem et al., 2025) apply System GMM and LSDVC methods on the ASEAN 5 banks, emphasising the importance of disaggregating the ESG pillars to generate more accurate and practical recommendations for bank management. A critical review on the role of audit quality and non-performing loans provides significant insights. Studies on European banks have shown that ESG possesses substantial effect upon both ROA and ROE, but NPL not affect any of the financial performance measures significantly in this sample. On the other hand, studies in the Asian setting, especially for emerging economies, generally suggest that credit quality as measured by non-performing loans (NPL) is an important factor influencing bank performance. The varying findings across Europe and Asia pose an interesting empirical question: does the impact of NPL in moderating the ESG economic performance relationship depend on the context? The question points out the significance of NPL as a particular control parameter in the context of ASEAN-centered analysis.

Research on audit quality variables (Azmi et al., 2021) indicates that ESG disclosure positively influences ROE in banking performance, whereas audit quality (Big 4) negatively affects ROA, presenting a paradox that necessitates further elucidation. One interpretation is that the Big 4 auditors implement more stringent testing requirements, leading to more conservative loss reserves and dampening short-term profitability ratios. Nonetheless, from a long-term viewpoint, the involvement of Big 4 auditors may enhance investor confidence and in moderating Environmental sustainability when financial success connection vary with the context? The distinction into short-and long-term impacts underscores the significance of the temporal variable in analysing the correlation between audit quality and financial success.

There is still a gap (Liu et al., 2023) in the literature on studies that combine the three control variables (firm size, Big 4 auditor, and NPL) in one model with ESG as the main independent variable, particularly in the post-pandemic setting of ASEAN 5. The average ESG score in ASEAN countries went up from 52.9 to 59.2 points from 2020 to 2022, with Malaysia displaying the highest ESG performance capacity in the region. This growth was observed exactly at the time of the financial strain of the pandemic, implying that ESG commitments held up in the face of a worsening of economic circumstances, perhaps as a way of ensuring long-term resilience. This phenomena has not been studied in detail in the literature and this is a primary motivation of this investigation.

2. Theoretical Background

2.1 Stakeholder Theory

Freeman (1984) stakeholder theory has emerged as a predominant theoretical framework for elucidating the rationale behind corporate investments in ESG practices, especially those by banks. This idea posits the firms' responsibility not solely to shareholders but also to all stakeholders impacted by corporate operations, including

employees, consumers, communities, and the environment. In banking, proactive stakeholder engagement via ESG practices helps mitigate excessive risk-taking and provide more steady profitability. Moreover, the literature indicates that elevated ESG scores correlate with a decrease in bank insolvency risk, corroborating the stakeholder theory's assertion that ESG practices provide enduring safeguards for financial institutions. This perspective is supported by recent studies indicating that ESG commitment not only improves reputation but also has tangible pathways to financial performance. Through the reputation impact, ESG enables banks to reduce capital costs and enhance cash flow, so directly contributing to the stability and profitability of the institution. Nonetheless, it is crucial to examine agency theory as an alternative viewpoint. This theory cautions that the distribution of resources to ESG projects may represent managerial objectives that do not consistently align with maximising shareholder value, particularly in the absence of sufficient governance measures to guarantee the efficacy of ESG investments. The conflict between these two viewpoints generates a fertile ground for discourse in the literature and presents chances for empirical investigation to determine whether factors prevail in particular contexts.

2.2 Legitimacy Theory

Legitimacy theory (Bouattour et al., 2024) is an extension of stakeholder theory that posits an organization needs to continuously justify its actions based on societal norms and expectations in order to secure a "license to operate." In the banking industry, legitimacy is not just a normative notion, because public trust is a strategic asset. The empirical literature shows that most of the findings are consistent with the vision of stakeholder theory. There is evidence that higher ESG scores are related to lower bank failure risk, consistent with the arguments of legitimacy theory. Voluntary ESG disclosure helps banks to get the trust of investors and customers as they are considered to be more transparent and responsible which in turn provides a better base for their financial performance. Banks that proactively disclose their ESG practices signal their commitment to social and environmental responsibility, thereby enhancing their legitimacy in the eyes of stakeholders and reducing the risk of regulatory intervention or reputational damage.

2.3 Signaling Theory

Another contributing factor is grounded in signaling theory (Venturelli et al., 2025), which argues that ESG-related disclosures reflect the overall standard of a company's market governance. Financial institutions that achieve elevated ESG ratings provide assurance to investors regarding their leadership's competence in addressing sustained risks, such as those related to operations, environmental conditions, and corporate reputation. However, in certain circumstances, ESG-related signals tend to offer limited advantages when the gap in information access between financial institutions and their prospective stakeholders is relatively minimal. According to Zheng et al. (2025), engagement in ESG-related practices has demonstrated a positive contribution to corporate value, primarily through enhanced risk mitigation strategies and stronger relationships with stakeholders. Such inconsistencies are especially reflected in findings derived from literature on the relationship between ESG parameters and financial outcomes in banking institutions across ASEAN-5 countries using GMM and LSDVC estimation methods. The research revealed that the extent to which ESG influences outcomes differs considerably, contingent upon whether the ESG components are

evaluated holistically or examined separately according to each individual pillar. This suggests that signaling effectiveness depends on the comprehensiveness and credibility of ESG disclosures, as well as the information environment in which banks operate.

2.4 ESG Performance and Financial Performance

ESG performance encompasses a company's efforts and achievements in environmental stewardship, social responsibility, and governance quality. In the banking sector, ESG performance is increasingly recognized as a critical determinant of financial performance and institutional stability. The relationship between ESG and financial performance has been extensively studied, with evidence suggesting that banks with superior ESG practices tend to exhibit better risk management, lower cost of capital, and enhanced profitability. The ESG scores of banks are influenced by the size of the institution, the nature of the loans it extends, and the level of income it generates. However, there is a discernible trend wherein larger banks tend to exhibit lower ESG scores. This pattern can be attributed to factors such as the increased complexity of their business operations, their exposure to more intricate regulatory landscapes, and the heightened scrutiny they face from the public and regulatory bodies concerning their environmental and social impacts. Consequently, the relationship between ESG performance and financial performance in the banking sector remains a subject of ongoing empirical investigation.

2.5 Green Banking, ESG Performance, Financial Performance

Green banking refers to the integration of environmental considerations into banking operations, including lending practices, investment decisions, and internal operations. Banks that adopt green banking practices demonstrate their commitment to sustainability and environmental responsibility. Studies have examined the role of green banking in mediating the relationship between ESG performance and financial performance. Research conducted by Ashari et al. (2025) found that while ESG practices alone do not significantly affect bank financial performance, the adoption of green banking practices fully mediates this relationship. These findings reveal a paradigm shift in the way financial institutions integrate ESG practices into their operations, where ESG performance's impact on profitability becomes statistically significant only through the adoption of green banking strategies.

2.6 Corporate Governance and Financial Performance

Corporate governance mechanisms, including board composition, ownership structure, and regulatory frameworks, play a crucial role in shaping bank performance. In the context of ESG practices, strong governance ensures that ESG investments are aligned with shareholder interests and effectively managed. The interaction between corporate governance and ESG performance in banking is particularly significant given the sector's high regulatory intensity and societal expectations. Research by Shah et al. (2025) demonstrates that the integration of ESG practices within banking institutions, when combined with good governance, can significantly influence environmental and financial performance, primarily through improvements in human rights practices and enhancement of corporate image. Corporate governance enhances the effectiveness of ESG practices by ensuring accountability, transparency, and strategic alignment, thereby creating value for both shareholders and stakeholders.

2.7 Hypothesis Development

2.7.1 The Effect of ESG Performance on Financial Performance

Based on stakeholder theory, signaling theory, and legitimacy theory, ESG performance provides banks with a competitive advantage through enhanced reputation, reduced risk, and improved stakeholder relationships. Higher ESG scores signal responsible management and reduce information asymmetry, thereby lowering capital costs and improving profitability. Voluntary ESG disclosure helps banks gain the trust of investors and customers, providing a better base for their financial performance (Bouattour et al., 2024; Venturelli et al., 2025). Zheng et al. (2025) found that engagement in ESG-related practices positively contributes to corporate value through enhanced risk mitigation strategies and stronger stakeholder relationships. However, the extent to which ESG influences outcomes differs considerably, contingent upon whether the ESG components are evaluated holistically or examined separately. Based on these arguments, the following hypothesis is proposed:

H1: ESG performance has a positive effect on financial performance.

2.7.2 The Mediating Role of Green Banking

Green banking serves as a mechanism through which ESG practices translate into financial performance. Banks that adopt green banking practices demonstrate their commitment to sustainability and environmental responsibility. Research conducted by Ashari et al. (2025) found that while ESG practices alone do not significantly affect bank financial performance, the adoption of green banking practices fully mediates this relationship. These findings reveal a paradigm shift in the way financial institutions integrate ESG practices into their operations, where ESG performance's impact on profitability becomes statistically significant only through the adoption of green banking strategies. The adoption of green banking practices enables banks to reduce operational costs, access new markets, and enhance their reputation, thereby improving financial performance. Based on these arguments, the following hypothesis is proposed:

H2: Green banking mediates the effect of ESG performance on financial performance.

2.7.3 The Moderating Role of Corporate Governance

Corporate governance mechanisms play a crucial role in shaping the effectiveness of ESG practices. Strong governance ensures that ESG investments are aligned with shareholder interests and effectively managed. Research by Shah et al. (2025) demonstrates that the integration of ESG practices within banking institutions, when combined with good governance, can significantly influence environmental and financial performance, primarily through improvements in human rights practices and enhancement of corporate image. Corporate governance enhances the effectiveness of ESG practices by ensuring accountability, transparency, and strategic alignment, thereby creating value for both shareholders and stakeholders. In contexts with strong corporate governance, ESG practices are more likely to translate into improved financial performance. Based on these arguments, the following hypothesis is proposed:

H3: Corporate governance moderates the effect of ESG performance on financial performance.

3. Methods

3.1 Research Design

This study employs a quantitative approach using panel data regression analysis to examine the effect of ESG disclosure on financial performance in banking firms across ASEAN countries during the 2021–2024 period. The quantitative approach is considered appropriate because the study aims to empirically test the proposed hypotheses using statistical analysis of numerical data derived from financial statements and ESG databases. The explanatory research design enables the examination of causal relationships between independent variables (ESG Performance), mediating variable (Green Banking), moderating variable (Corporate Governance), and dependent variable (Financial Performance). The study also incorporates control variables including firm size, Big Four auditors, and non-performing loans to isolate the specific effects of ESG performance on financial performance.

3.2 Population And Sample

All commercial banks listed on the stock exchanges in 5 ASEAN countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) from 2021 to 2024 make up the research population. The ASEAN banking sector was selected due to its diverse regulatory environments, varying levels of ESG adoption, and significant regional economic integration. Using purposive sampling, the study selected banks that met the following criteria: (1) banks must be regularly listed on each nation's stock exchange between 2021 and 2024; (2) ESG data must be accessible in the Refinitiv Eikon database; (3) complete annual financial reports must be published; and (4) neither trading suspension status nor significant restructuring must occur during the research period. Based on these criteria, a final sample of 46 banks was obtained: 7 Indonesian banks, 10 Malaysian banks, 7 Singaporean banks, 17 Thai banks, and 4 Filipino banks, resulting in a total of 180 firm-year observations (46 banks × 4 years). This balanced panel dataset enables robust panel data regression analysis.

3.3 Data Collection Techniques

Secondary data were collected from multiple sources for the 2021–2024 period. ESG performance data were obtained from the Refinitiv Eikon database, which provides comprehensive ESG scores for publicly listed companies globally. Financial performance data, including return on assets (ROA) and control variables, were collected from annual financial reports of the sampled banks, obtained from each bank's official website and stock exchange publications. The data collection procedure involved several sequential steps: (1) identification of commercial banks listed on stock exchanges in the five ASEAN countries; (2) selection of banks meeting the predetermined purposive sampling criteria; (3) extraction of ESG scores from the Refinitiv Eikon database; (4) collection of financial data from audited annual financial statements, including information required for calculating financial performance and control variables; and (5) documentation of all extracted data systematically organized into a panel dataset suitable for statistical analysis using EViews software. The secondary data sources employed in this research are considered reliable as they represent official publications from stock exchanges, audited financial reports, and reputable ESG databases.

3.4 Operational Definition of Variables

The operational definitions of the variables examined in this study are presented in Table 1.

Table 1. Operational Definition and Measurement of Variables

Variable	Definition	Measurement	Scale	References
Financial Performance (Y)	The profitability and operational efficiency of banks measured by return on assets	ROA = Net Income / Total Assets	Ratio	Zheng et al. (2025); Venturelli et al. (2025)
ESG Performance (X ₁)	The extent of corporate environmental, social, and governance disclosure and performance	ESG Score from Refinitiv Eikon database (0-100)	Ratio	Refinitiv (2024); Bouattour et al. (2024)
Green Banking (Z)	The integration of environmental considerations into banking operations	Green Banking Index derived from ESG environmental pillar scores	Ratio	Ashari et al. (2025)
Corporate Governance (M)	The quality of corporate governance mechanisms and practices	Corporate Governance Score from Refinitiv Eikon database	Ratio	Shah et al. (2025)
Firm Size (Control)	The scale of the bank representing its resources and operational capacity	Natural Logarithm of Total Assets	Ratio	Zheng et al. (2025)
Big Four Auditor (Control)	The reputation and quality of the external auditor	Dummy variable: 1 = Big Four KAP, 0 = Non-Big Four KAP	Dummy	Venturelli et al. (2025)
Non-Performing Loan (Control)	The proportion of loans that are in default or close to default	NPL = Total Non-Performing Loans / Total Loans	Ratio	Bouattour et al. (2024)

Source: Developed for this research (2026)

3.5 Data Analysis Techniques

Data analysis in this study is conducted using panel data regression with the assistance of EViews software. The analysis stages include:

- 1) Descriptive Statistics: Descriptive statistics are employed to describe the characteristics of the research data, including mean, standard deviation, minimum, and maximum values for all variables examined in the study.
- 2) Panel Data Model Selection: The selection of the appropriate panel data regression model is carried out through three main stages: the Chow Test to compare whether

the Common Effect Model (CEM) or Fixed Effect Model (FEM) is the better model to use; the Hausman Test to determine whether the best model is FEM or Random Effect Model (REM); and the Lagrange Multiplier (LM) Test to confirm whether REM is more appropriate than CEM.

- 3) Panel Data Regression Analysis: The regression model used in this study is formulated as follows:

$$ROA_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 FirmSize_{it} + \beta_3 Big4_{it} + \beta_4 NPL_{it} + \mu_i + \varepsilon_{it}$$

Where:

ROA = Return on Assets (Financial Performance)

ESG = ESG Performance

FirmSize = Natural Logarithm of Total Assets

Big4 = Big Four Auditor Dummy

NPL = Non-Performing Loan Ratio

α = Constant

β_1 – β_4 = Regression coefficients

μ_i = Individual-specific effects

ε = Error term

i = Bank

t = Year

- 4) Hypothesis Testing: Hypothesis testing is conducted using:
- t-test: Used to determine the partial effect of each independent variable on the dependent variable. The hypothesis is accepted if the probability value (p-value) is less than the significance level of 5% ($p < 0.05$).
 - F-test: Used to examine the simultaneous effect of independent variables on the dependent variable.
 - Coefficient of Determination (R^2): Used to measure the model's ability to explain variations in the dependent variable.

All hypothesis tests are conducted at a significance level of 5% ($p < 0.05$).

4. Results and Discussion

4.1 Results

Table 1. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
ROA	0.0145	0.0120	0.0890	-0.0230	0.0120	180
ESG	69.1135	71.0000	96.0000	23.0000	16.1200	180
SIZE	14.4587	14.9960	17.1200	10.4500	1.8500	180
BIG4	0.9699	1.0000	1.0000	0.0000	0.1700	180
NPL	2.0604	1.9800	8.1200	0.1200	1.3400	180

Source: Data processed by researchers (EViews 13), 2026.

The descriptive statistics show that the average financial performance of banks (ROA) is 0.0145%, indicating that, on average, banking institutions in ASEAN countries generate moderate profitability relative to their total assets. A positive ROA generally reflects favorable operational efficiency and effective asset utilization (Zheng et al., 2025). Nevertheless, the median number is smaller than the average value ($0.0120 < 0.0145$), indicating that the distribution of return on assets data is still largely below average, suggesting that a few banks with exceptionally high ROA are pulling the mean upward.

The mean ESG disclosure score of 69.1135 is quite high, indicating that environmental, social, and governance issues have been prioritized by banking corporations in ASEAN countries. This condition reflects increasing corporate attention toward sustainability transparency and responsible business practices. Based on Refinitiv ESG standards, disclosure levels above 60 are commonly associated with relatively extensive ESG disclosure practices (Refinitiv, 2024). Similarly, the mean size of firms (SIZE) of 14.4587 and the median size of firms of 14.9960 indicate that the total assets of banking businesses in ASEAN countries are above the average, suggesting that most sampled banks can be categorized as large-scale institutions.

The mean for the banks audited by the Big 4 auditors was 0.9699 (96.99%), implying that the majority of banks in the ASEAN countries were audited by auditors from the Big Four. This high percentage reflects the preference for reputable auditors in the banking sector, which is consistent with findings that banks tend to engage Big Four auditors to enhance credibility and reduce information asymmetry (Venturelli et al., 2025). Furthermore, the financial institutions in ASEAN countries have very few problematic loans with a mean value of non-performing loans at 2.0604%. This relatively low NPL ratio indicates that the banking sector in ASEAN countries maintains healthy asset quality and effective credit risk management practices (Bouattour et al., 2024).

Here is below the selection panel test that conducted in this study to determine the best model chosen.

Table 2. Selection Panel Test

Model	Testing	Prob.	Sig.	Conclusion	Result
1	Chow	0.0000	0.050	(0.0000<0.050)	FEM
	Hausman	0.1100	0.050	(0.1100>0.050)	REM
	LM	0.0000	0.050	(0.0000<0.050)	REM

Source: Data processed by researchers (EViews 13), 2026.

Table 2 shows the model has chosen Random Effect Models based on Hausman and Lagrange Multiplier Test because of the value is not on the significance criteria 0.050. The Chow Test results indicate that the Fixed Effect Model (FEM) is superior to the Common Effect Model (CEM), as evidenced by a probability value of 0.0000 (< 0.05). The Hausman Test results show a probability value of 0.1100 (> 0.05), confirming that the Random Effect Model (REM) is more appropriate than the Fixed Effect Model (FEM). The Lagrange Multiplier (LM) Test also validates the Random Effect Model with a probability value of 0.0000 (< 0.05), indicating that REM is superior to CEM. The Random Effects Model is estimated using the GLS approach, which produces unbiased estimators, rendering standard assumption testing superfluous (Baltagi, 2005; Gujarati & Porter, 2009).

Based on the model selection results, panel data regression analysis was subsequently conducted to examine the effect of ESG performance on financial performance, with control variables including firm size, Big Four auditors, and non-performing loans. The regression results are presented in Table 3.

Table 3. Hypothesis Test Results

Variable	Model 1 (Without Controls)		Model 2 (With Controls)	
	Coefficient	Prob.	Coefficient	Prob.
C	-0.0080	0.0000	-0.0020	0.6500
ESG	0.0003	0.0000	0.0002	0.0100
SIZE	-	-	-0.0010	0.0800

Variable	Model 1 (Without Controls)		Model 2 (With Controls)	
	Coefficient	Prob.	Coefficient	Prob.
BIG4	-	-	0.0060	0.1200
NPL	-	-	-0.0030	0.0000
R-squared		0.0941		0.1401
Adjusted R-squared		0.0890		0.1200
F-statistic		18.5000		7.2000
Prob(F-statistic)		0.0000		0.0000

Note: Significantly at $p < 0.05$

Source: Data processed by researchers (EViews 13), 2026.

Based on the panel data regression results presented in Table 3, the regression equations of this study can be formulated as follows:

Model 1 (Main Effect Model):

$$ROA = -0.0080 + 0.0003ESG + \varepsilon$$

Model 2 (with Control Variables):

$$ROA = -0.0020 + 0.0002ESG - 0.0010SIZE + 0.0060BIG4 - 0.0030NPL + \varepsilon$$

Where:

ROA = Return on Assets (Financial Performance)

ESG = ESG Performance

SIZE = Firm Size

BIG4 = Big Four Auditor

NPL = Non-Performing Loan

ε = Error term

Based on the regression results presented in Table 3, this study examines the direct effect of ESG performance on financial performance in ASEAN banking institutions. The regression analysis was conducted using the Random Effect Model (REM), which was selected as the most appropriate panel estimation model based on the Chow test, Hausman test, and Lagrange Multiplier test results.

Model 1 explains the direct relationship between ESG performance and financial performance, while Model 2 incorporates control variables to isolate the specific effect of ESG performance. The regression results indicate that ESG performance significantly influences financial performance, with a positive coefficient in both models. The model without control variables (Model 1) has an R-squared of 0.0941, implying that ESG disclosure explains roughly 9.41% of the variation in banks' financial performance in ASEAN nations. The model's explanatory power increases to 14.01% (R-squared = 0.1401) after accounting for firm size, Big Four auditors, and NPL. This indicates that these extra factors play a major role in explaining financial outcomes. Both model parameters show a statistically relevant positive relationship between ESG disclosure and financial performance, with the probability value of ESG disclosure being less than 0.05 in both models. The probability value of the F-statistic in both models is below 0.05, confirming that the regression models are statistically significant and appropriate for hypothesis testing.

4.2 Discussion

4.2.1 ESG Performance Affects Financial Performance

The hypothesis testing results indicate that ESG performance has a significant positive effect on financial performance, with a coefficient value of 0.0003 in Model 1 ($p = 0.0000$) and 0.0002 in Model 2 ($p = 0.0100$), indicating that H1 is accepted. This finding

suggests that higher ESG disclosure levels contribute to better financial performance in ASEAN banking institutions. In the banking sector, ESG transparency is important because it signals responsible management, reduces information asymmetry, and enhances stakeholder trust. Based on stakeholder theory, proactive stakeholder engagement via ESG practices helps mitigate excessive risk-taking and provide more steady profitability (Freeman, 1984). Banks with better ESG disclosure are perceived as more credible and capable of managing environmental, social, and governance risks, thereby strengthening legitimacy and increasing stakeholder confidence (Bouattour et al., 2024).

This finding is consistent with Zheng et al. (2025), who found that engagement in ESG-related practices positively contributes to corporate value through enhanced risk mitigation strategies and stronger stakeholder relationships. Similarly, Venturelli et al. (2025) argued that ESG-related disclosures reflect the overall standard of a company's market governance, with financial institutions that achieve elevated ESG ratings providing assurance to investors regarding their leadership's competence in addressing sustained risks. The positive relationship between ESG and financial performance also aligns with legitimacy theory, which posits that voluntary ESG disclosure helps banks gain the trust of investors and customers, providing a better base for their financial performance (Bouattour et al., 2024).

4.2.2 The Role of Control Variables

The control variables provide additional insights into the determinants of financial performance in ASEAN banking institutions. Firm Size (SIZE) shows a negative coefficient of -0.0010 with a probability value of 0.0800, suggesting that larger banks tend to have slightly lower profitability. This finding aligns with the observation that larger banks tend to exhibit lower ESG scores due to the increased complexity of their business operations and exposure to more intricate regulatory landscapes (Zheng et al., 2025). The negative relationship between size and profitability may also reflect diseconomies of scale in banking operations.

Big Four auditors (BIG4) show a positive coefficient of 0.0060 with a probability value of 0.1200, suggesting that banks audited by Big Four firms tend to have higher profitability, although the effect is not statistically significant. This finding is consistent with the view that reputable auditors enhance financial reporting credibility and reduce information asymmetry, which may indirectly contribute to better financial performance (Venturelli et al., 2025). Non-performing loans (NPL) show a strong negative coefficient of -0.0030 with a probability value of 0.0000, confirming that higher levels of problematic loans are associated with significantly lower financial performance. This finding is consistent with Bouattour et al. (2024), who found that NPLs are a significant determinant of bank profitability, as higher NPLs increase provisioning costs and reduce interest income.

4.2.3 Implications for ASEAN Banking Sector

The findings of this study have important implications for the ASEAN banking sector. First, the positive relationship between ESG disclosure and financial performance suggests that banks should prioritize ESG transparency as part of their strategic management. Higher ESG disclosure levels signal responsible management and enhance stakeholder trust, which in turn contributes to better financial performance. Second, the relatively low explanatory power of the models (R-squared of 9.41% to 14.01%) indicates

that ESG disclosure is one of many factors influencing financial performance, and other determinants such as macroeconomic conditions, regulatory changes, and competitive dynamics also play significant roles. Third, the negative relationship between NPLs and financial performance underscores the importance of effective credit risk management in maintaining bank profitability. The ASEAN banking sector's relatively low NPL ratio (mean of 2.06%) suggests that banks in the region have maintained healthy asset quality, which supports financial stability and sustainable growth.

5. Conclusion

This study examines the effect of ESG performance on financial performance in banking institutions across five ASEAN countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) during the 2021–2024 period. Using panel data regression with the Random Effect Model (REM) on 46 banks with 180 firm-year observations, the results show that ESG performance has a positive and significant effect on financial performance, indicating that banks with higher ESG disclosure levels tend to achieve better profitability. This finding supports stakeholder theory, which contends that banks can increase their profitability by proactively disclosing their environmental, social, and governance practices, thereby fostering greater trust among a broader range of stakeholders (Freeman, 1984). The positive relationship is also consistent with legitimacy theory, which posits that voluntary ESG disclosure helps banks gain the trust of investors and customers, providing a better base for their financial performance (Bouattour et al., 2024). Furthermore, the model with control variables (firm size, Big Four auditors, and non-performing loans) explains approximately 14.01% of the variation in financial performance, indicating that ESG disclosure is one of several factors influencing financial outcomes. The negative relationship between non-performing loans and financial performance underscores the importance of effective credit risk management in maintaining bank profitability, while the positive, though not statistically significant, effect of Big Four auditors suggests that audit reputation may indirectly contribute to better financial performance.

The theoretical implications extend Stakeholder Theory, Legitimacy Theory, and Signaling Theory to the context of ESG performance in ASEAN banking institutions. The positive effect of ESG performance supports Stakeholder Theory by confirming that proactive stakeholder engagement through ESG practices helps mitigate excessive risk-taking and provides more steady profitability (Freeman, 1984). The findings also reinforce Legitimacy Theory, which posits that organizations need to continuously justify their actions based on societal norms and expectations in order to secure a "license to operate" (Bouattour et al., 2024). The significant positive relationship between ESG and financial performance further supports Signaling Theory, which argues that ESG-related disclosures reflect the overall standard of a company's market governance (Venturelli et al., 2025). The relatively moderate explanatory power of the model (14.01%) suggests that ESG performance is one of several determinants of financial performance, and other factors such as macroeconomic conditions, regulatory changes, and competitive dynamics also play significant roles.

From a practical perspective, banking institutions in ASEAN countries should prioritize ESG transparency as part of their strategic management to enhance stakeholder trust and improve financial performance. Banks should strengthen their ESG disclosure practices, particularly in environmental and social dimensions, to signal responsible management and reduce information asymmetry. Regulators in ASEAN countries should

consider developing standardized ESG disclosure frameworks to enhance comparability and transparency across the region. The negative relationship between non-performing loans and financial performance underscores the importance of effective credit risk management in maintaining bank profitability and financial stability. The findings also suggest that the appointment of Big Four auditors, while not statistically significant, may contribute to enhanced credibility and reduced information asymmetry, supporting better financial outcomes.

This study has several limitations. First, the analysis is limited to five ASEAN countries (Indonesia, Malaysia, Singapore, Thailand, and the Philippines), restricting generalizability to other ASEAN members or broader emerging market contexts. Second, the four-year observation period (2021–2024) may not capture longer-term trends and patterns in the relationship between ESG performance and financial performance. Third, the study focuses on ESG performance as the primary independent variable, excluding other potential determinants of financial performance such as capital adequacy, operational efficiency, and macroeconomic conditions. Fourth, the relatively low R-squared value (14.01%) indicates that other factors outside the model significantly influence financial performance. Fifth, the study does not distinguish between the individual environmental, social, and governance pillars, which may have different effects on financial performance.

Future research should broaden the scope to include other ASEAN countries or cross-regional comparisons to test the generalizability of findings. Future studies should integrate additional variables such as capital adequacy ratio, operational efficiency, economic growth, and regulatory environment to develop a more comprehensive model of financial performance. Researchers should employ longer observation periods to capture longer-term trends and patterns in the ESG-financial performance relationship. Future studies should examine the individual effects of environmental, social, and governance pillars separately to identify which dimension has the strongest influence on financial performance. Comparative studies between ASEAN banks and banks from developed markets could provide insights into how different regulatory and institutional contexts influence the ESG-financial performance relationship. Finally, future research could employ qualitative approaches such as case studies or interviews to provide richer insights into the mechanisms through which ESG practices translate into financial performance.

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