### "ESG disclosure and financial performance: Empirical study of Vietnamese commercial banks"

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# ESG DISCLOSURE AND FINANCIAL PERFORMANCE: EMPIRICAL STUDY OF VIETNAMESE COMMERCIAL BANKS

#### **Abstract**

Environmental, social, and governance (ESG) disclosure becomes vital for banks to be transparent and accountable for their investments and lending decisions to shareholders, regulators, and society. The potential enhancement of shareholder value through ESG disclosure is still inconsistent. Empirical studies on the association between ESG disclosure and financial performance are mixed and limited in emerging economies. This study aims to examine whether ESG disclosure impacts the financial performance of 24 Vietnamese commercial banks in terms of return on assets (ROA), return on equity (ROE), and net interest margin (NIM). The study uses the feasible generalized least squares estimation method based on panel data from 2018 to 2022. The study employs content analysis on 12 themes related to environmental, social, and governance pillars to score policy disclosure based on the Fair Finance Guide Methodology. The results highlight the positive effects of ESG policy disclosure, individual environment disclosure (E), and individual governance disclosure (G) on bank financial performance. Notably, ESG, E, and G have the largest influence on ROE, with coefficients of 0.051, 0.036, and 0.027, respectively, at a 5% significance level. However, the study does not provide evidence of a statistically significant association between social disclosure and financial performance. These results provide empirical evidence for regulators and bank managers to shape ESG policies and practices aligning with international standards.

**Keywords** finance, sustainability, stakeholder, reporting,

profitability, bank, policy

JEL Classification G21, G32, M14, G34

#### INTRODUCTION

Environmental, social, and governance (ESG) disclosure becomes a norm and good practice among firms to contribute to achieving sustainable development goals, to account for their responsible business and investment decisions, and to meet the demand from regulators, clients, shareholders, and other stakeholders (Soni, 2023). Investors have paid more and more attention to ESG in emerging markets in their decision-making with the assumption that firms with better ESG disclosure can manage risks better (Lee, 2016).

As one of the most dynamic emerging markets in East Asia, Vietnamese commercial banks are more aware of disclosing ESG policies to integrate into the global financial market and to meet requirements from the regulators. However, Vietnamese banks are hesitant about investing in ESG policy development and disclosure to stakeholders. Current empirical studies show mixed results on the association between ESG policies and corporate financial performance. This study contributes to the limited evidence on this relationship in the banking sector in Vietnam.

## 1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Commercial banks play a role in achieving Sustainable Development Goals and fostering responsible business within their value chain by integrating environmental, social, and governance (ESG) criteria in their investment, lending, and operational decisions. By financing projects and corporations, banks are a driver to support responsible businesses of their own and their corporate clients in their value chain (Scholtens, 2006). Banks' business model focuses much on risk management and profitability maximization. This literature review presents the relationship between ESG disclosure and the financial performance of firms in general, and of banks in particular.

Stakeholder theory sees that meeting the demands of different stakeholders contributes to a firm's success and financial performance (Freeman, 1984; Friedman & Miles, 2002). Firms disclose ESG information to meet the demands of regulators, clients, shareholders, and other stakeholders (Aydoğmuş et al., 2022). Firms' engagement with employees, communities, government, clients, and suppliers by disclosing ESG is considered part of corporate governance (Utz, 2017).

In the view of stakeholder theory, ESG disclosure, on the one hand, is a risk management to increase internal firm values, then, bringing about positive financial performance (Lee, 2016). ESG disclosure can help a firm to attract more attention from customers and investors, which leads to an increase in revenue (Zahid et al., 2022), and becomes a competitive advantage in long-term stakeholders' engagement strategy (Khlif et al., 2015). On the other hand, ESG performance raises costs and reduces firm profitability and values (Melinda & Wardhani, 2020; Tommaso & Thornton, 2020; Utz, 2017; Wong et al., 2021).

In the banking sector, responsible banks are expected to not bring about a negative impact on stakeholders and to do better in line with international standards and good practices than only complying with the national law (Freeman, 1994). Stakeholder theory sees positive relations between

environmental and social aspects of financial performance (Bătae et al., 2021). Embedded in the strategy, ESG disclosure can help improve bank values and venue by attracting more attention from clients, and investors (Zahid et al., 2022; Tran et al., 2021; Chiaramonte et al., 2022). Concerning social aspects, the theory assumes that social responsibility will lead to improved efficiency and competitive advantage (Bătae et al., 2021). ESG disclosure enhances the image of banks as a responsible business, reduces capital costs, and easily accommodates the future government's regulations with stricter requirements on environmental and social norms (Buallay, 2020).

Legitimacy theory explains the motivation of a firm's leader in reporting their corporate social responsibility activities as part of business strategies. This theory also emphasizes the rights of the public besides shareholders. Legitimacy is seen as a firm's actions in alignment with standards, beliefs, and values (Suchman, 1995). A firm is responsible for its business activities and its impacts on society and the environment because it uses natural resources and labor for business (Deegan, 2014). Firms are transparent and accountable to communities in places where they operate to ensure their profits (Akhter et al., 2021). In recent years, disclosing non-financial information regarding ESG has become a norm and good practice among firms to account for their business activities (Boiral et al., 2019; Perego & Kolk, 2012). Business outcomes will be affected as a result of unmet social expectations or violation of environmental or social standards (Buallay, 2020).

In the banking sector in particular, commercial banks increase their legitimacy by publishing their commitments and practices in line with social and environmental standards, beliefs, and values set by regulations or society's expectations (Wilmshurst & Frost, 2000). Banks are expected to comply with these standards not only in their operations but also through their investment and lending activities to projects or corporations (Deegan, 2014). Although banks are not an environmentally sensitive industry, the strong reaction of customers to the environmental violation might reduce the returns for shareholders (Eccles et al., 2014). Once the violation occurs with the relevance to their credits and investment, banks face the challenge of

reputation risks, and are accountable to investors, shareholders, regulators, and society; hence, business outcome is affected (Buallay, 2020).

In a broad economic context, including commercial banks' business, the meta-analysis studies by Friede et al. (2015) and Whelan et al. (2021) prove the positive relationship between ESG and financial performance after reviewing 2,200 papers and 1,000 papers, respectively. However, there are papers showing disagreements on the positive results and by sectors, such as a positive relation in the manufacturing sector but a negative link in the banking industry (Buallay et al., 2020). Menicucci and Paolucci (2022) support this finding with evidence in the Italian banking sector. The results are inconsistent in recent studies conducted to understand the association between ESG disclosure and corporate financial performance in emerging economies such as China, Malaysia, and India (Naeem et al., 2022; Bai et al., 2022; Mohammad & Wasiuzzaman, 2021; Shakil et al., 2019; Saygili et al., 2022; Friede et al., 2015; Whelan et al., 2022; Aydoğmuş et al., 2022).

Fewer studies specify banks in emerging economies with information asymmetry, uncertainty, and limitations in policies, corporate governance, and transparency (Azmi et al., 2021). Studies focusing on the relationship in the banking sector in emerging economies provided mixed results. One of the first studies examining the link between ESG and bank financial performance in emerging markets shows the positive relationships between environmental and social aspects and the bank value, while profitability is not associated with corporate governance (Shakil et al., 2019). The other study claims that the relationship between ESG and bank value is not linear, which means while ESG practice at a low level has a positive impact on a bank's financial performance, a higher level of ESG activity does not bring about better returns to scale (Azmi et al. 2021).

In terms of the environmental pillar, noncompliance or late adoption of the environmental policy could influence the financial performance and remuneration of shareholders (Matthiesen & Salzmann, 2017; Lee, 2017). The strong reaction of customers to the environmental violation might reduce the returns for shareholders (Eccles et al.,

2014). Evidence from banks in emerging markets highlights the positive association between environmental efficiency and financial performance (Mahmood et al., 2019; Shakil et al., 2019). There is a negative link between carbon emissions and business outcomes (Liu et al., 2017).

The social pillar has a positive influence on financial performance (Aydoğmuş et al., 2022; Buallay, 2019; Esteban-Sanchez et al., 2017; Wu & Shen, 2013; Shakil et al., 2019; Mahmood et al., 2019).

The association between corporate governance and profitability has mixed results. Aydoğmuş et al. (2022) argue a positive impact on both corporate value and profitability. On the contrary, profitability is not associated with governance criteria (Shakil et al., 2019).

To summarize, the literature shows the results of prior studies on the association between ESG disclosure and corporate financial performance in both developed and developing countries. However, empirical results are mixed and limited in the banking sector in emerging economies like Vietnam. Several previous studies examine the association between ESG performance reporting and the financial performance of some Vietnamese commercial banks (Azmi et al., 2021; Tran et al., 2021; Bui, 2021; L. Nguyen & K. Nguyen, 2021; Thich & Hang, 2023).

The study aims to examine if ESG policy disclosure impacts the financial performance of Vietnamese commercial banks by applying methods in development studies and economics – a multidisciplinary approach. As the bank's role is financing projects and corporations, ESG policy covers both banks' operations and their requirements to their clients to direct the action and realize the sustainability strategies. Grounded on the aforementioned theories, hypotheses are proposed as follows:

- H1: The relationship between ESG policy disclosure and bank financial performance is positive.
- H2 The relationship between environmental policy disclosure and bank financial performance is positive.

H3: The relationship between social policy disclosure and bank financial performance is positive.

H4: The relationship between corporate governance policy disclosure and bank financial performance is positive.

#### 2. METHOD

The study sample includes 24 out of 31 commercial banks in Vietnam. Of them, the four biggest state-owned banks lead the banking sector accounting for the largest assets of the capital market. The commercial banks excluded from this study were those in the process of restructuring their operations or being merged, or were foreign banks in Vietnam. The research period is five years, from 2018 to 2022. The number of observations is 120.

To analyze the relationship between ESG policy disclosure and the bank's financial performance, four econometric models are proposed below in accordance with previous studies (Buallay et al., 2021; Shakil et al., 2019; Azmi, 2021; Menicucci & Paolucci, 2023).

$$BFP_{i,t} = \beta_0 + \beta_1 ESG + \beta_2 DAR^2$$

$$+ \beta_3 DAR + \beta_4 NPL + \beta_5 CD + \beta_6 SIZE + \varepsilon,$$
(1)

$$BFP_{i,t} = \beta_0 + \beta_1 E + \beta_2 DAR^2 + \beta_3 DAR + \beta_4 NPL + \beta_5 CD + \beta_6 SIZE + \varepsilon,$$
(2)

$$BFP_{i,t} = \beta_0 + \beta_1 S + \beta_2 DAR^2 + \beta_3 DAR + \beta_4 NPL + \beta_5 CD + \beta_6 SIZE + \varepsilon,$$
(3)

$$BFP_{i,t} = \beta_0 + \beta_1 G + \beta_2 DAR^2 + \beta_3 DAR + \beta_4 NPL + \beta_5 CD + \beta_6 SIZE + \varepsilon,$$
(4)

where  $BFP_{i,t}$  represents a bank's financial performance measured by three scales of ROA, ROE, and NIM of bank (i) in year (t),  $\beta_i$  is the estimated coefficient of each independent variable in the regression equation;  $\varepsilon$  is the error term. Measures of ESG policy disclosure include ESG combined score (ESG), individual environment score (ESG), individual social score (ESG), and individual governance (ESG). Independent variables encompass Debt

to assets ratio (*DAR*), Non-performing loan (*NPL*), and Credit growth (*CD*). Bank size (*SIZE*) is also controlled in the model. The scales for measuring the variables are presented in Table 1.

The study employed regression methods, including the ordinary least squares (OLS), fixed effects model (FEM), and random effects model (REM). The White test confirms the application of the FEM and REM models are more suitable than OLS. Then, the study used the Hausman test to choose between the FEM and REM models. The results show that the data are consistent with the FEM model. The regression model is to check and control unobserved heterogeneity and autocorrelation. These problems are overcome by regression models using the Feasible Generalized Least Squares (FGLS).

Table 1. Summary of variables

Variables	Description	Measurement
ROA	Return on Assets	Net Income / Total Assets
ROE	Return on Equity	Net Income / Average Equity
NIM	Net Interest Margin	Net interest income / total interest-earning assets
ESG	ESG combined score	Score based on 214 indicators of 12 ESG parameters
E	Environmental score	Score based on 62 indicators of three environmental parameters
S	Social score	Score based on 76 indicators of five social parameters
G	Governance score	Score based on 76 indicators of four governance parameters
NPL	Non-performing loan	Non-performing loans / total loans
DAR	Debt to assets ratio	Total equity/total assets
CD	Credit growth	(Credit year <sub>1</sub> /credit <sub>j-1</sub> ) – 1
SIZE	Size	Natural logarithm of total income

Regarding ESG policy disclosure, four independent variables are ESG combined score (ESG), individual Environment score (E), individual Social score (S), and individual Governance score (G) that were used in previous studies (Buallay et al., 2021; Shakil et al., 2019).

Most existing research relies on data extracted from global datasets regarding ESG scores and sustainable assessments such as Refinitiv, and Bloomberg. Many corporations, especially small and mediumsized ones in emerging economies might be limited in these sources, including Vietnamese commercial

banks (Saygili et al., 2022). Furthermore, the level and quality of ESG disclosure of these banks have not been studied yet.

As there are no available comprehensive ESG scores among Vietnamese banks at the national and international level, the study employed the Fair Finance Guide Methodology (FFGM) led by Oxfam and its civil society's Fair Finance coalitions in 15 countries in both the global North and global South to calculate this the quality of ESG policy disclosure of Vietnamese commercial banks (Laplane et al., 2023). FFGM is used to assess the policy commitments to ESG criteria of financial institutions (FIs) in line with international standards such as the United Nations human rights conventions, OECD guidelines, IFC performance standards, Equator principles, and principles of responsible investment (PRI). Grounded in stakeholder theory and legitimacy theory, ESG policies are published online on the bank's website and cover their operations, portfolio management, and public policies according to their corporate clients. In the view of development studies, impacted communities and civil society organizations hold the bank more transparent and accountable in their investment and lending decisions that affect the well-being of societies (World Economic Forum, 2013).

To score the ESG policy disclosure under FFGM, a content analysis method is used to assess the alignment between the content of the policy and the indicators developed for each theme. According to Holsti's definition, this qualitative method is seen as a technique to identify the implications of specific content subjectively and systematically (Stemler, 2001). Content analysis was used in previous studies on environmental disclosure in emerging economies such as Bangladesh (Akhter et al., 2021). In each theme of ESG, each bank was awarded a score of '1' if the content in the policy met the indicator and '0' otherwise. The score of each theme of one bank is the average of all indicators in that theme multiplied by 10. Narrative Disclosure by theme = (Average of all items disclosed in terms of content aligning indicators in FFGM's environmental criteria) · 10. The score of environmental policy disclosure is the average of all themes under this pillar. So are the scores of social and governance. The score of ESG policy disclosure is the average of all themes under three pillars.

In this study, 12 out of 21 ESG themes were selected with a total of 214 indicators as presented in Table 2. Out of 24 assessed banks, 13 were assessed by the authors, the other 11 were scored by the Fair Finance Vietnam coalition with data collected from 2018 to 2022.

Data were collected from the financial and annual reports, sustainability reports, and policies disclosed on their websites over the five years from 2018 to 2022. These data sources were publicly published by banks to reflect the extent to which stakeholders can access non-financial information including ESG criteria.

Table 2. Summary of ESG themes

Pillar	Themes	Number of indicators
	Nature	15
Environmental	Climate Change	26
	Power Generation	21
	No investment in arms	15
	Gender equality	17
Social	Human Rights	15
	Labor Rights	16
	Financial Inclusion	13
	Consumer Protection	19
_	Tax	17
Governance	Anti-corruption	12
	Transparency & Accountability	28

#### 3. RESULTS

Table 3 presents statistical results about the variables in the model. The mean of ESG combined score reached 0.992 out of 10, and the minimum and maximum values of ESG scores are 0.112 and 3.284 out of 10. This means all 24 Vietnamese commercial banks disclose ESG policy aligning with international standards. The value range of the G score between 0.505 and 2.80 shows that all 24 Vietnamese commercial banks disclose corporate governance policy. The fluctuation level of the social score (S) is the highest with [0.596; 3.92], meaning all 24 Vietnamese commercial banks disclose social policy but at different levels and extent. The environmental score ranges from 0 to 3.156, indicating that not all Vietnamese banks disclose environmental policy in accordance with international standards.

**Table 3.** Descriptive statistics of variables

Variables	Obs.	Mean	Std. dev.	Min	Max
ROA_Return on Assets	120	.012813	.008307	.00011	.036526
ROE Return on Equity	120	.154864	.076351	.00404	.303316
NIM_ Net income Margin	120	.034247	.014358	.0076	.0943
ESG- Score	120	.992156	.502698	.112	3.28444
E _ Environmental	120	.244930	.500270	0	3.15667
S_ Social	120	1.19383	.695941	.596	3.92
G- Governance	120	1.54771	.466684	.505	2.8
DAR_ Debt to assets	120	.092236	.041492	.0269	.2044
NPL_ Non-performing loan	120	.017149	.008794	0	.0573
SIZE_ Bank size	120	32.5681	2.60291	20.9720	35.29044
CD Credit Growth	120	.160448	.083196	.1132	.4464

The average return on assets (ROA), return on equity (ROE), and net interest margin (NIM) in the period 2018–2022 are 1.3%, 15.4%, and 3.4%, respectively. The smallest values of ROA, ROE, and NIM are 01%, 0.4%, and 0.7%, respectively. Other control variables included debt-to-assets ratio (DAR), non-performing loan ratio (NPL), and credit growth (CD) with average values of 9%, 1.7%, and 16%, respectively, in the period 2018–2022. The lowest credit growth rate in the data sample is 11%, and the highest growth rate is 44%. The non-performing loan ratio of commercial banks is basically within the safe threshold. The largest value of this indicator is 5.7%.

Correlation analysis aims to initially identify the relationship between variables in the model. Table 4 presents the correlations for the ESG pillar. The results show that ESG commitments positively correlate with indicators measuring bank financial performance, including ROA, ROE, and NIM with correlation coefficients 0.391, 0.272, and 0.643, respectively. Similarly, the component factors E, S, and G also show a positive correlation with these indicators. Regarding other independent variables, debt leverage (DAR) and credit growth (CD) are positively correlated with financial performance,

while non-performing loan ratio (NPL) is negatively correlated with business performance. In particular, the correlation coefficients of DAR and CD with ROA, ROE, and NIM are [0.593, 0.492], [0.11,0.39], and 0.55, 0.31], respectively. The correlation coefficients of the NPL with ROA, ROE, and NIM are -0.029, -0.178, and -0.258. The direction of these correlations is consistent with the arguments proposed for these relationships, as presented in the previous section.

Regression results using the FGLS model, which overcomes the unobserved heterogeneity phenomenon of the fixed effects model, are reported in Table 5. The result provides evidence of the positive relationship between ESG combined score and financial performance. Specifically, ESG is a positive predictor of ROA, ROE, and NIM at a significance level of 5% (*Beta* = .0038; .051; .012, respectively). It means that Vietnamese commercial banks increase their ESG policy disclosure by an average of 1% of disclosure points, *ceteris paribus*. Thus, hypothesis *H1* is accepted.

To examine in detail the relationship between individual E, S, and G scores and the financial performance of commercial banks, the regres-

**Table 4.** Pearson correlations between variables in the model

Variables	ROA	ROE	NIM	ESG	DAR	NPL	SIZE	CD
ROA	1.0000	-	-	-	-	-	-	-
ROE	0.8147	1.0000	-	-	-	-	-	_
NIM	0.7867	0.6067	1.0000	-	_	_	_	_
ESG	0.3912	0.2729	0.6431	1.0000	-	-	-	-
DAR	0.5932	0.1198	0.5579	0.2675	1.0000	-	-	-
NPL	-0.0296	-0.1783	-0.2581	0.3941	0.1949	1.0000	-	-
SIZE	0.2544	0.1515	0.1430	0.1402	0.1535	-0.0710	1.0000	-
CD	0.4228	0.3966	0.3139	0.1629	0.1094	-0.0929	0.1685	1.0000

**Table 5.** Panel regression results of the impact of ESG commitments on the financial performance of commercial banks

Variables	(1) ROA	(2) ROA	(3) ROE	(4) ROE	(5) NIM	(6) NIM
ESG	0.0038***	-	0.0517***	-	0.0120***	-
E	-	0.00314**	-	0.0364**	-	0.0068**
S	-	-0.000989	-	-0.0035	-	0.0014
G	-	0.0029***	-	0.0278**	-	0.0057***
DAR^2	-0.587***	-0.601***	-11.52***	-11.89***	-0.581**	-0.787***
DAR	0.265***	0.263***	2.852***	2.912***	0.261***	0.314***
NPL	-0.214***	-0.230***	-2.787***	-2.939***	-0.104	-0.125*
SIZE	-0.0001	-0.0001	-0.0018	-0.00261	-0.000413**	-0.0006***
CD	0.0198***	0.0188***	0.209***	0.204***	0.0277***	0.0273***
_cons	-0.00569	-0.0039	0.0380	0.0665	0.0148**	0.0171***
Obs.	120	120	120	120	120	120

*Note:* \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

sion results only confirm the positive relationship between individual E and G scores and bank finance performance. E score is a positive predictor of ROA, ROE, and NIM at a significance level of 5% with impact coefficients of .003, .036, and .007, respectively. G score is a positive predictor of ROA, ROE, and NIM with impact coefficients of .003, .028, and .006, respectively. However, this study did not find a statistically significant relationship between S score and any financial performance scale concerning ROA, ROE, or NIM. This result is also recorded in studies by Parkhi et al. (2022). These results confirm hypotheses *H2* and *H4*, but there is insufficient evidence to support hypothesis *H3* in this study sample.

Financial leverage has a statistically significant nonlinear relationship at the 5% significance level and has a consistent sign of the quadratic function. The results show that using financial leverage will only increase financial performance with a certain debt usage threshold. Exceeding this threshold, the use of leverage will negatively affect the financial performance. This result is consistent with the studies by Berger and Petti (2016) and Shakil et al., 2019.

Regarding DAR, NPL, and CD as control variables, the results show a meaningful relationship with bank financial performance as well as consistency with previous regression analysis results (Berger & Patti, 2016; Shakil et al., 2019; Ongore & Kusa, 2013; Petria et al., 2015).

The non-performance debt ratio has a negative impact at the 5% significance level on the finan-

cial performance of commercial banks in all three regression models, with the dependent variables being ROA, ROE, and NIM. The influence coefficient of this variable on the financial performance of commercial banks through regression models is 0.214, –2.787, and 0.104. This result is similar to Ongore and Kusa (2013), and Petria et al. (2015), explaining that bad debt also increases provision costs as well as costs for liquidating assets to ensure debt recovery as well as loss of part of interest and/or principal.

Credit growth (CD) is also a factor that helps explain the increase in commercial banks' financial efficiency. The influence coefficients of this variable on ROA, ROE, and NIM are 0.0198; 0.209, and 0.0277.

By examining SIZE as a control variable, as suggested by Shakil et al. (2019) and Bually (2019), the regression result shows that there is no correlation between ESG combined score and SIZE with no statistical significance.

To examine the relationship more comprehensively between ESG commitment and the financial performance of commercial banks, this study performs enhanced testing with dynamic modeling. This consideration is based on a quadratic nonlinear relationship between ESG and the performance of commercial banks suggested by Azmi et al. (2022). However, no reliable evidence was found when testing this sample. In addition, ESG commitments that can impact a bank's business performance require a certain time lag for the dis-

Variables	Model (1)		Mod	del (2)	Model (3)	
	P-value	ROA	P-value	ROE	P-value	NIM
l_ESG	4.72	0.00461***	6.04	0.0683***	5,78	0.0124***
DAR^2	-2.53]	-0.511**	-5.82	-11.67***	-2.34	-0.682**
DAR	6.20	0.261***	6.13	2.903***	4.54	0.289***
NPL	-6.10	-0.297***	-6.46	-3.923***	-3.19	-0.218***
SIZE	-1.79	-0.00023*	-2.22	-0.0038**	-3.02	-0.0005***
CD	3.9	0.0220***	4.46	0.274***	3.30	0.0258***
_cons	-0.10	-0.0005	1.65	0.101*	2.82	0.0171***

Table 6. Robustness model with the ESG lagged variable

*Note:* \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01.

closed information to influence the decisions of stakeholders. For example, customer and investor actions such as financing or depositing money and using banking services based on ESG-related reputation also require a certain time lag in the information being announced. Based on this argument, a robustness test was performed in which the ESG is lagged by one year to test whether the results changed significantly in terms of the effect as well as the possibility of the spillover of ESG policy disclosure on financial performance over time. Accordingly, the ESG lagged variable for one year is set. Table 6 presents the results of the regression model for the first lagged of ESG in relation to financial performance in terms of ROA, ROE, and NIM with robustness checks.

The robustness check shows the consistency in the positive relationship between ESG and bank financial performance. ESG is a positive predictor of ROA, ROE, and NIM, all at a 5% significance level with influential coefficients .004; .07; and .012, respectively.

#### 4. DISCUSSION

Grounded in stakeholder theory and development studies, the results show a slow increase in ESG policy disclosure among Vietnamese commercial banks, with the average ESG policy disclosure of nearly 1 out of 10. When calculating this value by year in 2018–2022, this score has improved but not significantly. The increase in score occurs in both state-owned commercial banks and private commercial banks. There are big gaps in individual Environmental (E), Social (S), and Governance (G) scores among banks in terms of the level and the

extent of disclosing E, S, and G policies. The social score (S) ranges from 0.596 to 3.92. Regarding environmental score (E), the evaluation point tends to focus heavily on the value 0, the value range of this factor is quite wide, from 0 to 3.156 points. The value range of the governance score (G) is from 0.505 to 2.80. The governance score (G) is the highest among the three factors, with an average score of 1.548 out of 10. The standard deviation value shows that the dispersion of the G score is the lowest.

Based on content analysis, it shows that the ESG disclosure of Vietnamese commercial banks is limited with more focus on corporate governance and less emphasis on the environmental pillar. This result supports the findings shown by Tran et al. (2021) on the difference between 18 Vietnamese listed banks in the disclosure of seven ESG themes with 14 indicators from 2015 to 2019 that illustrated limited ESG disclosure in reporting performance. The results show that all banks publish corporate governance policies concerning transparency and accountability, anti-corruption, customer protection, and tax compliance, indicating that corporate governance is placed as an important and prior disclosure. The result is in line with the findings on ESG disclosure of companies in Brazil, China, and India (Soni, 2023).

The robustness model and regression model confirm the result of a positive effect of ESG and bank financial performance. The results are the findings of Azmi et al. (2021) focusing on emerging markets, Bătaea et al. (2020) in developed and emerging Europe, Aydoğmuş et al. (2022) at the global level, and Bui (2021) in Vietnam. However, the result is not consistent with the study by Tran et al. (2021) specifying Vietnamese commercial banks.

The results of this study did not show valid evidence of a quadratic nonlinear relationship between ESG and bank financial performance, as argued by Azmi et al. (2021). However, these results may be due to the available time series data that is not long enough to be fully verified. However, to have a more comprehensive view of the relationship between ESG commitments and the financial performance of commercial banks, instead of considering it in a static model, this study examines the spillover effect by examining the robustness check model. The results confirm that the impact of ESG disclosure on a bank's financial performance may have a certain lag over time, and this is consistent across research models.

The result regarding the positive relationship between environmental policy disclosure and financial performance aligns stakeholder theory with environmental policy disclosure as a positive predictor of ROA, ROE, and NIM with impact coefficients of .003, .036, .007, respectively, at a significance level of 5%. This result supports the arguments of Aydoğmuş et al. (2022), and Buallay (2020) but is not consistent with the argument of Saygili et al. (2022) with a sample of Turkish-listed companies and Tran et al. (2021) with samples of banks in Vietnam.

This study does not find a statistically significant relationship between social policy disclosure and financial performance. This result is supported by the findings provided by Parkhi et al. (2022) but is not supported by Aydoğmuş et al. (2022) on this positive relationship.

The result indicates the positive effect of corporate governance disclosure on bank financial performance with corporate governance disclosure score as a positive predictor of ROA, ROE, and NIM with impact coefficients of .003, .028, and .006, respectively. The results are supported by the

findings of Sudiyatno et al. (2023), Aydoğmuş et al. (2022), Saygili et al. (2022), Esteban-Sanchez et al. (2019), and Soana (2011) but are not in line with the argument of Shakil et al. (2019).

Based on tests on control variables, including the Debt-to-assets ratio, Non-performing loan, and Credit growth, the results show a meaningful relationship with bank financial performance that is consistent with previous regression analysis in other studies (Berger & Patti, 2016; Shakil et al., 2019; Ongore & Kusa, 2013; and Petria et al., 2015). Concerning a control variable of size, the regression result shows no correlation to ESG with no statistical significance.

Additionally, the significance of the positive association between individual E disclosure, and G disclosure with bank financial performance is not strong. The explanation might be the big gap in E, S, and G disclosure in alignment with international standards among Vietnamese commercial banks. Furthermore, each bank might focus on environmental, or governance criteria based on differences in stakeholders' expectations and strategies to have more benefits (Azmi et al., 2021).

Based on these detailed discussions, future studies may also focus on detailed ESG criteria, especially emerging topics in sustainable finance such as gender, climate change, nature, labor rights, human rights, and financial inclusion, as the banking sector is still far behind in reaching sustainable development. Further study on ESG practices in comparative analysis among banks in emerging economies in Southeast Asia on ESG policy disclosure may provide insights at the Association of Southeast Asian Nations (ASEAN) level with their initiatives of taxonomy for sustainable finance, ASEAN social bond standards, ASEAN green bond standards, ASEAN sustainability bond standards.

#### CONCLUSION

The study aims to examine the effects of ESG policy disclosure on bank financial performances in the banking sector in Vietnam. The sample includes 24 Vietnamese commercial banks, of which four are state-owned and lead the capital market. The study employs mixed methods in development studies and economics as a multidisciplinary approach. The study contributes to examining the extent to which banks in one of the most dynamic emerging markets, in which global ESG score has limitations, dis-

close ESG policy in line with international standards. Furthermore, the study contributes to the literature by providing a better understanding of the association between ESG disclosure and financial performance in the banking sector in emerging countries.

The results show an increasing trend in ESG policy disclosure, emphasizing corporate governance but revealing a big gap in environmental and social disclosure. Grounded in stakeholder theory and legitimacy theory, the results indicate that ESG policy disclosure, individual environment disclosure, and individual corporate governance disclosure positively affect bank financial performance. However, no significant effect of social disclosure on financial performance is revealed.

The results offer empirical evidence for bank directors to improve their ESG policy disclosure. These include activities such as publishing more policies relevant to ESG criteria to the public in separate policies and improving their sustainability reports in line with international standards regardless of the size. The study serves as evidence for policymakers in their decision-making to support ESG and improve information asymmetry in emerging markets. Government regulations play a push factor for banks to be more active in ESG disclosure.

Although the research is still limited in sample size and some ESG topics such as labor rights and human rights that have not been publicly disclosed by banks, which may have caused certain challenges in data analysis, the results are of great significance for the banking sector in Vietnam as leading banks in the capital market are included. The content analysis to score ESG in line with international standards can be applied in emerging economies where the global ESG score might not be available.

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#### CONFLICT OF INTEREST

The authors declare no potential conflicts of interest concerning the research, authorship, or publication of this article.

#### **AUTHOR CONTRIBUTIONS**

Conceptualization: Bui Thi Thu Loan, Tran Thi Lan Anh, Trang Hoang. Data curation: Bui Thi Thu Loan, Tran Thi Lan Anh, Trang Hoang.

Formal analysis: Bui Thi Thu Loan. Investigation: Tran Thi Lan Anh.

Methodology: Bui Thi Thu Loan, Trang Hoang. Project administration: Bui Thi Thu Loan.

Supervision: Bui Thi Thu Loan.

Validation: Bui Thi Thu Loan, Tran Thi Lan Anh, Trang Hoang.

Writing – original draft: Bui Thi Thu Loan. Writing – reviewing & editing: Trang Hoang.

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