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Impacting ESG on the Performance of Commercial Banks: A Case Study in Vietnam

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ABSTRACT

Background: In the business activities of enterprises, banks actively contribute to the formation, development, and promotion of sustainable strategies related to environmental and social issues within the enterprise and are a significant factor for enterprises when deciding to transform their business models towards sustainable development. Objective: This study aims to assess the impact of environmental, social, and governance (ESG) factors on the performance of commercial banks in Vietnam. The performance indicators are return on assets (ROA), return on equity (ROE), and net interest margin (NIM). Methodology: The study employs the panel data quantification method, including the pooled regression models based on the generalized least squares method. Total ESG data based on the primary and secondary data systems collected from 27 banks in the period from 2015 to 2023. Result: Statistical evidence indicates that the dependent variables are significantly influenced by the criteria of Environment, Society, and Governance, as well as affected by factors such as loan-to-deposit ratio, bad debt ratio, liquidity ratio, price-to-book ratio, and economic growth. Conclusion: The study also considered internal bank factors, as well as the macroeconomic environment, to provide a more detailed evaluation. The loan-to-deposit ratio has a positive significance on ROA, ROE, and NIM, indicating that the ability to utilize capital and economic growth can help increase bank efficiency. Unique Contribution: This study considers control variables related to internal factors and the economic environment, and the independent variables are

environment, social, and governance. Key Recommendation: The authors have made policy recommendations for the banking system that priority should be given to integrating green strategies, improving credit quality, high security, and transparency; at the same time, there should be reasonable policies to ensure capital safety for development in a market that is increasingly concerned about climate change and sustainable development.

INTRODUCTION

Sustainable development is becoming increasingly important in the strategies of economic organizations, particularly in the financial sector, in the context of globalization and modernization, which are confronting numerous environmental, social, and governance challenges. Bloomberg estimates that by 2025, ESG-related assets will total \$53 trillion, or more than one-third of all assets managed globally. This indicates the significance of ESG in contemporary financial development strategies. In Vietnam, awareness and actions regarding ESG have gradually received attention in recent years, especially after the Prime Minister issued a decision 167/QĐ-TTg in 2022 approving the "Support program for private sector enterprises on sustainable business for the period 2022-2025". This reflects a clear shift of the Government of Vietnam in promoting the financial sector to play a central role in sustainable development. However, in reality, the integration of ESG in banking activities in Vietnam is still in its early stages, and its theoretical and empirical research has not been fully explored. Therefore, it is necessary to study the impact of ESG on banks' operational efficiency to improve financial efficiency and enhance their ability to adapt to macro challenges. This study examines the effects of using the entire ESG and ROA, ROE, and NIM indexes to describe financial success rather than just one. The study examines the impact of using ESG and financial performance indexes, including return on assets, return on equity, and net interest margin, to measure financial performance. It also recommends policies to enhance the competitiveness and sustainability of Vietnam's banking system amid integration and global economic fluctuations.

1. LITERATURE REVIEW

Banks must consider the interests of all stakeholders, including employees, customers, communities, and governments (Freeman, 2015). By incorporating ESG criteria into this theoretical model, commercial banks will be able to develop sustainable development plans. ESG norms enhance institutional prestige, attract investment capital, foster customer trust, and mitigate legal risk. Despite cost increases and conflicts of interest, banks can improve operational efficiency by striking a balance between shareholder and environmental, social, and governance goals. Sustainable development is guided by stakeholder theory, which posits that long-term success is contingent upon social responsibility, environmental conservation, and financial benefits.

Banks should adhere to social standards to achieve acceptability and grow sustainably. ESG has evolved into a strategic tool for financial institutions to enhance transparency, comply with regulations, and foster investor trust, according to legitimacy theory. ESG standards contribute to a favorable image while also laying the groundwork for long-term financial stability in volatile markets. High compliance expenses and the need to change social expectations pose substantial difficulties to banks. According to legitimacy theory, ESG helps banks improve their reputation, increase transparency, and encourage sustainable development.

The legal rules, societal standards, and industry trust all have a significant impact on the operations of commercial banks. In today's world, ESG serves as more than just a compliance tool; it also helps banks improve their brand, attract investment money, and build consumer trust. Transparency in ESG reporting can assist reduce legal risks and offer competitive advantages. Although challenges such as high investment costs, difficulty in measuring effectiveness, and limitations in green project sources still exist, ESG remains an important strategy that helps banks adapt to institutional pressures, thereby expanding market share and maintaining long-term stability.

There is more research on ESG in the economy; however, many aspects remain unclear and require further study. Several studies use ROA and ROE to quantify efficacy (Nathania & Ekawati, 2024). Other measures, such as NIM, which indicate lending profitability, are rarely examined. Most ESG studies on bank performance focus on developed economies, such as those in Europe and the US, where ESG has become a key corporate governance criterion. In contrast, studies on emerging economies, particularly in Asia, including developing countries such as Vietnam, remain scarce. The study noted that these three institutional constraints shape organizational behavior. This notion is underutilized, particularly in banks in developing countries (Aras & Hacıoglu, 2022).

2. THEORETICAL FRAMEWORK

In recent years, ESG has emerged as a crucial pillar in the sustainable development strategy of the global banking industry. Numerous empirical studies have been conducted in various countries to assess the impact of ESG on the operational efficiency of banks, thereby providing a multidimensional understanding of the role of these factors in the banking sector. Specifically, experimental studies have utilized multinational data to examine the relationship between ESG and bank financial indicators across various contexts. In 35 countries, Galletta et al. (2023) analyze how ESG affects operational risk in banks. With data from 837 banks, 20% are US banks, 8% are Japanese, and the remaining banks are from other countries. According to the study, banks' operational risk is negatively correlated with their ESG score.

Bogdanova et al. (2018) investigate the impact of sustainability reporting on the operational, economic, and market performance of banks across seven regions. Over the past decade, 60 nations have contributed 4,458 observations. The study demonstrated a negative correlation between ESG and ROA, ROE, and total quality, three key operational, financial, and market success metrics. In conclusion, global research indicates that ESG impacts banks' operations and financial performance differently across various areas.

Looking at specific nations will yield different results. This study aims to investigate the impact of banks' sustainable development initiatives on their accounting and market performance, as assessed by ESG scores, as reported by Çetenak et al. (2022). The flexible generalized least squares technique, using data from six Turkish banks, showed that the total ESG score has a favorable impact on ROA performance indicators. Thus, sustainable Turkish banks are likely to implement an acceptable ESG development plan, which will benefit the country's progress. However, Menicucci and Paolucci (2023) found that ESG harms the operational performance of 105 Italian banks over five years. Three econometric models demonstrated that environmental, social, and governance (ESG) characteristics harm bank efficiency (Cao et al., 2024).

According to a research assessment, ESG is becoming more significant in the banking industry's sustainable development plan. ESG impacts financial risks and operational performance

depending on the implementation scenario. Thus, financial institutions must tailor ESG strategies to their specific needs. To maximize benefits, ESG must be tailored to the domestic reality of Vietnamese banks, where ESG has received little attention. ESG is a trend and a tool for modern banks to gain a competitive edge and promote sustainable development.

In the context of limited current ESG research, this study will clarify the impact of ESG activities on the profits and financial performance of commercial banks (Çetenak et al., 2022). Based on the above fundamental theory and previous empirical results, this article proposes the following research hypothesis: ESG has a positive impact on bank performance. Previous studies have shown that ESG can lead to positive performance for banks. ESG investment has positive benefits for the financial stability of commercial banks (Cao et al., 2024; Lupu et al., 2022). The studies showed that high ESG performance helps commercial banks in emerging market economies reduce risk while improving their financial performance, as measured by return on equity (ROE) and return on assets (ROA). The loan-to-deposit ratio has a bidirectional impact on operating efficiency. The loan-to-deposit ratio has a two-way effect on performance. According to some studies, LDR has a positive impact on return on assets. When deposits and loans are well-managed, it can lead to increased profits (Chiaramonte et al., 2021). The effect of the non-performing loan ratio on operating efficiency is inverse.

The bad debt ratio lowers operational efficiency. According to the study, the bad debt ratio impacts the bank's profitability through provisioning expenses, which in turn harms asset quality and operating efficiency (Friede et al., 2015). A high liquidity ratio helps to achieve optimal operational efficiency. Commercial banks operate more efficiently when their liquidity ratio is high. The liquidity ratio is one method for assessing a company's ability to satisfy its short-term financial obligations. This ratio is computed using the following formula: Divide current liabilities by liquid assets to calculate the liquidity ratio. According to Galletta et al. (2023), a decrease in liquidity does not guarantee that the commercial banking system will stay stable. The relationship between operational efficiency and the market-to-book value ratio is two-sided. The market-to-book ratio has a beneficial effect on bank performance. The P/B ratio, which compares market value to the book value of equity, can be used to evaluate asset valuation and financial stability (Kelmendi, 2024).

Furthermore, GDP growth improves operational efficiency. Several studies have found varied results regarding the impact of GDP growth on bank performance. According to Ferreira (2012), while GDP growth can enhance bank performance, an overly concentrated banking sector can harm overall economic performance (Kolsi et al., 2023). The impact of the inflation rate on performance can be either positive or negative (Kelmendi, 2024; Torre et al., 2021).

3. RESEARCH METHODS

3.1 Research Data

The authors of this study employed a manual approach to creating ESG indices, as it is suitable for the Vietnamese context, given that most commercial banks in the country have not been officially evaluated for ESG. In reality, Vietnam is only in the early stages of ESG action. It requires support from international organizations and communities to continuously improve implementation capacity, gain experience, and gradually progress in the process of committing to

and implementing ESG actions. The purpose of this paper is to assist financial institutions in incorporating environmental, social, and governance (ESG) principles into their oversight and governance procedures (Lee et al., 2023; Lupu et al., 2022). However, to suit the actual conditions and information disclosure characteristics of commercial banks in Vietnam, the authors have reviewed and selected standards, thereby eliminating some inappropriate ones while retaining those that can be clearly and fully quantified from the annual reports and sustainable development reports of banks. The final set of ESG standards comprises 24 criteria, divided into three groups: Environment (E, 8 criteria), Society (S, 9 criteria), and Governance (G, 7 criteria). Each criterion is evaluated on a binary scale, where the bank will receive 1 point if it implements or publishes a policy related to the mentioned standard and 0 points if no information is provided (Menicucci & Paolucci, 2023). After scoring each criterion, to ensure balance between the three pillars, regardless of the difference in the number of criteria in each group, the authors calculated the average score for each criterion E, S, and G separately based on the formula:

$$E_{it} = \frac{1}{n_E} \sum_{j=1}^{n_E} E_{ijt}, \quad S_{it} = \frac{1}{n_S} \sum_{j=1}^{n_S} S_{ijt}, \quad G_{it} = \frac{1}{n_G} \sum_{j=1}^{n_G} G_{ijt}$$

Where it is bank *i* in year *t*, *j* is the criterion in group E, S or G, $n_E = 8$, $n_S = 9$, $n_G = 7$ is the number of criteria in each group, E_{ijt} , S_{ijt} , G_{ijt} are the binary scores according to criterion *j* of bank *i* in year *t*. Finally, the aggregate ESG index of bank *i* in year *t* is calculated as follows:

$$ESG_{it} = \frac{E_{it} + S_{it} + G_{it}}{n} \times 100$$

This ensures that each pillar contributes equally to each bank's overall ESG score over time, creating a favorable basis for utilizing the models proposed by the authors.

3.2 Proposed Research Model

The research team inherited the research model of authors Aras and Hacıoğlu (2022) with ROA, ROE specifically as follows:

$$Y_{i,t} = \beta_0 + \beta_1 ESGscore_{i,t} + \sum_{k=2}^K \beta_k Bank_{k,i,t} + \sum_{m=K+1}^M \beta_m Macro_{m,i,t} + \varepsilon_{i,t}$$

$Y_{i,t}$: The dependent variables representing operating efficiency include ROA, ROE, NIM

$ESGscore_{i,t}$ - Variable representing the overall ESG score

$Bank_{k,i,t}$ – The variables representing the bank include LDR, NPL, LR, and P/B.

$Macro_{k,i,t}$ - Macro variables include GDPgr, INF

$\varepsilon_{i,t}$ – Random disturbance term – includes other factors influencing the dependent variable but are not observed in the model.

3.3 Description of Research Variables

Table 1. Dependent variable

Variable	Name Variable	How to determine	Empirical research
ROA	Return on assets	Profit/Total Assets	Njoki & Nyamute (2023)
ROE	Return on equity	Profit/Equity	Folger-Laronde et al. (2022)
NIM	Net Interest Margin	Net Interest Income/Average Interest Earning Assets	Zahid et al. (2023)

Source: own

Table 1 illustrates that ROA, ROE, and NIM are key performance indicators for banks. Specifically, ROA assesses asset efficiency, ROE gauges shareholder return and the impact of leverage, and NIM captures interest spread management.

Table 2. Independent variables

Variable	Name Variable	How to determine	Expected	Empirical research	Hypothesis
ESG score	ESG Composite Score	$ESG_{it} = \frac{E_{it} + S_{it} + G_{it}}{n} \times 100$	+	Lee et al. (2023), Torre et al. (2021)	H1
Variable representing bank					
LDR	Loan-to-deposit ratio	Total outstanding loans / Total customer deposits	+/-	Zheng & Bu (2024)	H2
NPL	Non-Performing Loan	Bad debt/ Total outstanding debt	-	Alareeni & Hamdan (2020)	H3
LR	Liquidity risk	Total assets / Equity	+	Tan et al. (2024)	H4
P/B	Stock price to book value	Stock price/book value	+/-	Bogdanova et al. (2018)	H5
Macro variables					
GDPgr	Economic growth	GDP growth	+	Zheng & Bu (2024)	H6
INF	Inflation	Inflation index over the years	+/-	Kelmendi (2024), Zahid et al. (2023)	H7

Source: own

Table 2 shows that the ESG score, loan-to-deposit ratio, non-performing loans, leverage ratio, price-to-book ratio, GDP growth, and inflation capture banks' sustainability practices, credit risk, risk-taking, market sentiment, and macroeconomic conditions. Their expected impacts on profitability vary: ESG and GDP growth positive, NPL negative, while LDR, LR, P/B, and inflation may be neutral or context-dependent.

4. STUDY RESULTS

4.1 Statistical Results

Table 3 presents 243 observations and the performance variables, including return on assets, return on equity, and net interest margin. The ROA, averaging 1.432%, indicates relatively stable

profitability; however, there is a significant with 18.050%. ROE has an average of 11.690%, ranging from -12.330% to 30.330%, indicating substantial differences in financial efficiency among banks. Additionally, the commercial banks in the sample exhibit relatively strong profitability, with an average net interest margin of 3.283%. Due to the standard deviation of 1.598%, there is considerable variation in profitability as well. These apparent differences in financial indicators reflect the uneven performance levels among banks, providing a crucial basis for analyzing the impact of ESG factors in the subsequent sections.

Table 3. Testing descriptive statistics based on data from 2015 to 2023

Variable	Unit	Mean	Standard deviation	Minimum	Maximum
ROA	%	1.432	2.230	-0.720	18.050
ROE	%	11.690	8.448	-12.330	30.330
NIM	%	3.283	1.598	0.000	9.330
ESGscore	Score	61.311	18.504	27.513	100.000
PB	-	1.239	1.150	0.000	11.800
LDR	%	91.532	14.927	43.900	142.820
NPL	%	2.079	2.326	0.470	29.760
LR	%	91.530	3.058	80.895	96.238
GDPgr	%	6.003	1.932	2.554	8.124
INF	%	2.746	0.886	0.631	3.540

Source: own

Table 3 displays ROA as 1.43%, with a range of -0.72% to 18.05%. The ROE is 11.69%, with a range of -12.33% to 30.33%. The NIM is 3.28%, with a range of 0% to 9.33%. ESG received a critical score of 61.31, while PB received a score of 1.24. 9.15% LDR, 2.08% NPL, and 9.53 % LR. A rise of 6.00% in GDP and 2.75% in inflation. The wide range of bank performances, risk profiles, and macroeconomic situations are reflected in these spreads and means.

Table 4. Correlation Matrix and Multicollinearity Test

Variable	ROA	ROE	NIM	VIF1
ESGscore	0.2574*	0.4148*	0.1881*	1.14
PB	0.1031	0.3114*	0.0945	1.07
LDR	0.3272*	0.4502*	0.4700*	1.16
NPL	-0.1019	-0.2784*	-0.1021	1.01
LR	-0.1048	0.0083	-0.3244*	1.06
GDPgr	-0.0507	-0.0975	0.005	1.04
INF	0.0362	0.1778*	0.0305	1.07

Note: The symbol * represents the 5% statistical significance level.

Source: own

Table 4 presents a model that builds on the correlation coefficients between variables, using the results to make a preliminary assessment of the relationships between the independent variables and the dependent variables in the model.

Table 5. Summary table of model fit and defect testing

Variable	Hausman Test	Appropriate model	chibar2 (01)	ALM(lambda=0)
ROA	1.28	REM	307.33***	27.50***
ROE	-12.90	REM	259.59***	35.27***

NIM	-3.13	REM	601.19***	19.03***
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Notes: The symbols *, **, and *** is 10%, 5%, and 1%, respectively.

Source: own

Table 5 shows that the testing results indicate that REM is the more appropriate model. However, further diagnostic tests reveal that the REM model suffers from both heteroscedasticity and autocorrelation. The values of *chibar(01)* and ALM ($\lambda = 0$), both significant at the 1% level, indicate that the REM model exhibits heteroscedasticity and autocorrelation. Therefore, the authors consider the flexible generalized least squares (FGLS) method as a suitable choice, ensuring that the results are not biased due to the defects inherent in the REM model. The summary of the regression results examining the relationship between the independent variable, ESG score, and the dependent variable, estimated using the flexible generalized least squares (FGLS) method, is presented in Table 6 below.

Table 6. Summary of FGLS regression results with the model

Variable	ROA	ROE	NIM
ESGscore	0.00878***	0.0896***	0.00549**
	-3.89	-4.63	-2.46
PB	0.0626**	0.118	0.0481*
	-2.34	-0.8	-1.68
LDR	0.0179***	0.156***	0.0125***
	-5.86	-5.46	-3.48
NPL	-0.0346***	-0.684***	-0.0555***
	(-3.98)	(-4.82)	(-5.10)
LR	-0.0783***	0.385***	-0.107***
	(-4.10)	-2.67	(-5.54)
GDPgr	0.0205*	0.185*	0.0482***
	-1.72	-1.9	-3.83
INF	-0.00653	0.117	-0.0402
	(-0.22)	-0.5	(-1.30)
Constant	5.956***	-44.96***	11.20***
	-3.28	(-3.34)	-6.06

Note: The symbols *, **, *** is 10%, 5%, 1%, level respectively.

Source: own

Table 6 shows that the ESG score has a positive impact on all dependent variables related to operational efficiency, as proposed by the authors. This suggests that banks that prioritize and implement ESG-based sustainable development are more profitable. ESG norms enhance transparency and risk management, thereby boosting investor and stakeholder trust. Long-term investors tend to prefer ESG-practicing banks (Friede et al., 2015; Nathania & Ekawati, 2024).

4.2 Discussion of Findings

These findings confirm the authors' claim that ESG has a favorable impact on bank performance. Njoki and Nyamute (2023) reached similar conclusions as the research group on the effect of ESG on bank performance. ESG stabilizes and preserves the financial system by mitigating non-financial risks. Tan et al. (2024) and Aras and Hacıoglu (2022) investigated the impact of ESG on the financial stability of European banks, specifically examining how ESG influences bank performance before and after the COVID-19 pandemic. Other bank performance independent

variables: According to earlier research, such as Zahid et al. (2023), the loan-to-deposit ratio enhances bank performance by improving capital utilization efficiency, market trust, and organizational reputation. According to Zheng and Bu (2024), non-performing loans harm bank performance.

The Government needs to establish strict regulations while also enhancing mandatory requirements in the policy system and management process to protect every business and financial organization. Not only should they pay attention to the environmental aspect, but they should also comprehensively consider ESG factors to develop sustainability and social responsibility (Kelmendi, 2024; Zahid et al., 2023).

This suggests that minimizing non-performing loans is crucial for reducing credit risk and enhancing profitability. According to Alareeni and Hamdan (2020), the liquidity ratio has a two-way effect, underscoring the need for sufficient cash reserves to maximize financing, investor confidence, and system stability. According to Folger-Laronde et al. (2022), a high market price-to-book value ratio implies strong financial performance, facilitates capital raising, and attracts investors, all of which enhance operational efficiency. Finally, GDPgr improves bank efficiency across ROA, ROE, and NIM. Chiaramonte et al. (2021) and Galletta et al. (2023) discovered that GDP growth influences banking efficiency in two ways. The findings indicate that efficiency factors and economic cycle phases have a significant impact on economic growth.

CONCLUSION

The paper presents and discusses the impact of implementing ESG factors on the banking system, with a particular focus on Vietnamese banks. The paper also compares with the global situation to assess the importance of ESG in shaping the banking system and risk management. Additionally, this research examines the impact of ESG on Vietnamese commercial banks from 2015 to 2023. The authors measured bank performance using ROA, ROE, and NIM. The data indicate that ESG improves most key performance indicators, except for the net interest margin. This means that if ESG strategies are enhanced, banks will increase their market value and profitability. Moreover, the study considered both internal bank factors and the macroeconomic environment to provide a more comprehensive evaluation. The loan-to-deposit ratio and economic growth have a positive significance on return on assets, return on equity, and net interest margin, indicating that the ability to utilize capital and economic development can help increase bank efficiency. On the contrary, the bad debt or liquidity ratio harms ROA, ROE, and NIM, reflecting that high credit risk and excess payments will reduce financial efficiency. Finally, the P/B ratio has a positive impact on ROA and NIM, indicating that banks with a higher valuation than their book value tend to exhibit better market efficiency now or in the future.

To promote and encourage businesses, in general, and the banking system, in particular, to disclose ESG information in an increasingly better, more transparent, and more reliable manner, agencies, departments, sectors, and the Government need to take clear actions. The above results provide a basis for some policy implications:

(1) The banks need to develop clear and systematic internal ESG regulations and standards. A specialized department should be established to ensure progress and optimize ESG activities. On the management side, it is necessary to issue mandatory regulations on ESG standards to ensure consistency and improve the overall efficiency of the economy. Additionally, management agencies such as the State Bank can consider implementing policies to establish a set of ESG indicators in their bank credit ratings. This mechanism should include grading and publishing the annual rankings of sustainable development reports from public enterprises. From there, a reference basis will be established to encourage high-ranking enterprises to benefit from

preferential tax policies, as well as when investing and participating in bidding, thereby enabling enterprises to reap specific benefits. This will focus on improving the quality of sustainable development reports by specifically publishing ESG indicators.

(2) The banks also need to improve the quality of credit appraisal, tighten post-lending control, and be transparent in debt classification by applying technology such as artificial intelligence and big data. Additionally, they need to establish a reasonable insufficient debt reserve fund and proactively restructure debt when necessary to ensure operational stability. In today's context, the role of ESG is becoming increasingly important in building a sustainable and responsible financial system. In the Vietnamese banking system, promoting and enhancing the role of ESG is not only an urgent task but also a firm commitment to sustainable development.

(3) Banks need to manage mobilized capital effectively and allocate it to profitable loans. In addition, depending on the scale of operations and the level of risk, banks should establish a safe loan-to-deposit ratio to enhance capital efficiency and foster conditions for healthy credit growth. It is possible to diversify credit products and strive to maintain a reasonable level of loan-to-deposit ratio, thereby creating conditions for healthy credit growth. ESG risk management must also be carried out rigorously. ESG risk analysis and assessment will provide insight into the impact of environmental and social factors on the bank's strategy, operations, and long-term prospects. This not only helps businesses develop a rigorous risk mitigation plan but also enables banks to adapt flexibly to the challenges and opportunities posed by ESG.

(4) Banks need to develop a flexible liquidity management mechanism. Banks need to establish a reasonable liquidity threshold to strike a balance between safety and profitability. Banks need to strike a balance between maintaining a high liquidity level that does not waste assets and ensuring solvency to prevent systemic risks. Applying risk management technology in liquidity to minimize the opportunity cost of idle capital. In addition, issuing liquidity management policies needs to be flexible, especially in the context of economic and interest rate fluctuations.

(5) The banks should monitor the macroeconomic situation to make adjustments to credit plans and business operations as needed for each stage of market change. In addition, the Government and the State Bank need to operate monetary and fiscal policies flexibly, stabilize the macroeconomic environment, and support the banking system to overcome difficult periods, thereby promoting a sustainable link between economic growth and operational efficiency.

(6) The SBV needs to demonstrate its leadership in developing and implementing specific policies and regulations on green credit, ensuring that commercial banks and financial institutions seriously and effectively implement green principles and standards while maintaining consistency in their participation and implementation of ESG across the sector. The cooperation and contributions of all relevant ministries, departments, and agencies are also essential factors in ensuring that ESG implementation is comprehensive and the Government's commitments related to net emission reduction are fulfilled. Through solidarity and joint actions of all stakeholders, we can ensure the sustainability of the financial system and the natural environment in the future.

Limitations and future research: This study's limitation is that it is restricted to publicly traded commercial banks, specifically those listed on the HOSE, HNX, and UPCOM exchanges in Vietnam. Unlisted banks will not be included in the study. However, the study has yet to analyze the influence of ESG on each bank's individual performance. Finally, the authors employed non-dynamic regression models in the survey, so the results only reflect current performance and may not be indicative of long-term outcomes. Therefore, further research is needed to evaluate the long-term impact of ESG on the individual performance of each bank in Vietnam.

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