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Factors affecting ESG practices of commercial banks in Vietnam: The role of ownership

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ABSTRACT : *This study examines the determinants of environmental, social, and governance (ESG) practices among Vietnamese banks using a dataset of 26 banks from 2014–2023. Employing the Feasible Generalized Least Squares (FGLS) method, the results reveal that bank-specific characteristics significantly affect ESG outcomes, although the impacts differ across ESG dimensions. Bank size is positively associated with environmental and overall ESG scores. Bank age positively enhances environmental performance, while leverage negatively impacts environmental practices. Banks with greater foreign ownership demonstrate stronger social performance, whereas government-owned banks tend to underperform in this dimension. Further heterogeneity analysis shows interesting results for banks with different ownership characteristics. For private banks, bank age negatively influences social and overall ESG scores but positively affects governance. GDP growth shows positive impacts on social and overall ESG performance in private banks but has a negative effect on banks with substantial foreign ownership. Inflation reduces governance scores among foreign-owned banks. Based on the results, this study provides relevant recommendations for banks and regulators to improve ESG practices in the Vietnamese banking sector.*

KEYWORDS - *size, age, leverage, ownership, ESG, commercial banks, Vietnam.*

I. INTRODUCTION

ESG practices are becoming increasingly important for banks in developing countries such as Vietnam. Implementing strong ESG practices can help banks in developing nations attract foreign investors, improve risk management, enhance their reputation, and contribute to sustainable economic growth (Bui et al., 2024; Chang et al., 2021; Setiarni et al., 2023). Various factors can affect banks' ESG practices, such as regulatory frameworks and technological infrastructure (Smith et al., 2020), economic conditions that make banks choose between short-term gains over long-term sustainability (Buallay et al., 2020; Khoury et al., 2021)), ownership structures (Defung et al., 2024; Lou et al., 2023), and specific bank characteristics such as size, age, and leverage (Chang et al., 2021; Jaiwani & Gopalkrishnan, 2023).

Although some studies have examined the factors that impact banks' ESG practices, the results are mixed, and evidence on developing nations such as Vietnam is quite limited. For example, regarding bank ownership and ESG practices, Defung et al. (2024) and Lou et al. (2023) reported that state-owned banks tend to have lower ESG performance as they are exposed to higher ESG-related risks and have less efficient governance structures. In contrast, Jaiwani and Gopalkrisnan (2023) found a positive impact of government ownership on the ESG practices of Indian banks. Another example is the impact of economic growth on banks' ESG practices. Khoury et al. (2021) found that stronger ecomic growth was linked to a decline in environmental performance, while it positively influencd social and governance dimensions. Buallay et al. (2020) argue that GDP growth and ESG outcomes is nuanced and varies by context, that is during economic downturns, ESG practices and help to enhance bank resilience. Therefore, this study aims to contribute to the current literature gap by exploring the factors impacting the ESG practices of commercial banks in Vietnam, considering the role of ownership.

We use a sample of 26 Vietnamese commercial banks, from 2014-2023 and the Feasible Generalized Least Squares (FGLS) estimation method. Our results show a significant impact of bank-specific and macroeconomic factors on bank ESG performance; however, the impacts vary across different measures of ESG

practices. Based on the results, we provide suggestions for banks and regulators on how to strategically enhance ESG practices.

Our study contributes to the current literature in the following ways. First, we provide additional empirical evidence on the factors influencing the ESG practices of banks in developing countries, particularly Vietnam. Second, we consider the roles of banks with different types of ownership when estimating the impacts and find interesting additional results for state-owned, private, and banks with a high level of foreign ownership. Third, we provide meaningful recommendations for banks and regulators in Vietnam to foster ESG practices based on different bank characteristics and under different economic conditions.

The remainder of this paper is organized as follows. Section 2 reviews the literature on factors impacting banks' ESG practices. Section 3 summarizes the data and the mode. Section 4 presents the results and discussion. Finally, Section 5 concludes the paper.

II. LITERATURE REVIEW

The ESG practices of commercial banks are influenced by various firm-specific and macroeconomic factors. The following sections review how common factors, including bank size, age, leverage, ownership, and economic conditions, affect banks' ESG activities.

2.1. Bank size

According to Gurol and Lagasio (2002), larger banks often have more resources that enable them to invest in comprehensive ESG initiatives. Larger banks usually have more robust governance structures, which help them implement ESG practices effectively. Specifically, larger banks tend to have larger and more diverse boards, enhancing their ability to monitor ESG-related activities and disclosures (Menicucci & Paolucci, 2023). However, smaller banks may face challenges in implementing ESG due to their limited resources and capabilities. The scale and scope of smaller banks' operations may restrict their ability to absorb the complexities and costs associated with sophisticated ESG practices (Defung et al., 2024). Furthermore, in the context of increasing competitive pressure, smaller banks may have to prioritize short-term financial performance over long-term sustainability goals.

Empirical evidence supports these arguments. Defung et al. (2024) studied Indonesian banks and reported that smaller banks are more negatively affected by ESG risks than larger ones because they often lack resources and diversification necessary to effectively mitigate these risks. Other studies have found that the ownership structure of banks significantly influences the impact of size on ESG practices. Jaiwani and Gopalkrishnan (2023) studied Indian banks and found that the ESG implementation effectiveness varies between public sector and private banks, with these differences partially attributable to the governance structure and resources typical of large and small banks. Chang et al. (2021) examined banks in developed Asian countries and discovered that banks become more cost-efficient through ESG activities, with larger banks outperforming smaller banks in terms of technology adaptation and cost efficiency.

2.2. Bank age

Bank age represents the experience and networks that a bank builds during its operations. Banks operating for a longer period tend to have established relationships that influence their ESG strategies. Houston and Shan (2021) indicate that banking relationships can influence borrowers' ESG policies, with banks more likely to lend to firms with similar ESG profiles. Furthermore, older banks typically have larger resources and potentially conservative risk strategies, which may either benefit from or be challenged by higher ESG standards (Defung et al., 2024).

Furthermore, older banks tend to develop larger and more diverse board, and have a corporate social responsibility or sustainability committee, which can have a positive influence on banks' ESG performance (Menicucci & Paolucci, 2023)

2.3. Bank leverage

Dubey et al. (2017) highlight that banks with higher leverage can exacerbate the interest conflict between stakeholders. Specifically, creditors often have short-term financial focus, different from equity holders, which may negatively impact ESG practices. Kamaludin et al. (2021) state that banks with lower leverage levels might have more flexibility to adopt and implement robust ESG practices, which helps to align their operations with sustainablity goal and ethical governance. Jang et al. (2019) added that banks with more manageable debt levels might be in a better position to allocate resources to sustainable investments.

Empirical evidence also supports these arguments. Nitescu and Cristea (2020) studied Romanian banks and suggested that an increase in banks' leverage tends to reduce the likelihood of adopting ESG-related risk management strategies, implying that higher leverage might discourage banks from implementing ESG practices. Maama (2021) examined banks in Ghana and reported that overall ESG practices negatively impacted banks' financial sustainability. In other words, ESG initiatives, while having positive long-term ethical and sustainability impacts, could be perceived as resource-intensive and possibly reduce financial sustainability for banks operating with higher leverage levels.

2.4. Bank ownership

Bank ownership plays a significant role in shaping banks' ESG practices. According to Jaiwani and Gopalkrisnan (2023), government ownership can influence bank EGS practices in various ways because of structural and regulatory differences. Specifically, government-owned banks often face stricter regulations and focus more on socio-political objectives alongside financial ones, which contributes to differences in EGS emphasis compared to private banks. Jaiwani and Gopalkrisnan (2023) show that public sector banks in India demonstrate a positive and significant association between ESG scores and financial performance, implying that government ownership can help banks align their ESG practices with sustainable development goals. However, Defung et al. (2024) note that increased scrutiny and policy focus can sometimes lead to heightened risks and inefficiencies if banks' ESG practices are not managed properly. Specifically, Defung et al. (2024) studied Indonesian banks and found that government-owned banks face greater ESG risk than private banks because of their higher exposure to regulatory and reputational pressures, which might eventually lead to greater instability. Lou et al. (2023) studied firms (including banks) in China and reported that the challenges faced by state-owned enterprises are partly due to governance mechanisms. Private shareholder governance tends to improve ESG ratings by enhancing innovation and transparency.

On the other hand, foreign ownership is often linked to enhanced corporate governance and performance, as foreign investors often bring diverse experience and advanced practices from their home country. Bilyay-Erdogan and Öztürkkal (2023) show that firms with higher foreign ownership demonstrate improved performance through superior ESG scores compared to those with lower foreign ownership levels. Additionally, Ellili (2022) studied UAE-listed firms and concluded that foreign ownership positively impacts ESG disclosure for both financial and non-financial firms. Ellili (2022) noted that foreign owners might impose stricter governance standards and enhance transparency, which helps foster ESG disclosures and scores of firms. Additionally, signaling theory posits that a firm's ESG performance is used as a signal of its commitment to sustainable practices and governance (Liu et al., 2023). Under foreign ownership, banks may face greater pressure to comply with global sustainability standards, which may improve their ESG scores. Liu et al. (2023) reported that firms with leaders in developed countries tends to drive higher ESG performance in their company as they bring better practices from abroad. Nathania and Ekawati (2024) investigated ASEAN banks and concluded that banks with substantial foreign ownership tend to have better ESG scores, which positively impacts their performance due to enhanced governance and sustainable practices. Despite the advantages that foreign ownership could bring to bank ESG scores, Fuadah et al. (2022) noted that foreign ownership might negatively impact ESG practices due to the possible presence of information asymmetry between foreign owners and the management of domestic banks. Foreign investors may have less insight into the local context and specific ESG issues that banks face, which can lead to inadequate governance and prioritization of ESG goals. As a result, foreign owners may prioritize financial performance over ESG considerations.

2.5. Economic conditions

On the one hand, higher GDP growth often indicates economic growth and stability, which can foster banks' capacity to implement ESG practices. When banks operate under favorable economic conditions, they have more resources to allocate towards enhancing their ESG practices. Di Tommaso and Thornton (2020) states that when a nation is in economic growth period, it is more likely to impose more regulatory measures and societal pressure, which encourage banks to enhance their ESG performance to alight with higher sustainability standards and expectations. However, Buallay et al. (2020) argued that during periods of rapid economic growth, banks might prioritize immediate financial returns to grasp growth opportunities, thus devoting resources and attention to enhancing ESG scores. Khoury et al. (2021) studied countries in the MENA regions and concluded that country-specfic economic variables demonstrated significant effects on ESG scores. Specifically, higher economic growth negatively impacted environmental aspects but supported social and

governance aspects. However, Buallay et al. (2020) noted that the relationship between GDP and ESG score can be complex and context-dependent. Specifically, during adverse economic conditions, greater emphasis on sustainable practices helped improve bank performance, suggesting that ESG practices provide resilience during economic downturns.

Regarding another measure of economic conditions, inflation, previous studies have also discussed its effects on banks' ESG implementation. Nitescu and Cristea (2020) state that banks are less likely to adopt ESG strategies when their financial performance is stressed by increased inflation. Chang et al. (2021) argue that in developed nations, banks engaging in environmentally friendly activities tend to improve their efficiency, even under inflationary pressures, because these banks often have better resources to absorb higher costs caused by inflation.

III. METHODS AND DATA

3.1. Data

To examine the determinants of ESG reporting activities of banks in developing countries, we use a sample of 26 Vietnamese commercial banks from 2014 to 2023. All financial data were collected from the FiinPro database. To measure the ESG scores of each bank, we used information from their public annual reports.

3.2. The model

Following the approach of Defung et al. (2024), Nitescu and Cristea (2020), and Jaiwani and Gopalkrishnan (2023), we propose the following model:

$$ESG_{it} = \beta_0 + \beta_1 \times SIZE_{it} + \beta_2 \times AGE_{it} + \beta_3 \times LEV_{it} + \beta_4 \times FOREIGN_{it} + \beta_5 \times GOVT_{it} + \beta_6 \times INF_{it} + \beta_7 \times GDP_{it} + \epsilon_{it} \quad (1)$$

ESG represents the dependent variables, measured using individual Environmental, Social, Governance scores, and the composite ESG scores. We construct ESG scores by scoring each bank in the sample against the Global Reporting Initiative (GRI), which is the standard for ESG information disclosures for banks in Vietnam. We use the approach of Akhter et al. (2022) to construct the ESG scores. For each GRI indicator, we score each bank 1 point if it fulfills the condition, and 0 otherwise. We averaged the scores of each theme (E, S, and G) and multiplied them by 10. The composite ESG scores are the averages of the individual E, S, and G scores. The higher the score, the better the bank's ESG practices.

The dependent variables include bank-specific factors (bank size, age, leverage, foreign ownership, and government ownership ratios) and macroeconomic factors (GDP growth and inflation rate). The details of each variable are summarized in Table 1.

Table 1. Variable description

Variable	Variable name	Description
E	Environmental	Environmental scores
S	Social	Social scores
G	Governance	Governance scores
ESG	ESG composite scores	ESG composite scores
SIZE	Bank size	Natural logarithm of total asset
AGE	Bank age	Natural logarithm of number of years in operation
LEV	Leverage ratio	Total debt/Total assets
FOREIGN	Foreign ownership	% of foreign ownership
GOVT	Government ownership	% of government ownership
INF	Inflation	Annual inflation rate
GDP	GDP growth	Annual GDP growth rate

We then estimated Equation (1) using popular panel regression methods, such as OLS, FEM, and REM. After testing for model defects, we identified heteroscedasticity and autocorrelation issues in our model. Hence, we use the Feasible Generalized Least Squares method to fix these issues.

IV. RESULTS AND DISCUSSION

4.1. Descriptive statistics

Table 2 presents a description of the variables used in our model. The banks in our sample demonstrate different ESG scores. The average individual and composite scores were quite low, from 1-2 points, while the highest scoresreach 5-8 points. Banks also show various levels of size, age, and leverage. The level of foreign and government ownership in banks is quite low, averaging 10.7% and 16.6%, respectively. Economic indicators suggest that our sample period encompassed different states of economic growth, which helped us examine the factors impacting ESG scores under different economic contexts.

Table 3 reports the correlation matrix between the variables in Equation (1). Our model demonstrated a very low possibility of multicollinearity.

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
E	259	.646	1.018	0	5.15
S	259	1.881	1.433	0	7.2
G	259	1.822	1.189	0	8.24
ESG	259	1.446	1.03	0	5.503
SIZE	259	32.649	1.186	30.218	35.372
AGE	259	3.026	.618	0	4.19
LEV	259	.914	.037	.762	1.07
FOREIGN	259	.107	.115	0	.3
GOVT	259	.166	.291	0	1
GDP	259	6.15	1.81	2.562	8.483
INF	259	3.71	2.134	.631	9.21

Table 3. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) E	1.000										
(2) S	0.641	1.000									
(3) G	0.511	0.546	1.000								
(4) ESG	0.826	0.889	0.810	1.000							
(5) SIZE	0.359	0.357	0.255	0.377	1.000						
(6) AGE	0.229	0.236	0.124	0.231	0.369	1.000					
(7) LEV	-0.116	-0.097	-0.035	-0.101	0.446	0.040	1.000				
(8) FOREIGN	0.232	0.223	0.188	0.257	0.481	0.136	0.068	1.000			
(9) GOVT	0.065	0.072	-0.094	0.008	0.511	0.306	0.222	-0.015	1.000		
(10) GDP	0.174	0.103	0.056	0.126	0.038	0.026	0.050	-0.009	0.007	1.000	
(11) INF	0.069	0.091	0.050	0.084	-0.224	-0.138	-0.259	-0.103	0.000	-0.145	1.000

4.2. Baseline resultS

Table 4 presents our baseline results regarding the factors affecting the ESG scores of Vietnamese banks. We found significant impacts of most bank-specific factors; however, the impacts varied under different dependent variables.

First, bank size positively affects environmental and overall ESG scores. It has no significant impact on the Social and Governance aspects. In other words, larger banks demonstrate better environmental and overall ESG practices, which aligns with the findings of Chang et al. (2021) and Ji et al. (2022). Our results support the argument that larger banks tend to outperform smaller ones in ESG practices because of their greater resources, better technological capacity, and governance structure. Gurol and Lagasio (2002) pointed out that larger banks often have more resources, enabling them to invest in comprehensive ESG initiatives. Additionally, larger banks have better access to capital, allowing them to invest in advanced green technologies and better ESG reporting practices (Chang et al., 2021). Agnese et al. (2023) added that larger bank tends to have larger and more diverse board, which implies profound governance pratices, contributing to better ESG practices.

Second, banks with longer operational periods show better environmental practices, supporting the findings of Gulzar et al. (2024). Gulzar et al. (2024) stated that green banking practices are usually implemented

progressively over time, banks with longer operating period tend to have more resources and experience to invest in sustainable initiatives. Moreover, as banks mature, they become more experienced in integrating digital transformation into their operations, which helps enhance their overall performance and provides a basis for improved environmental management (Do et al., 2022). Ali et al. (2020) pointed out that as banks accumulate knowledge and scale up green technologies overtime, they can capitalize on their market position to integrate tools like Big data analytics and green supply chain management, which help to boost both environmental and financial outcomes.

Third, banks with higher leverage have lower environmental scores, which is consistent with Nitescu and Cristea (2020). The primary reason for this result is due to the fact that highly leveraged banks often face greater financial constraints, which might limit their ability to invest in environmentally sustainable practices. Specifically, these banks prioritize maintaining financial stability and meeting their debt obligations, leaving insufficient resources available for investment in sustainable or green projects (Nitescu & Cristea, 2020). Nguyen and Nguyen (2020) state that for Vietnamese banks, financial constraints significanty impact their risk-taking and resource allocation practices, which in turn influence their ability to integrate sustainability practices efficiently. Furthermore, banks with higher leverage levels tend to focus on short-term financial gains over long-term sustainability goals, which reduce their investment in environmental practice, unless it directly correlates with immediate financial results (Nguyen et al., 2023)

Fourth, banks with higher levels of foreign ownership are associated with higher levels of social practices, supporting the findings of Ellili (2022) and Nathania and Ekawati (2024). Foreign ownership significantly influences various aspects of banks' operations and social responsibility initiatives. Bouzidi and Nefzi (2024) stated that increased foreign involvement in the banking sector can be associated with better governance and operational practices, thereby fostering the social responsibility of banks. Nathania and Ekawati (2024) added that foreign banks and investors often bring higher corporate governance standards, which encourage banks to adopt more robust social responsibility practices, particularly in developing nations such as ASEAN countries. Bouzidi and Nefzi (2024) indicated that foreign bank presence can also push local banks to improve local banks towards their social and ethical practices and incorporate these as part of their operational strategy.

Table 4. Baseline results

Variable	**Dependent variables**			
	E	**S**	**G**	**ESG**
SIZE	0.247***	-0.0000884	-2.73E-12	0.0106***
	(8.20)	(-0.23)	(-0.00)	(2.69)
AGE	0.154***	-0.000269	1.82E-12	0.00207
	(2.88)	(-0.90)	(0.00)	(0.13)
LEV	-2.929***	0.00308	1.46E-11	-0.0616
	(-4.39)	(0.42)	(0.00)	(-1.15)
FOREIGN	0.237	0.468***	-4.55E-12	-0.0358
	(1.00)	(4.49)	(-0.00)	(-1.11)
GOVT	-0.186	-0.555***	1.82E-12	0.145*
	(-0.85)	(-33.24)	(0.00)	(1.74)
GDP	-0.0000465	2.92E-07	3.11E-15	0.000105
	(-0.02)	(0.01)	(0.00)	(0.47)
INF	0.00197	0.0000122	5.68E-14	-0.000284
	(0.53)	(0.29)	(0.00)	(-0.85)
Observation	259	259	259	259

t statistics in parentheses (* p<0.1, ** p<0.05, *** p<0.01)

Finally, banks with higher levels of government ownership demonstrate lower levels of social, implying that government-owned banks tend to focus less on social practices. Our results support those of Defung et al. (2024) and Lou et al. (2023). Defung et al. (2024) explained that government-owned banks often face distinct pressures other than private banks, including regulatory and reputational risks. Specifically, public sector banks may have to prioritize public policy and government objectives compliance over practices that could enhance their social status. Nevertheless, government ownership still positively impacts overall ESG

scores, indicating that the presence of government owners helps improve bank ESG practices. Nathania and Ekwati (2024) studied ASEAN banks and found that state-owned banks showed a stronger and positive correlation between ESG scores and financial outcomes. In Vietnam, government-owned banks are usually largest banks in the system, ESG disclosure is required for all banks but first implemented by state-owned banks, hence their overall ESG scores are higher (Bui et al., 2024).

4.3. Heterogeneity analysis: based on ownership

We further analyze the factors affecting ESG practices by examining different types of ownership. We split our sample into subsamples of government-owned banks (banks with more than 50% government ownership), private banks, and foreign-owned banks (banks with more than the average foreign ownership in the sample). Tables 5, 6, and 7 present the estimation results.

Regarding government-owned banks, we identified bank size, age, and leverage as the most important factors affecting overall ESG practices. The direction of the impacts is consistent with our baseline results, with size and age positively impacting the overall ESG scores, while leverage shows a negative impact.

Table 5. Factors affecting ESG activities: Government-owned banks

Variable	Dependent variables			
	E	**S**	**G**	**ESG**
SIZE	-5.58E-08	0.000709	0.00238	0.506***
	(-0.00)	(0.14)	(0.23)	(4.24)
AGE	1.51E-07	0.0000368	0.0163	0.164***
	0.00	(0.10)	(0.94)	(4.01)
LEV	-5.43E-08	-0.0127	-0.0118	-4.799***
	(-0.00)	(-0.14)	(-0.22)	(-4.97)
FOREIGN	1.16E-08	-0.0464	-0.000184	-0.22
	0.00	(-0.22)	(-0.03)	(-0.72)
GOVT	-2.692***	-2.000***	1.544***	-1.177**
	(-3525.38)	(-14.97)	(2.61)	(-2.04)
GDP	6.28E-10	-2.94E-06	-6.07E-06	-0.00691
	0.00	(-0.06)	(-0.05)	(-1.15)
INF	-1.27E-10	0.00000474	-0.0000175	-0.0131
	(-0.00)	(0.04)	(-0.09)	(-1.27)
Observation	65	65	65	65

t statistics in parentheses (* p<0.1, ** p<0.05, *** p<0.01)

We found significant additional results for private banks. First, size, leverage, and foreign ownership show stronger but similar effects to the baseline results. Second, bank age has negative effects on social and overall ESG scores but a positive effect on governance scores. Bui et al. (2024) explained that older banks often have more established governance structures and have year of experince in regulatory compliance and risk management, hence their governance scores are higher. However, older private banks may have difficulties maintaining social scores and overall ESG performance, as they may become less flexible and slower to adopt contemporary social and environmental practices (El Khoury et al., 2021). Furthermore, private banks often lack the strong influence and direct government supports like state-owned banks, which leads to inconsistencies in how ESG practices are implemented and impacting the overall scores (Aevoae et al., 2022)

Third, economic growth has a significant positive impact on social and overall ESG scores. Gidage and Bhide (2024) explained that economic growth, particularly in developing nations, fosters a conducive environment for banks to improve their social responsibility and governance practices, thereby enhancing their ESG scores. Sadiq et al. (2022) added that, in ASEAN countries, ESG integration into economic growth strategies is associated with positive outcomes. Hence, private banks in the region can use economic growth to enhance their ESG scores, thereby boosting investor confidence and achieving long-term financial and development goals.

Regarding banks with high foreign ownership, we again found similar results for bank size, age, leverage, and government ownership. However, we found additional results for the GDP and inflation. First,

GDP has a significant negative impact on overall ESG scores, which can be explained by the focus of foreign-owned banks on capturing financial growth opportunities and limiting resources for ESG practices Khoury et al. (2021). Second, inflation has a significant negative impact on banks' governance scores. Foreign banks may face challenges in maintaining their governance standards in developing countries due to weak institutional frameworks and macroeconomic volatility (Nguyen et al., 2023). High inflation can negatively affect the stability of banks in Vietnam, thereby affect the governance level of foreign credit institutions as they struggle to manage greater financial and operational risks (Jungo et al., 2024).

Table 6. Factors affecting ESG activities: Private banks

Variable	Dependent variables			
	E	**S**	**G**	**ESG**
SIZE	4.18E-10	0.146***	0.118***	0.0146***
	0.00	(20.37)	(7.65)	(6.38)
AGE	-1.29E-09	-0.321***	0.425***	-0.0778***
	(-0.00)	(-19.66)	(8.37)	(-13.90)
LEV	-8.21E-10	-0.736***	-0.617***	0.0541
	(-0.00)	(-4.52)	(-4.33)	(1.46)
FOREIGN	0.464***	0.610***	-0.163***	0.133***
	(3.29)	(20.20)	(-3.91)	(3.77)
GOVT	1.401*	-0.0645	-0.00552	-0.414**
	(1.74)	(-1.36)	(-0.20)	(-2.46)
GDP	2.35E-13	0.00306***	0.0000832	0.000430***
	0.00	(3.79)	(0.18)	(2.80)
INF	-3.25E-12	-0.00178	-0.00153*	-0.000669***
	(-0.00)	(-1.31)	(-1.95)	(-2.96)
Observation	194	194	194	194

t statistics in parentheses (* p<0.1, ** p<0.05, *** p<0.01)

Table 7. Factors affecting ESG activities: banks with high foreign ownership

Variable	Dependent variables			
	E	**S**	**G**	**ESG**
SIZE	0.369***	0.156**	0.0710***	0.194***
	(4.59)	(2.45)	(6.45)	(3.67)
AGE	0.207	0.544***	0.312***	0.144
	(0.76)	(3.79)	(7.95)	(1.48)
LEV	0.541	0.268	-0.266***	1.193
	(0.56)	(0.23)	(-3.54)	(1.02)
FOREIGN	-1.194*	0.676	-0.135***	0.917**
	(-1.73)	(1.08)	(-2.98)	(2.33)
GOVT	1.316***	0.631**	0.00215	0.976***
	(3.12)	(2.53)	(0.11)	(7.65)
GDP	-0.00316	0.00144	0.00000692	-0.00359***
	(-0.42)	(0.38)	(0.02)	(-3.25)
INF	0.012	-0.00208	-0.00127***	0.00155
	(0.75)	(-0.26)	(-2.93)	(0.51)
Observation	112	112	112	112

t statistics in parentheses (* p<0.1, ** p<0.05, *** p<0.01)

V. CONCLUSION

This study investigates the factors affecting the ESG practices of banks in Vietnam. We use a dataset of 26 banks from 2014-2023 and the FGLS estimation method. The results reveal that most bank-specific factors significantly influence ESG outcomes; however, the impact varies across different ESG dimensions. Specifically, bank size positively impacts environmental and overall ESG scores but not social or governance components. Banks with longer operational periods are linked to improved environmental performance, whereas banks with higher leverage ratios are associated with lower environmental practices. Banks with greater foreign ownership exhibit stronger social performance. However, government ownership tends to have lower social practice. Further heterogeneity analysis shows that our results are consistent for government-owned banks but show variations for private banks and banks with high foreign ownership. For private banks, bank age shows negative effects on social and overall ESG scores but a positive effect on governance scores. GDP growth shows significant positive impacts on social and overall ESG scores for private banks but negative impacts for banks with high foreign ownership ratios. Inflation negatively impacts foreign banks' governance scores.

Based on these results, we provide the following suggestions for banks and regulators. First, we suggest that banks in developing countries, such as Vietnam, focus on tailoring their ESG strategies to their specific characteristics and ownership structures. Specifically, larger and established banks should leverage their resources and enhance their environmental and overall ESG performance. Banks with higher leverage ratios should prioritize balancing financial stability and environmental responsibility. Banks focusing on improving their social aspects could benefit from an increased foreign ownership ratio. On the other hand, government-owned banks need to pay attention to enhancing their social practices. Second, regulators should consider implementing policies that encourage foreign investment in the banking sector to promote better social practices. Furthermore, regulators should develop targeted guidelines for different bank types and acknowledge the impact of macroeconomic factors on ESG performance across banks with different ownership structures. Finally, we suggest that banks and regulators prioritize comprehensive ESG reporting and transparency to facilitate better monitoring and improvement of ESG practices across the banking sector in Vietnam.

Despite its significant theoretical and empirical contributions, our study has several limitations. First, our sample only includes banks from one developing country, which might limit the generalization of our findings. We suggest that future research expand to multiple country analyses, particularly in developing regions. Second, our study does not consider other bank-specific and macroeconomic factors, such as corporate governance, business models, or risk management practices. We suggest future research looking

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