ENVIRONMENTAL, SOCIAL, AND GOVERNANCE STRATEGY IMPLEMENTATION AND OPERATIONAL EFFICIENCY IN THE BANKING SYSTEM

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Abstract

The COVID-19 pandemic has created profound economic disruptions, significantly impacting businesses and banking systems worldwide, including Vietnam. This crisis has highlighted the need for sustainable development strategies. Michael et al. (2023) indicated that banks incorporating environmental, social, and governance (ESG) criteria gain increased investor confidence, suggesting the financial viability of ESG implementation. However, adopting ESG practices needs to be more consistent, raising questions about the factors influencing ESG implementation in Vietnamese banks and its effect on performance. This study analyses the impact of leadership characteristics, stakeholder pressures, and Big Data technology on ESG implementation in the Vietnamese banking sector. Using a quantitative approach, data was collected from various banks and analysed through partial least squares structural equation modelling (PLS-SEM) to establish causal relationships between the factors and ESG adoption. The findings reveal that leadership traits — such as strategic vision, commitment, and ESG awareness — are critical drivers of ESG policies. Stakeholder groups, including regulators, customers, and shareholders, exert substantial influence, while Big Data technology demonstrates transformative potential in facilitating ESG practices. The study concludes that ESG adoption reduces costs, improves risk management, and offers a competitive edge, positioning it as both a financial necessity and a strategic advantage for the Vietnamese banking system.

Keywords: Leadership, Pressure, Big Data, Banking System, ESG

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1. INTRODUCTION

In the current context, the trend of sustainable business development has significantly influenced the operations of enterprises and financial institutions. These organisations are exploring opportunities and confronting challenges related to adapting to a sustainable business model. Within the banking-oriented model, banks play a crucial role as leading capital providers and, importantly, as critical decision-makers when businesses transition towards sustainable development. Their role is not just pivotal; it is indispensable, as when assessing environmental, social, and governance (ESG) risks, financial institutions determine the economic conditions they will offer to businesses, with the strictness of these requirements being based on assessing the business's ESG risk level (Bonollo

et al., 2023; Porretta & Benassi, 2021). Reputation risk, considered by banks as linked to listed companies, plays a significant role in this process, underscoring the importance of their role as critical decision-makers and making the audience feel the weight of their responsibility (Gangi et al., 2018).

The ESG factors impact the banking system. ESG factors affect the valuation of the banking sector alongside ESG changes (Michael et al., 2023; Rastogi & Singh, 2022). These factors significantly influence the credit ratings of non-financial institutions, with varying responses to credit rating changes across different sectors. Moreover, the impact of corporate governance on ESG disclosure has been explored, with ownership structure affecting ESG disclosure in non-financial companies. Studies have also developed innovative frameworks like the "Integrated ESG Governance Index" to incorporate sustainability into governance systems in banks (Dicuonzo et al., 2022).

To investigate the implementation of ESG practices in the banking system in Vietnam, a study by (Loan et al., 2024) focusing on ESG disclosure and its impact on the financial performance of Vietnamese commercial banks can provide valuable insights. This research aims to analyse how ESG disclosure influences the financial performance of 24 Vietnamese commercial banks in terms of return on assets (ROA), return on equity (ROE), and net interest margin (NIM). Additionally, the study by (Dung et al., 2024), the early stages of applying ESG practices in an emerging Asian economy, including Vietnam, can provide a broader perspective on the factors influencing ESG performance in Vietnam. This research illuminates the challenges and opportunities associated with the initial phases of ESG implementation in Vietnam, shedding light on the unique dynamics of integrating ESG practices in an emerging Asian economy like Vietnam.

This study seeks to address existing gaps in the literature regarding the integration of ESG principles within the banking sector, with a particular emphasis on the Vietnamese business context. The primary research question is as follows:

RQ: What are the critical factors influencing the adoption of environmental, social, and governance practices by Vietnamese banks, and what is the impact of environmental, social, and governance implementation on their operational performance?

The theoretical framework underpinning this research is informed by a comprehensive review of existing studies on the efficacy of ESG practices and their context-specific applications.

This study is critical and significant as it addresses the disconnect between the theoretical framework and practical implementation of ESG principles, thereby contributing valuable insights to academic discourse and professional practice. Employing a rigorous mixed-methodology, this research integrates qualitative and quantitative analyses to comprehensively evaluate the adoption and impact of ESG practices within the Vietnamese banking sector.

The findings of this study significantly advance the existing body of literature by identifying key determinants influencing the adoption of ESG principles within the Vietnamese banking sector. Furthermore, the research evaluates the implications of ESG adoption on banks' financial and operational performance. These insights provide valuable practical applications for practitioners and policymakers,

contributing to a deeper comprehension of ESG's critical role in strategic decision-making processes and enhancing operational efficiency.

The remainder of this paper is organised into four sections. Section 2 provides a literature review and outlines the development of the hypotheses. Section 3 details the research methods and methodology. Section 4 presents the key findings and offers related discussions. Lastly, Section 5 delivers the concluding remarks.

2. LITERATURE REVIEW

Implementing ESG standards within the banking sector is influenced by many factors, including organisational, cultural, and governance-related elements. Existing research underscores the pivotal role of a company's board of directors in shaping ESG performance (Birindelli et al., 2018). Board characteristics, such as gender diversity, independence, and size, have been consistently identified as critical determinants of ESG outcomes in the banking industry (Miranda et al., 2023; Rooh et al., 2021). Specifically, gender diversity on boards has been found to enhance ESG performance when achieving a "dual critical mass" of male and female directors, aligning with stakeholder expectations for inclusivity and balanced representation (Birindelli et al., 2018, p. 12). Similarly, establishing corporate social responsibility (CSR) committees and appropriate board size further strengthen governance frameworks, contributing positively to ESG integration (Menicucci & Paolucci, 2022).

Cultural and gender diversity within leadership structures has been examined for its dual effects on ESG performance. While these forms of diversity can promote knowledge sharing and foster sustainability, evidence suggests that their combined influence may have a complex, occasionally adverse, impact on ESG outcomes (Paolone et al., 2024). Leadership style also plays a decisive role in embedding ESG practices into corporate strategies. Transformational leadership, characterised by stakeholder engagement and a commitment to sustainability, has been shown to facilitate the successful integration of ESG initiatives (Cheungsirakulvit & Pranee, 2023). This leadership approach aligns with the need for systematic frameworks that include measurable objectives and clear communication strategies to support ESG implementation (Dong, 2023). The regulatory environment and institutional pressures significantly influence ESG practices within the banking system. Following the 2007–2008 financial crisis, regulatory reforms have compelled banks to enhance transparency and accountability, thereby improving ESG performance (Fernández Sánchez et al., 2020). Governance mechanisms, shaped by stakeholder demands and institutional expectations, have evolved to integrate sustainable practices more effectively (Mohamed Buallay et al., 2021). Furthermore, enhanced ESG performance has been empirically linked to reduced financial risks, such as liquidity risk, improved overall financial performance, and decreased non-performing loans (Liu & Xie, 2024). These findings highlight the strategic importance of proactive leadership that recognises the long-term benefits of sustainable practices and integrates them into governance and operational frameworks. Collectively, the evidence underscores the critical role of leadership diversity, regulatory adaptation, and stakeholder engagement in advancing ESG initiatives within the banking sector.

Based on these insights, the research team has developed the following hypothesis:

H1: Leadership characteristics in banks influence the implementation of environmental, social, and governance in the banking system.

The stakeholder theory, introduced by R. E. Freeman in 1984, provides a robust framework for understanding the intricate relationship between a bank's valuation and risk acceptance criteria and its governance practices under the lens of ESG principles. This theoretical approach asserts that stakeholders — individuals or groups capable of affecting or being affected by achieving an organisation's objectives — are integral to organisational success (Freeman & Phillips, 2002). Stakeholder theory underscores the necessity of incorporating the interests of all stakeholders, beyond mere shareholders, into organisational decision-making processes.

Within the context of ESG considerations, evaluating a bank's environmental obligations involves a tripartite analysis. First, the efficiency of internal resource utilisation is assessed. Second, the bank's degree of financing for environmentally sustainable industrial projects is scrutinised. Finally, mitigating risks associated with capital provision to businesses operating in highly polluting sectors is examined (Gangi et al., 2018). Implementing ESG principles within the banking sector necessitates active collaboration with related parties, as effective coordination has been empirically linked to improved cost efficiency and time performance (Lailatul Qomariah & Susetyo, 2024). This highlights the critical role of communication and cooperation among stakeholders in driving successful ESG initiatives. Moreover, fostering partnerships with external stakeholders is essential for comprehensive ESG integration. For instance, schools collaborating with stakeholders to develop emergency response systems, standard operating procedures, and simulation training demonstrates the importance of inclusive stakeholder engagement to enhance safety measures (Widowati et al., 2023).

Stakeholder pressure is a significant catalyst for implementing ESG practices within the banking system. Various stakeholder groups, including investors, customers, regulators, and the broader community, increasingly demand transparency and accountability regarding ESG performance. This pressure manifests in the growing demand for detailed ESG disclosures, reflecting a paradigm shift in evaluating financial institutions. Empirical evidence suggests that banks with robust ESG disclosures experience superior financial performance as stakeholders reward their commitment to sustainability (Shakil et al., 2019). This correlation underscores the financial incentives for banks to prioritise ESG initiatives.

Furthermore, effective stakeholder engagement is pivotal in shaping governance structures and enhancing the legitimacy of sustainability management practices (Ahmad et al., 2023). By aligning organisational strategies with stakeholder expectations, banks can achieve more impactful ESG implementation. For example, adopting ESG-oriented products and services to meet corporate clients' sustainability priorities demonstrates how alignment with stakeholder demands fosters customer loyalty and enhances competitive advantage (Ferretti et al., 2024). Regulatory frameworks further amplify the pressure to integrate ESG considerations into banking practices. Governments and regulatory bodies increasingly mandate ESG disclosures and compliance with sustainability standards, compelling banks to embed ESG elements within their risk management frameworks and overarching business strategies (Aldowaish et al., 2022). Non-compliance with these regulations risks reputational and financial consequences, thereby incentivising rigorous ESG practices.

The reciprocal relationship between stakeholder pressure and ESG performance is noteworthy. Banks that enhance their ESG initiatives in response to stakeholder demands often cultivate increased stakeholder trust and engagement. Demonstrations of commitment to social responsibility and environmental stewardship enable banks to forge stronger stakeholder relationships, yielding tangible benefits such as heightened investment and improved customer retention (Galletta & Mazzù, 2022). This dynamic underscores the cyclical reinforcement of stakeholder engagement and ESG performance, solidifying the centrality of stakeholder influence in driving effective ESG implementation.

Drawing on these insights, the research team formulated the following hypothesis:

H2: Pressure from stakeholders influences the implementation of environmental, social, and governance in the banking system.

Research examining the interplay between information technology and the relationship between ESG practices and bank valuation has established that information technology is a moderating factor in this dynamic (Rastogi & Singh, 2022). Effective implementation of ESG initiatives within the banking sector necessitates a holistic framework encompassing elements such as board composition, corporate governance mechanisms, cultural and gender diversity, financial performance, and the regulatory implications of technological advancements. Addressing these dimensions enables banks to enhance their ESG performance and contribute to sustainable banking practices.

The role of technology, particularly Big Data, in facilitating ESG implementation within the banking industry is substantial and multifaceted. Big Data augments ESG performance by improving data collection, analysis, and reporting capabilities, which is critical for informed decision-making and stakeholder engagement. Specifically, Big Data allows for the comprehensive acquisition and evaluation of ESG-related data from diverse sources, such as social media, customer feedback, and environmental impact assessments. By leveraging these data streams, banks can gain actionable insights into their ESG performance and stakeholder expectations, thereby identifying areas for improvement and refining ESG strategies. For example, advanced analytics can evaluate the environmental impacts of lending practices and investment portfolios, enabling more sustainable decision-making (Arnone et al., 2024). Additionally, predictive analytics enhance risk management by forecasting potential ESG risks and opportunities (Liu & Xie, 2024).

Big Data analytics also plays a pivotal role in enhancing transparency and accountability in ESG reporting, a critical requirement given the increasing demand for detailed and accurate disclosures by stakeholders. By automating data collection and analysis processes, Big Data tools ensure that banks provide timely, relevant, and accurate information to stakeholders, fostering trust among investors and customers while meeting stringent global regulatory requirements (Aldowaish et al., 2022).

Such transparency strengthens reputational standing and attracts socially conscious investors, further contributing to sustainable banking practices (Miralles-Quirós et al., 2019).

Furthermore, Big Data supports the development of innovative financial products that align with ESG principles. By analysing customer preferences and market trends, banks can design products such as green bonds and ESG-focused investment funds, thereby meeting the growing demand for sustainable investment options. These innovations enhance product offerings and contribute to the broader objectives of sustainable finance by directing capital towards environmentally and socially impactful projects.

Moreover, the integration of Big Data into ESG practices drives operational efficiencies. Through data-driven insights, banks can optimise resource allocation and reduce inefficiencies, ultimately improving their sustainability performance. For instance, analytics can identify energy inefficiencies within bank operations, reducing carbon footprints and operational costs (Gangi et al., 2018). Achieving such operational efficiencies is integral to meeting sustainability objectives while maintaining financial profitability.

Building on these insights, the research team formulated the following hypothesis:

H3: Technology (Big Data) influences the implementation of environmental, social, and governance in the banking system.

In the context of the global economy, adopting ESG standards has become imperative for banks seeking to communicate their sustainability goals to customers and business partners. This strategic alignment is instrumental in fostering customer trust, enhancing institutional reputation, and achieving sustainable profitability (Gangi et al., 2018). Recent studies underscore the critical role of integrating sustainability within management control systems, particularly in the Italian banking sector, to address the evolving preferences of customers, especially those interested in ESG-focused financial products (Ferretti et al., 2024). This integration enables operational improvements through responsiveness to shifting market demands and enhances customer satisfaction. Furthermore, research highlights that embedding ESG considerations into lending and investment decisions can balance short-term profitability and long-term sustainable development, thereby contributing to operational efficiency and enduring success (Liu & Xie, 2024).

Implementing ESG practices within the banking sector has demonstrable implications for operational efficiency through enhanced risk management, compliance, stakeholder engagement, and financial performance. One critical dimension of this relationship is the improvement in risk management. Banks that integrate ESG factors into their decision-making processes are better positioned to identify and mitigate risks linked to environmental and social issues. For instance, adopting environmentally sustainable practices reduces exposure to information asymmetry, a vital factor in addressing adverse selection and moral hazard concerns (Gangi et al., 2018). This proactive risk management approach promotes financial stability and minimises operational costs by reducing penalties and reputational risks associated with non-compliance to ESG standards. Additionally, firms with robust ESG disclosures often incur lower capital costs as investors increasingly prioritise sustainability-oriented institutions. This reduction in financing costs enables banks to offer competitive lending terms, enhancing profitability and operational efficiency.

Moreover, effective ESG integration strengthens stakeholder relations, a cornerstone of operational efficiency. Enhanced ESG performance builds trust and loyalty among customers and investors, increasing business opportunities and lowering customer acquisition costs (Zumente & Bistrova, 2021). For example, banks offering ESG-compliant financial products can access a growing market of socially conscious consumers, expanding their customer base and improving overall performance (Clementino & Perkins, 2020). This alignment with stakeholder values fortifies the bank's reputation and bolsters employee engagement and retention — critical factors for operational efficiency. ESG implementation also catalyses innovation within the banking sector, driving the development of new products and services, such as green financing and sustainable investment funds. These innovations contribute to operational efficiencies by streamlining processes and creating additional revenue streams (Finger & Rosenboim, 2022).

Finally, integrating ESG principles into business strategies enhances decision-making by leveraging advanced data analytics to evaluate banking operations' environmental and social impacts (Alareeni & Hamdan, 2020). Through these multidimensional benefits, ESG adoption emerges as a transformative approach for optimising operational efficiency while aligning with sustainability imperatives.

H4: The implementation of environmental, social, and governance in the banking system affects its operational efficiency.

Figure 1. Overview of the research model
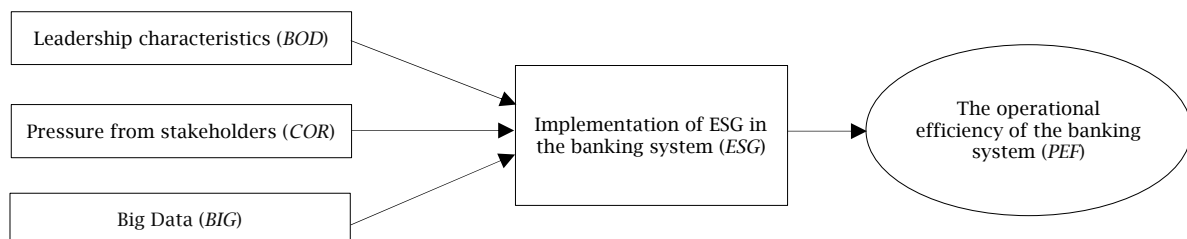
Source: Authors' elaboration.

3. RESEARCH METHODOLOGY

In this paper, the research team uses qualitative and quantitative methods to investigate theoretical issues related to implementing ESG standards and their impact on the banking system.

Initially, the team applied a qualitative research method, specifically the case study approach, by collecting and synthesising secondary data sources. They then analyse information from these sources, including research articles, textbooks, economic journals, dissertations, and theses, to systematise

relevant theories. Subsequently, the research shifts to a quantitative method. It begins with reviewing previous studies and related theories on ESG implementation and its impact on the operational efficiency of the banking system. The goal is to clarify the factors influencing ESG implementation. The team constructs a specific research model and develops scales for the research variables, followed by quantitative surveys and analysis to assess the influence of these factors on ESG implementation and the model's suitability. The quantitative research method used is structural equation modelling (SEM). The team tests the measurement and structural models through this method to evaluate the scales' reliability and validity, the relationships between variables, and the model's alignment with the theory. Data is collected from personnel working in Vietnamese banks through a non-probability convenience sampling method. The research sample is expected to exceed 100 to ensure the accuracy and reliability of SEM analysis. The survey was conducted in the second quarter of 2024, with results obtained from 130 valid responses. This high response rate ensures a solid data foundation for the research.

4. RESULTS AND DISCUSSION

After collecting and cleaning the data, the SmartPLS 4.1.0.0 software is employed to establish the relationship among variables, as shown in Figure 2.

Figure 2. Overview of the relationship among variables
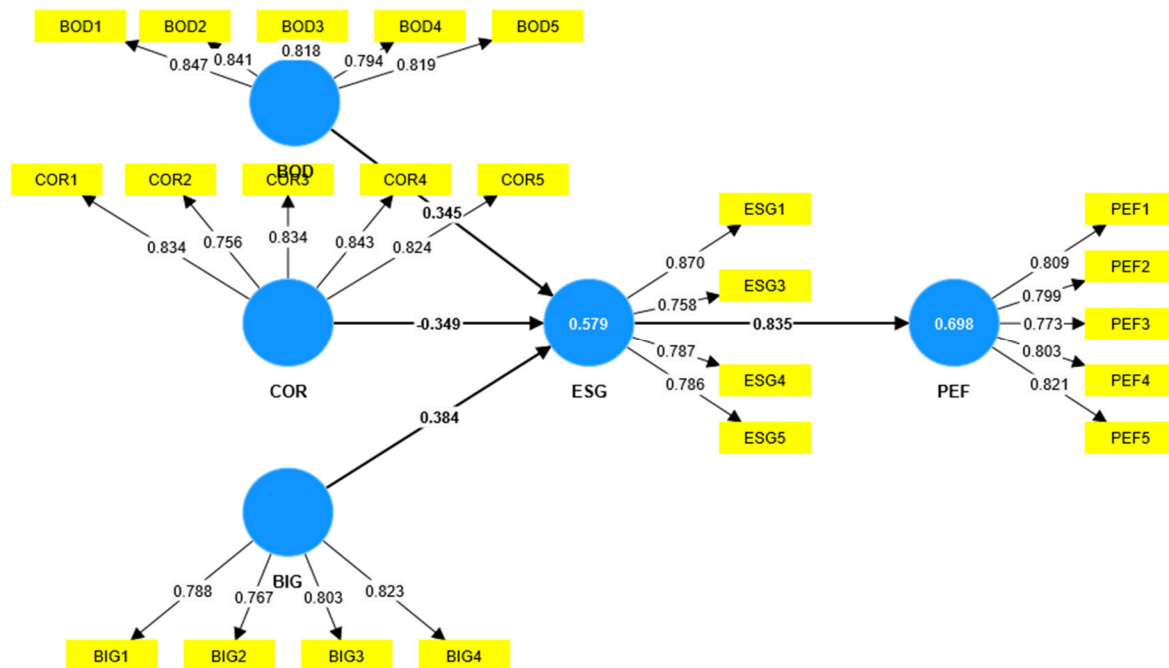
Source: Authors' elaboration.

Table 1. Outer loadings results

Scale	BIG	BOD	COR	ESG	PEF
BIG1	0.788				
BIG2	0.767				
BIG3	0.803				
BIG4	0.823				
BOD1		0.847			
BOD2		0.841			
BOD3		0.818			
BOD4		0.794			
BOD5		0.819			
COR1			0.834		
COR2			0.756		
COR3			0.834		
COR4			0.843		
COR5			0.824		
ESG1				0.870	
ESG3				0.758	
ESG4				0.787	
ESG5				0.786	
PEF1					0.809
PEF2					0.799
PEF3					0.773
PEF4					0.803
PEF5					0.821

Note: After testing and dropping weak indicators (ESG2), we have all proper scales with outer loadings.
Source: Authors' elaboration.

According to Hair et al. (2021), the magnitude of outer loadings is generally called indicator reliability. At a minimum, the outer loadings of all indicators must be statistically significant. However, a statistically significant outer loading might still be weak, so a general rule of thumb is that standardised outer loadings should be 0.708 or higher. In this case, all of the outer loadings in Table 1 are higher than 0.708.

The reliability of the constructs in the model can be assessed through Cronbach's alpha and composite reliability. The analysis results presented in Table 2 show that Cronbach's alpha values range from 0.807 (*BIG*) to 0.882 (*BOD*). Similarly, the composite reliability values are also within the range of 0.811 (*BIG*) to 0.885 (*BOD*). Both indices exceed the 0.7 threshold according to the standard set by Hair et al. (2021), confirming the reliability of the constructs in the study. Table 2 also presents the average variance extracted (AVE) values for each construct, with all values greater than 0,5, ensuring the convergent validity of the constructs according to the standard of Fornell and Larcker (1981).

Table 2. Model evaluation results

Scale	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
BIG	0.807	0.811	0.873	0.633
BOD	0.882	0.885	0.914	0.679
COR	0.877	0.879	0.910	0.670
ESG	0.813	0.817	0.877	0.642
PEF	0.861	0.863	0.900	0.642

Source: Authors' elaboration.

The heterotrait-monotrait (HTMT) ratio index tests the actual correlation between the scales of the concept pairs in the research model. This new technique for assessing discriminant validity in partial least squares SEM (PLS-SEM) is considered more advanced than traditional methods by Fornell and Larcker (1981) or cross-loadings by Henseler et al. (2015). The HTMT results presented in Table 3 show that none of the HTMT indices for the concept pairs have a value greater than 0.696. According to Henseler et al. (2015), the acceptable level for HTMT is below 0.9. Hence, it can be concluded that the scales of the research concepts achieve high discriminant validity.

Table 3. Heterotrait-monotrait ratio values

Scale	BIG	BOD	COR	ESG	PEF
BIG					
BOD	0.288				
COR	0.328	0.248			
ESG	0.691	0.605	0.624		
PEF	0.687	0.632	0.696	0.994	

Source: Authors' elaboration.

The validation results presented above confirm the suitability of the measurement model, allowing the author to proceed with the structural model analysis. The variance inflation factor (VIF) index (multi-collinearity) was applied to evaluate the correlation between independent variables in the structural model. According to Lowry and Gaskin (2014), a VIF value greater than 5 or less than 2 shows multicollinearity among latent variables in the model. The data presented in Table 4 show that all VIF values are below 5, with the highest value being 1.126 and the lowest value being 1.000, both within the permissible range. This indicates the absence of multicollinearity among latent variables in the model, further confirming the stability and suitability of the structural model under investigation.

Table 4. Multicollinearity test results

Scale	BIG	BOD	COR	ESG	PEF
BIG				1.126	
BOD				1.090	
COR				1.109	
ESG					1.000
PEF					

Source: Authors' elaboration.

The results in Table 5 indicate that the external variables largely explain the intrinsic variable (*ESG*) with an R^2 determination coefficient of 56.9%. This demonstrates that the model has a high predictive capacity. Moreover, the variable *PEF* is also accurately predicted with an R^2 determination coefficient of up to 69.5%.

Table 5. Determination coefficients

Scale	R-square	R-square adjusted
ESG	0.579	0.569
PEF	0.698	0.695

Source: Authors' elaboration.

Table 6 displays each structural model's effect size (f^2) values. Model 1 (*ESG*) provides additional evidence to support the conclusion that ESG implementation in the banking system depends on adopting Big Data technology (*BIG*, $f^2 = 0.311$). The remaining factors, related to stakeholder pressure (*COR*, $f^2 = 0.261$) and bank leadership characteristics (*BOD*, $f^2 = 0.259$), also play a significant role.

Similarly, in Model 2, ESG implementation in the banking system strongly impacts operational efficiency (*PER*, $f^2 = 2.309$).

The model's fit was tested using the bootstrapping method to evaluate the path coefficients in the structural model. The impact of independent variables on the dependent variable was assessed by testing the direct relationships between constructs through the path coefficient (*β*) and p-value. Table 7 shows that the p-value statistically supports the initial research hypotheses from *H1* to *H4*.

Table 6. Effect size values

Scale	BIG	BOD	COR	ESG	PEF
BIG				0.311	
BOD				0.259	
COR				0.261	
ESG					2.309
PEF					

Source: Authors' elaboration.

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Table 7. Hypothesis testing results

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Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	t-statistics (|O/STDEV|)	p-values	Decision
H1: BOD → ESG	0.345	0.346	0.057	6.027	0.000	Accepted
H2: COR → ESG	-0.349	-0.353	0.061	5.737	0.000	Accepted
H3: BIG → ESG	0.384	0.380	0.067	5.761	0.000	Accepted
H4: ESG → PEF	0.835	0.836	0.030	27.851	0.000	Accepted

Source: Authors' elaboration.

The preceding findings carry significant implications. Firstly, the results indicate that technology (Big Data) influences the implementation of ESG in the banking system. Big Data significantly influences the implementation of ESG practices in the banking system by enhancing data collection and analysis, improving transparency and reporting, fostering innovation in financial products, and driving operational efficiencies. As banks increasingly recognise the importance of ESG factors in their business models, the strategic use of Big Data will be essential for achieving sustainable growth and meeting stakeholder expectations. This is consistent with the Aldowaish et al. (2022) and Michael et al. (2023) findings.

Secondly, stakeholder pressure is a critical factor influencing the implementation of ESG practices in the banking system. The demand for transparency, regulatory compliance, and active stakeholder engagement compels banks to prioritise sustainability. As banks respond to these pressures, they enhance their ESG performance and strengthen their relationships with stakeholders, creating a virtuous cycle that benefits both the banks and the communities they serve. Lailatul Qomariah and Susetyo (2024) mentioned this in the results of prior studies.

Thirdly, bank leadership characteristics significantly influence the implementation of ESG initiatives through board composition, leadership styles, and governance structures. The interplay between these factors not only enhances ESG performance but also aligns banks with stakeholders' growing expectations for responsible and sustainable banking practices. This study supports prior research by Miranda et al. (2023) and Rooh et al. (2021).

Lastly, implementing ESG practices in the banking system significantly enhances operational efficiency through improved risk management, reduced financing costs, better stakeholder relations, and increased innovation. As banks integrate ESG considerations into their core operations, they will likely experience enhanced financial performance and a stronger competitive position in the evolving financial landscape. In existing research, scholars have argued the positive influence of implementing ESG practices on the banking system's operational efficiency (Finger & Rosenboim, 2022).

5. CONCLUSION

This study sheds light on the key factors influencing the implementation of ESG in Vietnam's banking system. Bank leadership characteristics, stakeholder pressure, and technology, particularly Big Data, all play crucial roles in promoting or hindering the progress of ESG in the industry. The research also reveals that ESG implementation positively impacts the operational efficiency of the banking system in Vietnam.

Based on the conclusions regarding the factors influencing ESG implementation in the Vietnamese banking system, the research team proposes several solutions to improve and encourage ESG implementation as follows:

First, bank leadership with strategic vision, strong commitment, and high awareness of the importance of ESG can effectively lead the implementation of ESG policies. Competent leaders with a positive attitude towards ESG create a conducive working environment and encourage employees to participate and commit to sustainable development goals.

Second, stakeholders, including shareholders, customers, and regulatory agencies, have their requirements and expectations regarding ESG. Pressure from these groups drives banks to consider and integrate ESG criteria into their operations. Specifically, shareholder demands for detailed and transparent ESG reports, customer expectations for sustainable financial products, and regulatory requirements directly influence ESG implementation in banks.

Third, technology, especially Big Data, is indispensable in ESG implementation. Big Data provides tools and platforms to accurately and efficiently collect, analyse, and report ESG data. This technology also assists banks in risk assessment, trend detection, and decision-making based on real-time data. Adopting Big Data helps banks improve their forecasting ability, risk management, and responsiveness to changes in ESG requirements.

In conclusion, successful ESG implementation in the Vietnamese banking system requires a close combination of visionary leadership, positive stakeholder pressure, and the application of advanced technologies like Big Data. These factors enhance banks' operational efficiency and contribute to the sustainable development of society and the environment. Continuing research and developing ESG strategies are essential for the Vietnamese banking system to achieve sustainable development goals in the future.

This study is critical for future research as it underscores the role of ESG integration in enhancing operational efficiency within the banking sector through improved risk management, stakeholder engagement, and innovation. By establishing a link between sustainability practices and financial performance, the study offers a framework for banks to balance profitability and long-term development, thereby addressing dynamic market and regulatory requirements. Nonetheless, the findings are subject to certain limitations, particularly the restricted generalizability arising from the limited sample size confined to listed banks on Vietnam's stock market. Consequently, future research should aim to broaden the sample size and encompass a more diverse range of business sectors to explore the impact of industry-specific factors on the degree of ESG implementation and its implications for bank performance. Furthermore, subsequent studies should examine additional variables not included in this research, such as government support, network management, and the costs associated with ESG implementation.

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