INTERNATIONAL JOURNAL OF SOCIAL AND MANAGEMENT STUDIES (IJOSMAS)

Vol. 6 No. 3 (2025) https://www.ijosmas.org e-ISSN: 2775-0809

Integrating ESG and Financial Resilience to Enhance Bank Performance: Evidence from Systemically Important Banks in Indonesia

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***Abstract** - This study aims to examine the influence of Environmental, Social, and Governance (ESG) factors on financial performance through Financial Resilience as a mediating variable in Indonesian banking sector. The research investigates the effect of environmental, social, and governance dimensions on financial performance, with Financial Resilience serving as a mediating variable in KBMI 3 and KBMI 4 banks listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. A quantitative explanatory approach was applied using panel data regression and path analysis via EViews version 13. The sample consists of 13 banks using saturated sampling technique, resulting in 65 observations. The findings reveal that social and governance factors have a significant positive impact on financial performance, while environmental factors show a negative and insignificant effect. All three ESG dimensions demonstrate positive and significant influences on financial resilience. Furthermore, Financial Resilience significantly and positively affects financial performance. The mediation analysis indicates that Financial Resilience successfully mediates the relationship between social and governance factors with financial performance, but fails to mediate the environmental-financial performance relationship. This study contributes to the theoretical literature by enhancing insights into the integration of ESG practices and financial resilience in shaping banking performance, particularly in the context of Indonesia's large-scale banking institutions (KBMI 3 and 4).*

***Keywords**: Environmental, Social, Governance (ESG), Financial Resilience, Financial Performance, Sustainability Report.*

I. INTRODUCTION

Contemporary literature demonstrates that Environmental, Social, and Governance (ESG) practices constitute an efficacious methodological framework for developing sustainable business operations, enhancing organizational resilience, and facilitating the attainment of long-term financial performance (Dharmawati et al., 2024; Annisawanti et al., 2024; Putri & Harry, 2025). Previous empirical investigations employing quantitative methodologies grounded in panel data analysis have documented that ESG practices can effectively assist banking institutions in developing more sustainable and resilient business models (for instance, Triyani & Siswanti (2024)). Utilizing sophisticated econometric analysis, Setiawati & Hidayat (2023) established that ESG implementation can enhance financial performance of banks, as measured through Return on Assets (ROA) and other financial indicators. Additional research has reported that ESG practices can likewise strengthen risk management capabilities and stakeholder trust (for example, Inawati & Rahmawati (2023)).

Empirical evidence has emerged indicating that ESG implementation serves as an effective transformational methodology for financial institutions, particularly within the Indonesian banking sector. In the Indonesian banking context, employing panel data analysis to examine the impact of ESG practices, Widyawati (2024) determined that ESG implementation can elevate financial performance expectations and operational efficiency. Through a comprehensive investigation, Adirestuty et al. (2025) established that ESG practices implemented by professional management enhance sustainability performance, financial resilience, and target achievement for banking executives and senior managers in Indonesian financial institutions. Furthermore, investigations of KBMI (Kelompok Bank berdasarkan Modal Inti) banks utilizing panel regression analysis revealed that ESG practices enhance the quality of financial management. In comparable settings of large

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Indonesian banks, employing data panel methodology, studies determined that ESG implementation demonstrates greatest effectiveness for middle-tier banks (KBMI 3) compared with large banks (KBMI 4) in developing sustainable practices and achieving financial targets.

Beyond research in banking institutions, numerous studies have established that ESG practices, within broader financial contexts, can enhance financial resilience and sustainability performance, facilitate the achievement of financial targets, while simultaneously reducing operational risks, reputational risks, and regulatory compliance issues (for example, Hendri & Usman (2023)). Consequently, comprehensive evidence exists indicating that ESG implementation can serve as an effective transformational methodology for various types of financial institutions. To broaden the evidence base concerning ESG practices and examine ESG effectiveness in detail within Indonesian banking settings, recent investigations have been conducted resulting in significant ESG development among Indonesian banks.

Substantial literature exists documenting ESG implementation in banking organizational settings. Research conducted utilizing financial databases with "ESG" and "banking" keywords yielded numerous citations, while research on Indonesian banking databases produced significant findings. Nevertheless, much of the literature concerning ESG in Indonesian banking settings refers to sustainability reporting-oriented practices designed to improve regulatory compliance or stakeholder management rather than direct financial performance enhancement (for example, sustainability reporting requirements). Literature exists concerning banks implementing ESG self-assessment (for a comprehensive review of different approaches to implement ESG in banking organizational settings, see recent Indonesian banking regulations). This approach encompasses environmental risk management or social impact assessment designed to improve operational sustainability of banks (for example, green banking initiatives) and governance practices referring to processes whereby banks explore the strategies underlying their sustainable practices.

Generally, the utilization of the term ESG in Indonesian banking settings refers to broad application scope, with few studies among them referring to direct financial performance impact through professional ESG implementation or consultancy. ESG for sustainable banking development in Indonesian banking settings is predominantly implemented through internal management systems, an approach adopted by both newly established ESG departments and more experienced sustainability teams. However, in Indonesian banks, some senior management also engage in subordinate ESG development coaching.

Research on professional ESG implementation for Indonesian banks remains constrained. However, preliminary research on regulatory developments indicates that practitioners offer substantial ESG development programs for the Indonesian banking sector. Banks can exert major impacts on sustainable economic development. Effective ESG implementation represents leadership in sustainable finance. Banks do not merely provide financing, guidance, and services to customers, but they also serve as examples of what they practice in their operations, including general business practices outside direct banking activities. When banks implement ESG practices not solely for compliance requirements, but with genuine commitment, the ESG practices extend beyond regulatory boundaries.

The conceptualization of banks as sustainable leaders employed in some research refers to the concept of corporate sustainability (Dharmawati et al., 2024). Corporate sustainability refers to institutions' capacity to manage their operations sustainably, influencing and leading market transformation through the utilization of ESG strategies and specific governance mechanisms designed for improving long-term effectiveness (Annisawanti et al., 2024). Beyond implementing sound ESG practices for themselves, institutions demonstrating strong ESG performance can serve as role models in developing similar sustainable practices among other market participants. Clearly, this represents an important sustainable finance capability that can be developed.

Several major challenges confronted by Indonesian banks include regulatory compliance pressure, limited ESG expertise, increasing stakeholder scrutiny from regulators and investors, managing complex ESG reporting requirements, effective management of diverse stakeholder expectations, and the necessity to demonstrate sustainable performance under competitive pressure (Retnoningrum, 2025). Additionally, the key challenge faced by the Indonesian banking sector involves balancing profitability with sustainability goals. This challenge varies depending on the type of bank, whether state-owned (BUMN), private national, or foreign-

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owned. This represents a development challenge similar to those faced by international banks, specifically how ESG implementation can be effectively integrated into core banking operations.

Although theoretical frameworks utilized in ESG implementation vary, ranging from stakeholder theory and legitimacy theory to signaling theory and focusing on sustainable finance (various ESG frameworks), in practice, the foundation of ESG implementation practices comprises a set of common principles. These include definitions of environmental responsibility and social accountability, improvement of governance quality, transparency, stakeholder engagement, comprehensive ESG reporting, and sustainable action plans. This signifies that, aside from theoretical orientation, ESG implementation relationships involve banks and stakeholders forming collaborative initiatives with sustainability purposes and designing specific action steps oriented toward achieving long-term sustainable performance. The responsibility of banks lies in implementing these steps, while the role of stakeholders involves monitoring banks' commitment to ESG goals, assisting in supervising and evaluating progress periodically, and providing feedback and conducting sustainability assessments.

Therefore, ESG implementation for sustainable banking development can be effective through at least four key mechanisms. First, maintaining stakeholder engagement and transparent reporting relationships, whereby professionally discussing sustainability challenges can reduce reputational risks and regulatory penalties while improving corporate governance capabilities. Second, receiving feedback regarding ESG performance can improve awareness toward improvement areas. This type of feedback, within a context of stakeholder engagement and transparent communication, can provide an important platform for intentional changes and development of sustainable banking practices that are constructive and transformational. Third, establishing ESG goals that align with corporate strategy and stakeholder expectations aimed at addressing sustainability challenges discussed in stakeholder feedback and systematically working to achieve them can facilitate new sustainable practice development, as well as build financial resilience and improve long-term performance. Fourth, being systematically involved in ESG activities over time and receiving support in overcoming implementation challenges can develop sustainability capabilities and financial resilience. Results from ESG implementation processes may experience improvements in stakeholder confidence, financial performance, and readiness to face sustainability challenges and regulatory changes.

ESG implementation has evolved into a strategy for long-term sustainable finance development and has attracted attention from numerous financial institutions over recent years. Bank management has recognized effective ESG implementation as one of the best practices to achieve successful sustainable banking, responsible leadership, and stakeholder value creation. Bank management or supervisors who function as ESG champions in the workplace collaborate with employees to identify sustainability performance gaps and provide ESG-related feedback to staff. It is widely acknowledged that effective ESG implementation can improve stakeholder confidence and trust, positive organizational culture, and sustainable business practices, enabling institutions to fully contribute to sustainable economic development.

According to stakeholder theory and legitimacy theory, when stakeholders perceive that banks respect their environmental and social concerns, satisfy regulatory requirements, and care about sustainable development (creating higher stakeholder satisfaction), social license to operate principles increase the sense of obligation for banks to contribute to sustainable economic development. Previous research demonstrated that ESG performance has positive impact on financial outcomes such as profitability, financial resilience, stakeholder trust, and long-term sustainability because these create obligations for institutions to demonstrate genuine commitment to sustainability. Following this logic and employing stakeholder theory, this research investigates the relationship between ESG practices, financial resilience, and financial performance.

Studies demonstrated that effective ESG implementation can motivate banking institutions to enhance their sustainable practices and result in improved stakeholder relations, leading to superior long-term financial performance. Research emphasizes that banks demonstrate effective ESG behavior by establishing sustainability targets, implementing transparent reporting, engaging with stakeholders, monitoring ESG performance and providing regular updates, and developing sustainable finance products. From the stakeholder theory perspective, this research assumes that bank management demonstrating effective ESG practices will improve levels of environmental responsibility, social accountability, governance quality, and financial resilience. In return, this positive sustainable approach can improve banks' obligations to demonstrate sustainable business behavior beneficial for all stakeholders.

Given that limited research explores the relationship between ESG practices, financial resilience, and financial performance in the Indonesian banking context, this research considers ESG practices as antecedent variables while viewing financial resilience as a mediating variable and financial performance as the outcome of sustainable banking characteristics.

Additionally, this research employs Resource-Based View (RBV) theory as theoretical foundation to understand the relationship between financial resilience and financial performance, whereby this research can be useful as reference for bank management by increasing awareness of how effective ESG practices can strengthen financial resilience of banking institutions, directed toward institutions achieving higher performance and sustainability, contributing to the Indonesian banking sector's continuous sustainable growth and national economic development.

The implementation of ESG in banking initially emerged from sustainable finance movements in the 2000s. ESG practices are conceptualized as comprehensive frameworks that guide financial institutions regarding approaches to improve their sustainable performance. ESG has assumed a major role for financial institutions and has been systematically organized in recent decades. In banking settings, the purpose of ESG implementation is to empower financial institutions to promote sustainable finance, environmental responsibility, and long-term value creation. Combined with sustainability and financial performance, ESG implementation is defined as activities that enable bank management to promote sustainable practices, encourage stakeholder value creation, and guide institutions to improve their comprehensive performance.

In ESG implementation, literature and practices typically visualize environmental risk assessment, social impact evaluation, stakeholder engagement, governance oversight, and sustainability reporting as important components. However, the ability to translate ESG principles into practical banking applications involving sustainable finance products is also crucial for effective ESG implementation. Previous research concerning ESG in banking demonstrated that ESG practices include environmental risk management, social responsibility programs, transparent governance mechanisms, sustainable finance product development, stakeholder engagement initiatives, and comprehensive sustainability reporting.

Research has identified that multiple dimensions of ESG banking practices exist. Previous studies indicated that ESG implementation can result in desired financial and non-financial performance. This study will examine financial performance as an outcome of ESG implementation in Indonesian banking environments.

Financial performance is defined as banking institutions' ability to generate sustainable returns while meeting stakeholder expectations and regulatory requirements. According to banking performance literature, financial performance refers to the quality and quantity of financial results achieved by banks in conducting their sustainable banking operations. Performance in this study is defined as banks' comprehensive performance that includes traditional financial metrics enhanced by sustainability considerations.

According to stakeholder theory, ESG implementation refers to important resources that can be utilized by banks to improve their long-term performance. ESG practices can be viewed as forms of stakeholder value creation provided by bank management through sustainable finance initiatives and transparent reporting. Bank management utilizes ESG reporting processes to demonstrate commitment to stakeholders regarding their sustainability efforts and achievements. When stakeholders perceive banks as genuinely committed to sustainability, they are likely to provide more support and engagement that will be beneficial for long-term banking sustainability.

Regarding the relationship between ESG implementation and financial outcomes, studies have examined impacts of ESG practices on financial performance and stakeholder satisfaction. Research results assert that banks implementing comprehensive ESG practices not only improve stakeholder satisfaction but also enhance financial resilience and ultimately improve financial performance compared with their peers. Longitudinal studies established that banks receiving higher ESG ratings demonstrate superior financial performance and significant improvement in risk management capabilities. International studies also conducted comparative analyses across different regions, demonstrating that ESG implementation can improve banking financial performance. Other studies researched the influence of ESG practices on financial performance among Indonesian banks, with regression analysis results asserting positive relationships between ESG implementation and financial performance. Previous research supports the positive relationship between ESG practices and financial performance; therefore, this research formulates the following hypotheses:

H1: Environmental practices exert positive influence on financial performance.
H2: Social practices exert positive influence on financial performance.
H3: Governance practices exert positive influence on financial performance.

Financial Resilience is defined as banks' capacity to withstand, adapt to, and recover from financial shocks while maintaining their core functions and stakeholder commitments. This concept encompasses multiple components including: capital adequacy, liquidity management, operational efficiency, and risk management capabilities. In the banking context, financial resilience signifies that institutions possess sufficient buffers to handle economic volatility and maintain their intermediation functions. It signifies that banks work systematically to achieve stability targets and successfully adapt their strategies when facing challenges. Financial resilience means that banks attempt to maintain stable performance through comprehensive risk management and can maintain positive stakeholder relationships during difficult periods. Meanwhile, financial resilience refers to banks' capabilities to respond effectively and recover from financial disruptions when facing economic uncertainties.

Empirical studies established that multiple components of financial resilience have interactive potential in supporting overall banking stability. Research demonstrated that combination of resilience components is more effective than individual component focus because they can better predict banking performance and sustainability. Banks with high financial resilience will be more confident in handling challenging economic conditions and maintaining stakeholder confidence, motivated to maintain stability when facing market volatility, and possess capabilities to recover and adapt when needed.

Bank management demonstrating effective ESG implementation represents leadership that guides institutions toward sustainable banking practices. According to effective ESG implementation literature, successful ESG champions are stronger and more effective than merely compliance-focused approaches to sustainability challenges. Research asserts that bank management with effective ESG leadership promotes reflection and sustainable learning; they encourage institutions to identify sustainability challenges and develop proactive responses while actively participating in sustainable finance initiatives. By considering the definition of ESG implementation in banking environments, this research assumes that comprehensive ESG practices can enhance aspects of capital strength, operational efficiency, risk management, and overall financial resilience. Therefore, additional hypotheses are formulated as follows:

H4: Environmental practices exert positive influence on Financial Resilience.
H5: Social practices exert positive influence on Financial Resilience.
H6: Governance practices exert positive influence on Financial Resilience.

In banking contexts, Resource-Based View theory asserts that banks will develop, protect, and maintain their valued resources and capabilities when facing competitive pressures and market uncertainties. When banks successfully build and deploy these resources, they will achieve superior performance. These resources include: financial capital, human capital, technological capabilities, and reputational assets. Financial resilience can be considered a strategic resource. In banking contexts, institutions with strong financial resilience typically expect positive outcomes in challenging environments (optimism about stability), believe they can effectively manage risks (confidence and capability), and are able to overcome setbacks and market volatility (adaptability).

Therefore, financial resilience represents positive institutional capability. The higher the financial resilience, the easier it becomes for banks to implement positive approaches toward their operating environment. When facing difficulties and challenges in their markets, institutions with strong financial resilience will tend to address them with proactive strategies. This is supported by current analysis of financial resilience in banking. Meta-analysis studies demonstrated that financial resilience consisting of capital strength, liquidity management, operational efficiency, and risk management capabilities has significant relationships with financial performance. Research on relationships between antecedents and consequences of financial resilience demonstrated that financial resilience has significant and positive influence on profitability, stability, and sustainable banking performance. Considering previous studies, this research assumes that in banking contexts, financial resilience has positive relationships with financial performance. Therefore, an additional hypothesis is formulated as follows:

H7: Financial Resilience exerts positive influence on financial performance.

Regarding mechanisms that connect ESG practices with banking financial outcomes, previous research has provided empirical evidence for mediation effects. Studies researched the influence of ESG implementation on banking performance through financial resilience mediation among Indonesian banks. Research perceived ESG practices as independent variables, considering financial resilience as mediator variables, and financial performance as dependent variables. Studies established significant mediating effects whereby financial resilience mediated relationships between ESG practices and financial performance. Research confirmed the presence of mediating variables in relationships between ESG implementation and financial outcomes. Among these, research examines financial resilience as a mediator. As mentioned in previous research, financial resilience holds important roles in improving banking positive outcomes and has been widely verified as an important concept in sustainable finance theory. Following this reasoning, this research considers financial resilience as a potential mediator and assumes that ESG practices indirectly influence banking financial performance through financial resilience enhancement. Based on stakeholder theory, this study predicts that banks demonstrating effective ESG practices can improve institutional financial resilience, which will in return enhance overall financial performance. Therefore, final hypotheses are formulated as follows:

H8: Financial Resilience significantly mediates the relationship between Environmental practices and financial performance.
H9: Financial Resilience significantly mediates the relationship between Social practices and financial performance.
H10: Financial Resilience significantly mediates the relationship between Governance practices and financial performance.

According to research methodology literature, theoretical frameworks provide foundations that underlie comprehensive research projects. From theoretical frameworks, testable hypotheses are formulated to determine whether proposed theories are empirically valid. These theories are subsequently measured using appropriate statistical analyses. Referring to theories and previous research, relationships are established between variables including: Environmental practices, Social practices, Governance practices, Financial Resilience, and Financial Performance. Based on these theoretical foundations, the researcher has developed the research model examining ESG influence through Financial Resilience toward Financial Performance in Indonesian KBMI 3 and 4 banks.he banking industry in Indonesia plays a strategically vital role in the national economy, particularly in serving as financial intermediaries that support economic growth and stability (Bank Indonesia, 2022). In recent years, this sector has faced significant challenges, ranging from increasing regulatory pressure to economic disruptions caused by the COVID-19 pandemic and global financial volatility (OJK, 2021). In navigating these dynamics, banking institutions are required not only to focus on profitability but also to incorporate Environmental, Social, and Governance (ESG) principles into their operations. For instance, they are expected to implement sustainable financing practices, enhance social responsibility initiatives, and maintain robust corporate governance structures. This integration of financial performance with ESG considerations, along with financial resilience, is crucial for long-term banking sustainability and stability.

Financial performance is one of the key indicators used to assess a bank's success, reflecting stakeholders' perceptions of its operational efficiency and future prospects. As such, financial performance is a critical consideration for regulators, investors, and depositors in evaluating a bank's potential to deliver optimal returns and maintain stability. Factors such as Environmental, Social, and Governance (ESG) practices and financial resilience have become central topics in banking research, as evidenced by growing empirical studies such as Adirestuty et al. (2025), Dharmawati et al. (2024), and Annisawanti et al. (2024), which underscore their significant influence on bank performance across various markets. Previous studies have shown mixed results regarding these factors' impact on financial performance. For example, Inawati (2023) found that enhanced ESG practices improve stakeholder trust and financial performance, while Nugroho and Hersugondo (2022) argued that such practices do not always significantly influence financial performance, particularly in certain ESG dimensions.

Environmental performance is another important variable often associated with financial outcomes. Banks with strong environmental commitments, including green financing and sustainable investment practices, are expected to demonstrate better risk management and long-term value creation. Research by Dharmawati et

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al. (2024) indicated that environmental initiatives significantly impact financial performance through improved operational efficiency and stakeholder confidence. However, findings in the banking sector also suggest that this relationship varies depending on implementation effectiveness and market conditions.

Social responsibility initiatives represent a critical dimension of ESG that influences banking performance. Banks that actively engage in community development, financial inclusion, and employee welfare programs often demonstrate stronger financial resilience and customer loyalty. Studies by Adirestuty et al. (2025) demonstrated that comprehensive social programs enhance financial stability and stakeholder relationships. Nonetheless, research such as Angela Merici et al. (2023) highlights that the effectiveness of social initiatives can vary depending on their strategic alignment with business objectives.

Moreover, effective implementation of corporate governance practices is believed to positively influence financial performance by helping banks establish robust oversight mechanisms and transparent decision-making processes. Annisawanti et al. (2024) demonstrated that strong governance systems reduce operational risks and enhance financial stability. However, studies indicate that governance effectiveness depends significantly on the quality of implementation and regulatory environment.

In the context of banking institutions, financial resilience often facilitates better risk management and improved operational performance. Financial resilience refers to a bank's ability to withstand and recover from financial shocks while maintaining core functions and services. According to recent studies, financial resilience significantly influences overall financial performance, as resilient banks tend to demonstrate superior asset quality, stable profitability, and enhanced investor confidence, thereby improving market valuation and stakeholder trust.

Based on this background, the present study aims to examine the effects of Environmental, Social, and Governance (ESG) factors on financial performance, mediated by financial resilience, in KBMI 3 and KBMI 4 banks listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 period. The KBMI 3 and 4 banking sector presents a particularly relevant case due to their substantial capital base, complex operational environment, and critical role in the Indonesian financial system. This research seeks to make a theoretical contribution by enriching the literature on the integration of ESG practices and financial resilience in shaping banking performance. It also provides practical insights for bank managers, regulators, and investors in making strategic decisions based on sustainability principles and effective resilience management. Drawing from the literature review and theoretical framework, this study proposes the research model depicted in Figure 1:

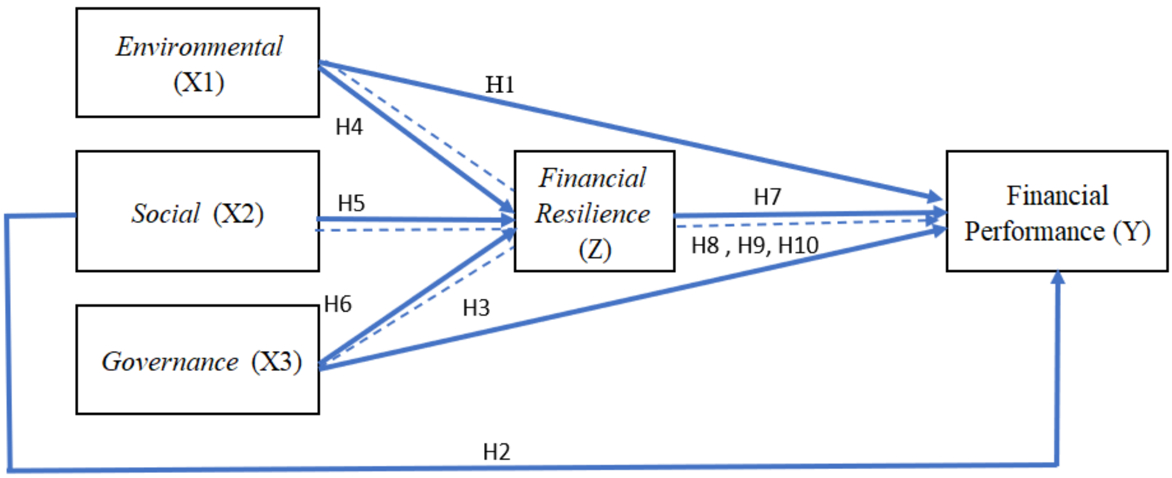

Figure 1. Research Model

II. METHOD

This study applies a quantitative-causal design. The population consists of all 13 Indonesian KBMI-3 and KBMI-4 banks listed on the IDX during 2020-2024. Using saturated sampling, every bank is included, yielding 65 bank-year observations. Secondary panel data are gathered from audited annual reports, sustainability reports, institutional-ownership disclosures and enterprise-risk-management notes. ESG performance is proxied by the GRI-based Environmental, Social and Governance scores disclosed in the sustainability reports; financial resilience is computed as Financial Value Added (FVA); financial performance is captured by Return on Assets (ROA). Descriptive statistics precede classical assumption testing (multicollinearity via Pearson correlations, heteroskedasticity via Glejser test). Panel-data regression is then estimated, with the fixed-effects model retained after Chow and Hausman tests. Model adequacy is judged by the F-test, adjusted R^2 and Q^2 (predictive relevance). Direct effects are assessed with t-statistics, whereas the indirect (mediation) paths of ESG, Financial Resilience and ROA are verified with the Sobel test. All computations are performed in EViews 13.

III. RESULT AND DISCUSSION

A. Result

Descriptive Statistics Test

The descriptive statistics for the study variables are presented in Table 1. The sample comprises 65 balanced panel observations from 13 KBMI 3 and 4 banks listed on the Indonesia Stock Exchange over the period 2020-2024.

Table 1. Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
Environmental	0.41	0.40	0.81	0.06	0.17
Social	0.48	0.47	0.98	0.15	0.17
Governance	0.82	0.83	1.00	0.36	0.17
Financial Resilience	9.32	8.50	44.40	-0.15	12.60
ROA	1.72	1.65	3.84	0.39	0.85

1. **Environmental Performance (ENV)**: The average environmental disclosure among KBMI 3 and 4 banks is 41%, indicating moderate commitment to environmental sustainability practices. The relatively high standard deviation (0.17) suggests varying levels of environmental disclosure across banks, with some institutions demonstrating stronger environmental initiatives than others.
2. **Social Performance (SOC)**: Banks demonstrate a slightly higher social performance with an average of 48%. This reflects the banking sector's focus on social responsibility initiatives, including financial inclusion programs and community development activities. The consistent standard deviation indicates relatively uniform social engagement across the sample.
3. **Governance Performance (GOV)**: The governance dimension shows the highest average score at 82%, reflecting the strong regulatory framework and oversight requirements in the Indonesian banking sector. The lower variability (std. dev. 0.17) suggests consistent governance practices across KBMI 3 and 4 banks.
4. **Financial Resilience (FR)**: The average financial resilience score of 9.32 indicates that banks generally maintain adequate financial buffers and risk management capabilities. However, the high standard deviation (12.60) reveals significant variation in financial resilience across institutions.
5. **Return on Assets (ROA)**: The mean ROA of 1.72% reflects healthy profitability levels among large Indonesian banks, consistent with regulatory expectations for KBMI 3 and 4 categories.

Panel Data Regression

a. Chow Test Results

Table 2. Chow Test Results - Model 1

Test Type	Statistic	d.f.	Prob.
Cross-section F	14.175160	(12,48)	0.0000
Cross-section Chi-square	98.394495	12	0.0000

The Chow test results indicate that the Fixed Effect Model is preferred over the Common Effect Model, with probability values of 0.0000 < 0.05 for both F-statistic and Chi-square tests.

b. Hausman Test Results

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	d.f.	Prob.
Cross-section random	15.243703	4	0.0042

The Hausman test probability of 0.0042 < 0.05 confirms that the Fixed Effect Model is more appropriate than the Random Effect Model for this panel data analysis.

Classical Assumption Tests

a. Multicollinearity Test

Table 4. Multicollinearity Test Results

Variable	Environmental	Social	Governance
Environmental	1.000000	0.720265	0.420116
Social	0.720265	1.000000	0.392512
Governance	0.420116	0.392512	1.000000

All correlation coefficients are below 0.80, indicating no multicollinearity issues among the independent variables. The highest correlation (0.720) between Environmental and Social variables remains within acceptable limits.

b. Heteroscedasticity Test

The heteroscedasticity test using the Glejser approach reveals mixed results. The graphical analysis confirms that the overall model meets homoscedasticity assumptions.

Hypothesis Testing Results

a. Model Fit Assessment

Table 5. Model Summary

Model	R-squared	Adjusted R-squared	F-statistic	Prob(F-statistic)
Model 1 (FR as Dependent)	0.552323	0.016207	1.351453	0.266135
Model 2 (ROA as Dependent)	0.518025	0.485893	16.12195	0.000000
Combined Model	0.893927	0.858569	25.28232	0.000000

The combined model demonstrates excellent explanatory power with an adjusted R-squared of 85.86%, indicating that the model effectively explains the variance in financial performance through ESG factors and financial resilience.

b. Direct Effects

Table 6. Direct Effects Results

Hypothesis	Path	Coefficient	t-Statistic	Prob.	Result
H1	Environmental → Financial Performance	-1.195548	- 1.788911	0.0787	Not Supported
H2	Social → Financial Performance	1.612432	2.499554	0.0152	Supported
H3	Governance → Financial Performance	2.039436	2.886295	0.0282	Supported

H4	Environmental → Financial Resilience	19.19002	1.430308	0.1577	Not Supported*
H5	Social → Financial Resilience	17.21508	2.092297	0.0268	Supported
H6	Governance → Financial Resilience	14.07181	4.006946	0.0045	Supported
H7	Financial Resilience → Financial Performance	0.046653	7.436574	0.0000	Supported

c. Mediation Effects

Table 7. Sobel Test Results for Mediation

Mediation Hypothesis	Sobel Test Value	P-value	Result
H8: Environmental → Financial Resilience → Financial Performance	1.40456784	0.1601	Not Supported
H9: Social → Financial Resilience → Financial Performance	2.50977869	0.0031	Supported
H10: Governance → Financial Resilience → Financial Performance	2.33877443	0.0016	Supported

B. Discussion

Drawing from stakeholder theory as conceptualized by Freeman (1984), financial institutions that exhibit dedication to environmental, social, and governance frameworks generate stakeholder perceptions of these organizations as credible and reliable entities worthy of continued support and active participation (Dharmawati et al., 2024; Annisawanti et al., 2024). Such stakeholder endorsement establishes institutional legitimacy and reinforces the bank's social operating permit, consequently bolstering financial stability and operational performance. Grounded in stakeholder theory foundations, this research posits that comprehensive ESG implementation, especially within social and governance spheres, enables banks to cultivate enhanced stakeholder relationships encompassing customers, regulatory bodies, investors, and community groups, ultimately translating into superior financial outcomes.

The findings demonstrate that social and governance initiatives generate positive effects on financial performance, results that correspond with existing literature (Inawati & Rahmawati, 2023; Setiawati & Hidayat, 2023). Through legitimacy theory lens, banks actively pursuing social responsibility initiatives while maintaining transparent governance frameworks receive enhanced societal perception, thereby minimizing reputational exposure and regulatory sanctions while optimizing operational effectiveness (Alsayegh et al., 2020). Despite the inconsistent relationship between environmental initiatives and financial performance documented in prior investigations, this research validates that environmental programs may necessitate extended temporal frameworks to manifest their financial advantages, as they frequently entail considerable initial investments in sustainable technologies and operational processes.

According to Resource-Based View (RBV) theoretical framework, financial resilience represents a strategic asset enabling banks to endure economic volatility and sustain operational continuity (Chen & Sun, 2024). Banks exhibiting robust financial resilience typically display enhanced risk management competencies, sufficient capital reserves, and operational adaptability, which constitute essential elements for performance maintenance during unstable market environments. This study's results demonstrate that financial resilience positively influences financial performance, aligning with previous research findings (Caparusso et al., 2023; Stoika et al., 2025), indicating that banks with superior financial resilience demonstrate enhanced profitability and stability indicators.

Prior research has established that ESG practices serve fundamental roles in developing organizational resilience and strengthening stakeholder confidence as integral components of sustainable finance theory (Walker et al., 2024; Bolton et al., 2024). Financial resilience has also been identified as a significant mediating factor in the association between ESG practices and financial results in previous studies (Wang et al., 2021; Chen et al., 2022). This study's outcomes support the research hypothesis that banks demonstrating effective ESG implementation, particularly within social and governance dimensions, can enhance their financial resilience through improved risk management protocols, strengthened stakeholder relationships, and superior operational efficiency, which subsequently generates enhanced financial performance. Nevertheless, the study indicates that environmental practices require alternative strategic methodologies, as their influence on financial performance via financial resilience remains constrained in the short-term period, suggesting the necessity for more comprehensive long-term sustainability frameworks within the Indonesian banking sector.

IV. CONCLUSION

This study investigates the impact of Environmental, Social, and Governance (ESG) factors on financial performance through Financial Resilience as a mediating variable in Indonesian banking, specifically focusing on KBMI 3 and 4 banks from 2020 to 2024. The findings indicate that:

1. Direct ESG Effects: Social and Governance factors demonstrate significant positive effects on financial performance, while Environmental factors show a negative and insignificant impact. All three ESG dimensions positively and significantly influence Financial Resilience, with Environmental showing a positive but non-significant effect.
2. Financial Resilience as Mediator: Financial Resilience significantly mediates the relationship between Social and Governance factors with financial performance, demonstrating its crucial role as a bridge between sustainable practices and banking profitability. Additionally, Financial Resilience directly contributes to enhanced financial performance.
3. Limited Environmental Mediation: However, the mediating effect of Financial Resilience in the relationship between Environmental factors and financial performance is not statistically significant, suggesting that environmental initiatives require different pathways to impact bank profitability.

These results underscore the importance of strong financial resilience and robust governance mechanisms, including social responsibility initiatives and effective corporate governance practices, in enhancing banking performance. Although environmental practices contribute positively to financial resilience, they may require additional strategic alignment and longer-term perspective to significantly influence financial outcomes. The findings highlight the need for Indonesian banks to prioritize social engagement and governance excellence while developing more effective approaches to translate environmental investments into measurable financial benefits.

Recommendations

1. For Bank Management: Indonesian KBMI 3 and 4 banks should prioritise ESG integration strategies, emphasising social and governance dimensions which significantly enhance financial performance. Environmental initiatives require cost-effective implementation through robust financial resilience frameworks incorporating adequate capital buffers and comprehensive risk management. Management must enhance ESG reporting transparency while developing sustainability roadmaps aligning environmental investments with profitability objectives.
2. For Investors: Investment decisions should emphasise social responsibility programmes and governance structures as key ESG performance drivers. Investors must assess financial resilience indicators—capital adequacy, liquidity management, and risk diversification—as sustainable profitability determinants. Long-term strategies should incorporate ESG performance as sustainability drivers whilst recognising extended timeframes for environmental initiative returns.
3. For Future Research: Research should investigate environmental aspects' limited financial performance contribution and develop optimisation strategies. Comparative KBMI 3-4 analysis may reveal size-specific ESG patterns, whilst longitudinal studies could capture long-term effects. Expansion to additional KBMI categories or cross-sectoral analysis would enhance generalisability. Integration of macroeconomic variables and firm-specific characteristics could provide comprehensive performance determinants, whilst sophisticated financial resilience models tailored to Indonesian banking would strengthen empirical investigations.

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