DO SUSTAINABILITY DISCLOSURES MATTER? AN EMPIRICAL ANALYSIS OF BANKS' FINANCIAL PERFORMANCE IN INDONESIA AND MALAYSIA

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Abstract *: This study investigates the impact of sustainability disclosure, as measured by the Environmental, Social, and Governance (ESG) score, on the financial performance of banks in Indonesia and Malaysia. Financial performance is proxied by Return on Assets (ROA) and Return on Equity (ROE), while macroeconomic variables and bank-specific indicators such as Net Profit Margin (NPM) and Debt to Equity Ratio (DER) are used as controls. Panel data from 17 banks over the 2020–2024 period are analyzed using the Random Effects Model (REM), selected based on the Hausman test results. The findings reveal that ESG disclosure does not have a significant impact on bank performance in either country. In contrast, NPM demonstrates a strong positive association with both ROA and ROE. Inflation shows a moderate positive effect, while GDP growth negatively affects ROE. Unemployment exerts a positive effect on ROE but does not significantly influence ROA. These results suggest that in emerging markets, short-term bank profitability is shaped more by internal efficiency and macroeconomic conditions than by sustainability disclosures. The study highlights the importance of integrating ESG practices into long-term strategic planning to generate future financial value.*value.

Keywords : ***ESG Disclosure, Bank Performance, Sustainability Reporting, Macroeconomic Indicators***

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1. INTRODUCTION

The banking sector serves a critical function in underpinning the global economy, particularly within emerging economies such as Malaysia and Indonesia. In addition to their traditional duties as financial intermediaries, banks are also faced with the challenge of implementing responsible sustainability practices. Sustainability reporting is now increasingly becoming a focus for various sectors, especially in the banking industry, which is closely related to Environmental, Social, and Governance (ESG). Includes responsible environmental policies, social compliance, and good governance principles. Disclosure of this information provides an overview of the bank's long-term performance in managing risks and opportunities related to sustainability (Rosalina et al., 2023).

Previous studies have indicated that the disclosures related to sustainability significantly influence the reputation and financial outcomes of corporations, including banking institutions. Within this framework, financial performance is frequently assessed using metrics such as Return on Assets (ROA) and Return on Equity (ROE), which serve as indicators of the operational efficiency and profitability of banks (Anikin et al., 2023). Empirical evidence suggests that organizations demonstrating a robust commitment to sustainability, as evidenced by elevated ESG scores, are likely to experience superior financial performance over an extended time frame. This is mainly due to increased transparency and better risk management (Chang et al., 2021).

Nevertheless, although a multitude of scholarly investigations have elucidated the correlation between responsible corporate practices and financial performance in advanced economies, empirical evidence from developing markets such as Malaysia and Indonesia remains limited. These countries encounter distinct regulatory and institutional challenges in embedding non-financial reporting into the banking sector (Gutiérrez-Ponce & Wibowo, 2023). Malaysia has made notable progress in aligning its financial industry with internationally recognized sustainability frameworks, whereas Indonesia is still in the formative phase of implementing comprehensive environmental and social governance initiatives (Gunnarapong et al., 2024; Dicuonzo et al., 2022; Menicucci & Paolucci, 2022; Dragomir et al., 2022). Therefore, it is important to understand how sustainability reporting affects the financial performance of banks in these two countries, taking into account factors that may influence the results, such as Debt to Equity (DER) ratio and Net Profit Margin (NPM) (Edi et al., 2024).

This study aims to assess whether non-financial transparency, as reflected by Environmental, Social, and Governance (ESG) ratings, has a meaningful impact on the financial outcomes of banks in Indonesia and Malaysia, particularly in terms of Return on Assets (ROA) and Return on Equity (ROE). By incorporating firm-specific and macroeconomic control variables, the analysis seeks to offer practical insights for industry stakeholders such as financial institutions, investors, and regulators on the strategic value of integrating sustainability into core banking operations (Arintoko et al., 2024).

Numerous studies have investigated the link between non-financial transparency and financial outcomes in the banking sector, yet the results remain inconclusive. While many scholars highlight the potential of environmental and social responsibility initiatives to enhance corporate performance through improved risk management, investor trust, and reputational capital others argue that such efforts may not yield immediate financial returns, particularly in developing economies.

Empirical evidence supporting a positive relationship is abundant. For example, Mason & Martindale, (2023), Vărzaru et al., (2021), Debnath et al., (2024) find that greater transparency in non-financial reporting correlates with superior performance both in the short and long term. These outcomes are often attributed to heightened investor confidence and reduced uncertainty. Similarly, Kolsi et al., (2023) and Gunnarapong et al., (2024) observe that banks operating under strong sustainability mandates, especially in countries with regulatory support, tend to exhibit greater operational efficiency and profitability.

Some researchers, such as Manta et al., (2020) and Archer, (2024), emphasize the long-term value of such initiatives in attracting ethically conscious investors, particularly in markets like China. Meanwhile, studies from Southeast Asia and the Middle East present a more nuanced picture. Ji et al., (2023) and (Mertens et al., 2023) reports that in

Indonesia, social responsibility efforts may enhance profitability, but environmental and governance aspects appear less influential. In Vietnam and Jordan, specific dimensions such as governance and social capital have been linked to stronger firm value, especially among larger institutions (Zhu & Jin, 2023).

Contrastingly, other scholars argue that the impact of such disclosures is context dependent. Adamu et al., (2024), Krisciukaityte et al., (2023), and Denia et al., (2024) suggest that the effectiveness of responsible banking practices depends heavily on external factors such as regulatory enforcement and market perceptions. Mans-Kemp & Swartz, (2024) caution that while many firms adopt sustainability frameworks, their integration into core business strategy remains limited, which may explain the absence of measurable effects on short-term profitability metrics like ROA and ROE.

Further complicating the picture, Korzeb et al., (2024) and Miranda et al., (2023) demonstrate that ethical controversies can negatively impact performance by increasing capital requirements and eroding stakeholder confidence, even when disclosure scores are high. These findings emphasize the importance of substance over form and the potential disconnect between reporting and actual practice.

Studies by Pangalos, (2023) and Korzeb et al., (2024) also underline the role of complementary factors such as digital transformation and regulatory infrastructure in maximizing the financial benefits of sustainability integration. Their research shows that technology adoption and strong institutional frameworks can amplify the performance impact of ethical business conduct.

Moreover, methodological diversity contributes to the heterogeneity in findings. While traditional approaches such as linear regression have been widely used Nițescu et al., (2025), newer studies advocate for more nuanced techniques like panel models that better account for unobserved heterogeneity over time (Serkbayeva et al., 2024). Inconsistencies may also stem from differences in control variables or the operationalization of sustainability itself ranging from global ESG scores to locally defined practices which reflect the evolving nature of measurement in this domain.

Birindelli et al., (2018), Daszyńska-żygadło et al., (2021), Miralles-Quirós et al., (2019), and Janda et al., (2022) highlight a significant gap in Southeast Asian banking literature, where local institutional characteristics are often underexplored. Despite increasing attention, comparative insights between countries like Indonesia and Malaysia remain scarce, particularly considering their divergent regulatory environments and market structures.

Taken together, the literature suggests that while responsible banking practices have the potential to enhance financial performance, their effects are not uniform across contexts. Factors such as regulatory quality, stakeholder expectations, firm size, market maturity, and the authenticity of implementation all shape the degree to which such practices translate into financial gains.

The research aims to address these gaps by adopting a more holistic approach and focusing on the context of Malaysia and Indonesia, two emerging economies with unique banking markets. The research will provide a more in-depth comparative analysis between banks in Malaysia and Indonesia. Although both are located in Southeast Asia, there are significant differences in market structure and sustainability policies. Given that Malaysia has more advanced sustainability policies than Indonesia, this research can delve deeper into how differences in national regulations and policies affect the relationship between sustainability reporting and bank financial performance.

The model used is the Random Effects Model (REM) model with more appropriate control variables, namely bank-specific variables including Debt to Equity Ratio (DER), Net Profit Margin (NPM), as well as country-specific variables, in this case using macroeconomics, namely Inflation (INF), Gross Domestic Product (GDP), and Unemployment Rate (UNP). This will provide a better understanding of the long-term influence of sustainability reporting on banks' Return on Assets (ROA) and Return on Equity (ROE).

Unlike prior research that predominantly adopts a short-term perspective, this study analyzes bank performance over a five-year period (2020–2024) to capture potential lagged effects of strategic non-financial initiatives. A longitudinal approach is considered essential, as the benefits of ethical governance and environmental responsibility may materialize progressively over time, rather than being immediately reflected in annual profitability metrics. By focusing on emerging markets such as Indonesia and Malaysia two countries with contrasting institutional maturity in sustainability adoption this study seeks to provide deeper insights into the practical relevance and financial implications of integrating social and environmental priorities into banking operations. It also aims to inform financial institutions and regulatory bodies on how these practices can enhance financial resilience within specific local contexts.

Grounded in this theoretical and contextual framework, the following hypotheses are proposed:

H1: ESG disclosure is positively associated with Return on Assets (ROA)

H2: ESG disclosure is positively associated with Return on Equity (ROE)

H3: The positive effect of ESG disclosure on financial performance is stronger in Malaysia than in Indonesia.

H4: Macroeconomic variables significantly affect financial performance independently of ESG disclosure

2. METHODS

This study seeks to examine the impact of sustainability reporting, as measured by the ESG score, on bank financial performance, represented by Return on Assets (ROA) and Return on Equity (ROE), while considering control variables such as Debt to Equity Ratio (DER), Net Profit Margin (NPM), Inflation (INF), Gross Domestic Product (GDP), and Unemployment Rate (UNP). To test the proposed hypotheses, the study employs the Random Effects Model (REM) using panel data from banks operating in Indonesia and Malaysia during the period 2020–2024. The selection of this five-year timeframe is methodologically significant, as it captures a dynamic range of economic conditions: the initial shock of the COVID-19 pandemic in 2020–2021, the post-pandemic recovery phase during 2022–2023, and the stabilization period in 2024, marked by the institutionalization of sustainability-related regulations in both countries. This period allows for a more comprehensive evaluation of whether the integration of environmental, social, and governance (ESG) principles begins to yield financial outcomes in the banking sector, particularly during and after external economic disruptions. The REM approach is deemed appropriate as it assumes that variations across entities (i.e., banks) are random and uncorrelated with the explanatory variables in the model. Moreover, REM enables more efficient estimation by accommodating unobserved heterogeneity between cross-sectional

units, thereby producing robust inferences across countries with varying institutional settings (Niţescu et al., 2025).

The selection of REM in this study is reinforced by the results of the Hausman Test, which shows a high probability (p-value> 0.05), indicating that the individual effects are not correlated with the independent variables. Thus, REM is able to provide unbiased and more efficient estimation results in testing the relationship between independent variables and banking financial performance in panel data (Rosalina et al., 2023).

Tabel 1. Explanatory Variables

Variables		Label	Description	Source	Expected Sign
Independent	Environmental, Social, and Governance Score	ESG	**company's** performance across these three areas, often on a standardized scale (e.g., 0 to 100)	Thomson reuters eikon, bloomberg	+
Dependent	Return on assets	ROA	company's profitability relative to its total assets	Thomson reuters eikon	
	Return on Equity	ROE	company's profitability in relation to shareholders' equity	Thomson reuters eikon	
Control	Net profit margin	NPM	measures how much net profit is generated from each unit of revenue	Thomson reuters eikon	+
	Debt to Equity Ratio	DER	assesses a company's financial leverage by comparing its total debt to shareholders' equity	Thomson reuters eikon	-
	Inflation Rate	INF	measures the rate at which the general price level of goods and services in an economy increases over a specific period	IMF	-
	Gross Domestic Product Growth	GDP	represents the total value of all goods and services produced within a country during a specific period and serves as a primary indicator of economic growth	IMF	+
	Unemployment Rate	UNP	proportion of the labor force that is unemployed yet actively looking for work	IMF	-

ESG (Environmental, Social, and Governance) Score is expected to have a positive influence on ROA and ROE. An increase in ESG score indicates that banks are paying more attention to sustainability, which can strengthen the company's image and reputation, as

well as attract investors and customers who care about social and environmental issues. This can have a positive impact on the bank's financial performance, as it increases the flow of funds and strengthens market position.

Net Profit Margin (NPM) is also predicted to have a positive influence on ROA and ROE. NPM reflects the bank's operational efficiency in generating profit from its revenue. The higher the NPM, the more efficient the bank is in managing costs and generating net income, which will certainly increase profitability reflected in ROA and ROE.

Debt to Equity Ratio (DER), on the other hand, is expected to have a negative influence on bank financial performance, both ROA and ROE. DER measures the proportion of bank financing through debt compared to equity. High debt can increase a bank's financial risk, especially if economic conditions worsen. Banks with high DER tend to face liquidity pressures and higher interest costs, which in turn can reduce profitability (ROA and ROE).

Inflation (INF) is expected to have a negative influence on bank financial performance. High inflation can increase banks' operating costs, reduce purchasing power, and increase the risk of non-performing loans. However, this effect may vary depending on the bank's monetary policy and risk management.

Gross Domestic Product (GDP) is predicted to have a positive influence on ROA and ROE. An increase in GDP reflects healthy economic growth, which is often followed by an increase in credit demand, business expansion, and financial stability. Strong economic growth provides opportunities for banks to increase revenue and profit, which is reflected in increased ROA and ROE.

Unemployment Rate (UNP) is expected to have a negative influence on ROA and ROE. High unemployment can reduce people's purchasing power and customers' ability to repay loans, potentially increasing the ratio of non-performing loans. This can burden the bank's financial performance and reduce profitability as reflected in ROA and ROE.

The research design is quantitative, with a panel data regression approach involving annual data of banks in Malaysia and Indonesia over the period 2020-2024. The data used is pooled cross-section time-series to analyze the dynamics of changes in bank financial data from year to year, as well as comparing between different banks.

This study is guided by a conceptual framework that links a bank's sustainability performance, represented by its ESG score, to its financial outcomes, measured through ROA and ROE. The model also includes internal financial indicators Net Profit Margin (NPM) and Debt to Equity Ratio (DER) as well as macroeconomic factors such as inflation, GDP growth, and unemployment. These variables are expected to jointly influence bank profitability. The framework assumes that the relationship between ESG practices and financial performance may vary depending on internal efficiency and external economic conditions, especially in emerging markets like Indonesia and Malaysia.

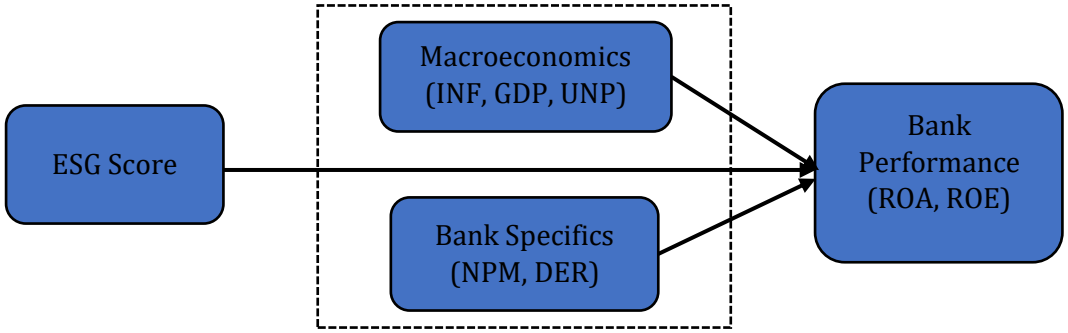

Figure1. Conceptual Framework

This integrated model allows for a comprehensive understanding of how both internal dynamics and external conditions interact with ESG implementation in shaping financial performance. It also acknowledges that the impact of ESG-related initiatives may vary across institutional and economic contexts, particularly within emerging markets such as Indonesia and Malaysia.

2.1 Data and Samples

The data was sourced from Thomson Reuters Eikon, and macroeconomic data from the IMF. Purposive sampling technique is used in this study to select a sample of banks that meet certain criteria so that the results of the analysis are more relevant to the research objectives. Banks listed on the Indonesia Stock Exchange (IDX) and Bursa Bursa Malaysia Berhad, Banks that publish sustainability reports or disclose ESG (Environmental, Social, Governance) scores during the 2020-2024 period. Have complete data for research variables during the 2020-2024 period. Banks that operate continuously during the study period without any significant changes such as mergers, acquisitions, or liquidations. Banks that fall into the category of conventional commercial banks and Islamic banks, to provide a more comprehensive understanding of the performance and financial stability in the banking sector within various regulatory and operational frameworks.

Table 2. Research Sample

ID	Bank	Country
AFIN	Affin Bank Bhd	Malaysia
ALLI	Alliance Bank Malaysia Bhd	Malaysia
AMMB	AMMB Holdings Bhd	Malaysia
CIMB	CIMB Group Holdings Bhd	Malaysia
HLBB	Hong Leong Bank Bhd	Malaysia
HLCB	Hong Leong Financial Group Bhd	Malaysia
MBBM	Malayan Banking Bhd	Malaysia
PUBM	Public Bank Bhd	Malaysia
RHBC	RHB Bank Bhd	Malaysia
BBCA	Bank Central Asia Tbk PT	Indonesia
BDMN	Bank Danamon Indonesia Tbk PT	Indonesia
BMRI	Bank Mandiri (Persero) Tbk PT	Indonesia
BNII	Bank Maybank Indonesia Tbk PT	Indonesia
BBNI	Bank Negara Indonesia (Persero) Tbk PT	Indonesia
NISP	Bank OCBC NISP Tbk PT	Indonesia
BBRI	Bank Rakyat Indonesia (Persero) Tbk PT	Indonesia
BBTN	Bank Tabungan Negara (Persero) Tbk PT	Indonesia

Table 2 shows the research sample consisting of 8 banks from Malaysia and 9 banks from Indonesia with a total of 85 observations.

3. RESULT AND DISCUSSION

3.1. Result

3.1.1 Descriptive Statistical Analysis

Descriptive statistics are presented to summarize the key characteristics of the variables, including their central tendency and dispersion. This preliminary analysis helps to understand the data distribution prior to regression estimation.

Table 3. Descriptive statistics variable

Variable	Obs	Mean	Median	Maximum	Minimum	Std. Dev.
Dependent						
ROA	85	0.014641	0.009790	0.062460	-0.022550	0.013149
ROE	85	0.096261	0.095700	0.236021	-0.230360	0.060843
Independent						
ESG	85	0.687180	0.724801	0.879413	0.318640	0.146127
Bank specific						
NPM	85	0.266355	0.285925	0.574762	-0.909746	0.183885
DER	85	0.645124	0.506378	2.492116	0.009379	0.463752
Country specific (Macro Economics)						
INF	85	0.023776	0.025000	0.041000	-0.011000	0.013971
GDP	85	0.031894	0.037000	0.089000	-0.055000	0.039521
UNP	85	0.049518	0.047000	0.071000	0.035000	0.011676

Source: secondary data processed (2025)

There are 85 observations for each variable, indicating that the data provides adequate coverage for panel regression analysis. Based on the descriptive statistics results for the study variables, financial performance, as indicated by Return on Assets (ROA) and Return on Equity (ROE), shows the central tendency and variability of the data show averages of 0.0146 (1.46%) and 0.0962 (9.62%), respectively. ROA has a standard deviation of 0.0131, which indicates a relatively low level of variability in return on assets among the observed banks. In contrast, ROE has a standard deviation of 0.0608, indicating a higher variability in return on equity. ESG Score has a mean of 0.687 with a standard deviation of 0.146, indicating significant variation in sustainability practices between banks.

The maximum ESG value reaches 0.879, while the minimum value is 0.318, reflecting a substantial difference in ESG disclosure between banks in Malaysia and Indonesia. For the control variable, Net Profit Margin (NPM) shows an average of 0.266 with a standard deviation of 0.183, with a negative minimum value of -0.909, indicating losses in some banks during the observation period. Debt to Equity Ratio (DER) has an average of 0.645 with a standard deviation of 0.463, indicating significant differences in capital structure between banks, with a maximum value of 2.492. The macroeconomic variables used as controls, namely Inflation Rate (INF), Gross Domestic Product Growth (GDP), and Unemployment Rate (UNP), have averages of 0.0237 (2.37%), 0.0319 (3.19%), and 0.0495 (4.95%), respectively. The standard deviations on these macro variables are relatively low, indicating stability in the macroeconomic indicators over the observation period.

Overall, the data shows significant variability in financial performance and sustainability disclosure levels among the observed banks, which makes regression analysis using the Random Effects Model (REM) approach relevant to control for unobserved differences in individual characteristics.

Model:

$$Y_{it} = \beta_0 + \beta_1 ESG_{(it)} + \beta_2 DER_{it} + \beta_3 NPM_{(it)} + \beta_4 INF_{(it)} + \beta_5 GDP_{(it)} + \beta_6 UNP_{(it)} + \alpha_{(it)} + \varepsilon_{(it)}$$

Description:

Y_{it} : The financial performance of bank *i* in year *t*, measured by ROA and ROE.

ESG_{it} : ESG score of bank i in year t, which is used as an indicator of sustainability disclosure.

DER_{it} : Debt to Equity Ratio of bank I in year t, as a control variable that measures the level of bank leverage.

NPM_{it} : Net Profit Margin of bank i in year t, control variable, measures the operational efficiency of the bank.

INF_{it} : Bank i's inflation in year t, is a country-specific control variable for macroeconomics.

GDP_{it} : Gross Domestic Product of bank i in year t, is a country-specific control variable for macroeconomics.

UNP_{it} : Unemployment Rate of bank i in year t, is a country-specific control variable for macroeconomics.

α_{it} : Fixed effects that capture unobserved factors that are fixed within each bank over time.

ε_{it} : Error term that includes factors that affect bank performance but are excluded from the model.

To test hypotheses, panel regression analysis was conducted using ROA as the dependent variable. The results are estimated using the Random Effects Model (REM), as validated by the Hausman test.

Table 4. Dependent Variable: ROA

	Method: random effects		**Method: Fixed effect**	
Variable	Coefficient	Prob.	Coefficient	Prob.
C	-0.010484	0.3302	-0.000406	0.9778
ESG	0.010165	0.3571	0.006855	0.6547
DER	-0.001402	0.6447	0.001184	0.7527
NPM	0.030540	0.0000***	0.029236***	0.0000
INF	0.199743	0.0367**	0.183705*	0.0570
GDP	-0.084572	0.0171**	-0.093558***	0.0096
UNP	0.178891	0.1358	0.008114	0.9549
Observations	85		85	
Hausmant Test	0.00	1.00		

Source: secondary data processed (2025)

The table delineates the outcomes of the regression estimations utilizing both random and fixed effect panel models for our cohort of 17 banks located in Indonesia and Malaysia during the period from 2020 to 2024. The definitions of the independent variables are presented in the aforementioned table. The p-values are documented adjacent to the estimated coefficients. ***, **, * indicate significance levels of 1%, 5%, and 10%, respectively.

The regression analysis results, utilizing the Random Effects Model (REM) and Fixed Effects Model (FEM) approaches, reveal varying impacts of the independent and control variables on Return on Assets (ROA). The Hausman Test yields a probability value of 1.00, indicating that the Random Effects Model (REM) is more appropriate, as the p-value exceeds the 0.05 threshold.

In the Random Effects Model (REM), the Net Profit Margin (NPM) variable exhibits a significant positive effect on ROA, with a coefficient of 0.0305 and a p-value of 0.0000. This indicates that a higher net profit margin enhances financial performance as measured by ROA. This finding aligns with the Fixed Effects Model (FEM), where NPM is also significant with the same p-value.

The macroeconomic variable Inflation Rate (INF) has a significant positive effect on ROA with a p-value of 0.0367 in the REM model, and significant at the 10% level in the FEM model (p-value 0.0570). This suggests that a moderate increase in inflation may contribute to an increase in ROA, due to an increase in interest income (Aras & Hacioglu Kazak, 2022).

In contrast, Gross Domestic Product Growth (GDP) shows a significant negative effect on ROA in both models, with a coefficient of -0.0846 in REM (p-value 0.0171) and -0.0936 in FEM (p-value 0.0096). This may indicate that in a period of slowing economic growth, banks face challenges in maintaining operational efficiency and profitability.

However, the ESG Score, Debt to Equity Ratio (DER), and Unemployment Rate (UNP) variables do not show a significant influence on ROA in both models. The high p-values for these three variables indicate that the level of sustainability disclosure, debt to equity ratio, and unemployment rate do not have a clear relationship with the financial performance of banks in the analyzed sample. The selected REM model shows that bank financial performance measured by ROA is more influenced by NPM, INF, and GDP, while ESG Score, DER, and UNP variables have not provided a significant influence within the observation period (Ji et al., 2023).

The Hausman Test results which show a p-value of 1.00 indicate that the more appropriate model to use is the Random Effects Model (REM). Panel regression analysis was performed using ROE as the dependent variable to evaluate the hypothesized relationships. The estimation relies on the Random Effects Model (REM), as supported by the Hausman test results.

Table 5. Dependent Variable: ROE

	Method: random effects		**Method: Fixed effect**	
Variable	Coefficient	Prob.	Coefficient	Prob.
C	-0.083168	0.0085	0.012712	0.8684
ESG	0.056425	0.0851	0.105382	0.1941
DER	0.007591	0.4499	-0.009335	0.6371
NPM	0.268934***	0.0000	0.256101***	0.0000
INF	0.946250*	0.0569	0.680412	0.1772
GDP	-0.371424**	0.0427	-0.518985***	0.0065
UNP	1079893**	0.0125	-1.023.564	0.1784
Observations	85		85	
Hausmant Test	0.00	1.00		

Source: secondary data processed (2025)

The table delineates the outcomes of the regression estimations utilizing both random and fixed effect panel models for our cohort of 17 banks located in Indonesia and Malaysia during the period from 2020 to 2024. The definitions of the independent variables are presented in the aforementioned table. The p-values are documented adjacent to the estimated coefficients. ***, **, * indicate significance levels of 1%, 5%, and 10%, respectively.

The regression results using the Random Effects Model (REM) and Fixed Effects Model (FEM) for Return on Equity (ROE) reveal that the Net Profit Margin (NPM) variable has a

positive and significant impact on bank financial performance, with a p-value of 0.0000 in both models. This suggests that an increase in net profit margin consistently enhances the profitability of bank equity in Malaysia and Indonesia.

Meanwhile, the macroeconomic variable Inflation Rate (INF) shows a significant positive effect at the 10% level in the REM model (p-value 0.0569), but is not significant in the FEM. Gross Domestic Product (GDP) instead shows a significant negative effect on ROE, with a p-value of 0.0427 in REM and increasingly significant in FEM with a p-value of 0.0065. This finding indicates that a slowdown in economic growth may have a negative impact on bank profitability (Nitescu & Cristea, 2020).

In contrast, the ESG Score and Debt to Equity Ratio (DER) variables are not significant in both models, as indicated by a p-value above 0.05. This indicates that the level of sustainability disclosure and capital structure has not been a factor that affects bank profitability directly within the observation period.

The result of the Hausman Test which shows a p-value of 1.00 indicates that the more appropriate model to use is the Random Effects Model (REM). Therefore, in this analysis, financial performance proxied by ROA and ROE tends to be more influenced by internal profitability and macroeconomic factors than sustainability disclosure and capital structure.

3.2. Discussion

The hypothesis testing results show that ESG score does not significantly influence bank financial performance in Indonesia and Malaysia during the 2020–2024 period. H1 and H2 are rejected, indicating that higher ESG disclosure does not lead to better performance in terms of ROA and ROE. This suggests that, although ESG disclosure is gaining traction, its integration into strategic decision-making in the banking sector remains limited. In many cases, ESG reporting is still perceived as an administrative obligation rather than a driver of value creation, primarily used to comply with regulatory mandates such as Sustainable Finance Disclosure in Malaysia and POJK No. 51 in Indonesia.

The insignificant relationship may also reflect the early stage of ESG adoption in both countries. Many banks are still building internal capacity for sustainability reporting and risk integration. Moreover, the financial benefits of ESG initiatives are often realized over the long term. Investments in environmentally friendly technologies, employee training, or governance reform involve upfront costs and delayed returns. ROA and ROE, as short-term profitability measures, not capture these lagged effects (Loan et al., 2024). Therefore, future research should consider extended time frames or adopt longitudinal designs to better assess the delayed financial impact of ESG strategies (Rosalina et al., 2023). ESG scores obtained from Bloomberg and Refinitiv are global in scope and standardized in structure, which overlook local nuances. In Southeast Asia, particularly in Indonesia and Malaysia, banks may implement sustainability practices rooted in Islamic finance principles or community-based initiatives, which may not be reflected in international ESG scoring methodologies. This measurement gap highlights the need for developing hybrid or localized ESG indicators that align with regional business values and stakeholder expectations (Adamu et al., 2024).

H3 is also rejected, as the effect of ESG performance on financial outcomes does not appear to differ significantly between Indonesian and Malaysian banks. Although Malaysia has more mature sustainability frameworks, the similar insignificant outcomes suggest that the level of regulatory enforcement alone may not be sufficient to create measurable financial benefits from ESG. What may matter more is how deeply ESG is embedded in the business strategy, not just its presence in compliance reports. H4 is accepted, demonstrating that macroeconomic

factors such as inflation and GDP growth have a more direct and consistent influence on bank profitability. The analysis confirms that internal efficiency, proxied by Net Profit Margin (NPM), has a strong and consistent positive impact on both ROA and ROE. Banks with higher NPM are more effective at managing revenues relative to costs, thereby enhancing overall profitability. This aligns with findings from Arintoko et al., (2024), who demonstrated a positive link between NPM and firm value.

Inflation positively affects ROA and ROE, due to banks' ability to reprice loans and widen interest spreads in moderate inflation environments. Controlled inflation can also increase asset values (e.g., collateral), improving financial ratios and reducing credit risk. This is consistent with the findings of Fakhrunnas et al., (2025), who observed that inflation contributes positively to corporate performance in Indonesia.

Interestingly, GDP growth has a negative impact on both ROA and ROE. While this may seem counterintuitive, it may indicate that rapid economic expansion leads to aggressive credit growth, potentially increasing non-performing loans and reducing profitability. Higher GDP growth may also trigger government spending and higher interest rates, making funding more expensive and compressing bank margins.

The unemployment rate shows a mixed effect. It positively influences ROE, possibly due to enhanced risk management and operational adjustments during downturns. Banks may become more cautious in lending, focus on asset quality, and streamline operations. However, the effect on ROA is not significant. This could be because ROA measures returns against total assets, which remain relatively stable regardless of labor market conditions. These findings partially contrast with earlier studies (Rosalina et al., 2023; Arintoko et al., 2024; Liu, 2024), highlighting that unemployment may have complex effects depending on asset structure and credit exposure.

Overall, the results indicate that bank profitability in Indonesia and Malaysia during the study period is more strongly influenced by internal financial metrics and macroeconomic variables than by ESG disclosures. However, this does not diminish the strategic relevance of ESG in the long term. As regulatory frameworks mature and stakeholder expectations evolve, integrating ESG into strategic planning may become increasingly critical for long-term value creation and financial resilience in emerging markets.

4 CONCLUSION

This study examined the relationship between ESG performance and bank financial performance in Indonesia and Malaysia over the period 2020- 2024, using panel data regression with the Random Effects Model. The findings reveal that ESG scores do not significantly affect ROA or ROE in the short term. Instead, internal factors particularly Net Profit Margin and macroeconomic conditions such as inflation, GDP growth, and unemployment play a more dominant role in shaping bank profitability during the observed period. Theoretically, the study contributes to the growing body of ESG-finance literature by offering evidence from Southeast Asian dual-banking systems, a context that remains underexplored. It highlights the importance of accounting for macroeconomic context and measurement limitations when analyzing the financial implications of sustainability initiatives. Practically, the findings suggest that ESG adoption alone does not automatically translate into financial gains unless it is strategically embedded within the bank's operational and governance structures. For banks, the results underscore the need to move beyond regulatory compliance and treat sustainability as a long-term value creation tool. ESG strategies should be integrated into strategic planning, risk management, and performance evaluation frameworks.

For policymakers, the study calls for the development of more context-sensitive ESG disclosure standards that reflect local values such as sharia compliance and community engagement alongside global benchmarks. Future research is encouraged to expand the temporal scope to better capture lagged effects, and to explore how ESG interacts with crisis events. Mixed-method approaches or localized ESG metrics may also provide deeper insights into the financial materiality of sustainability practices in emerging markets.

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