

# The Impact of ESG Disclosure on Bank Financial Performance: Comparative Evidence Between Islamic and Conventional Banks in ASEAN+3

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**Abstract**— This study investigates and compares the nexus of ESG disclosure on the financial performance of Islamic and conventional banks in the ASEAN+3 region. Longitudinal data was extracted from the annual reports of 61 banks from 2015–2024. The ESG disclosure index was constructed through content analysis using guidelines from environmental, social, and governance standards established by the Global Reporting Initiative (GRI). This paper evaluates the probability of banks achieving superior financial outcomes using Bayesian logistic regression. Empirical results indicate that the effects of ESG disclosure on financial performance diverge between the two banking archetypes. In particular, ESG tends to enhance the financial performance of conventional banks more; whereas for Islamic ones it exerts a detrimental impact because Islamic banks have a strong commitment to ethical values and social responsibility that are inherently internalized in their operations based on Shariah principles. Given the prevailing push on information efficiency and governance in the banking system towards technology and innovation for the banking industry to strengthen regulatory compliance, fortifying ESG disclosure can be a basis for mitigating information asymmetry and institutional credibility enhancement of banks in the market. This study adds to empirical evidence on ESG in the banking sector, making significant contributions to support the role of ESG in this area and provides various policy implications to promote transparency and systemic sustainability in the banking system.

**Keywords**— ESG, disclosure of information, financial results, Islamic banks, ASEAN+3.

## I. INTRODUCTION

In recent years, the international banking sector has undergone significant reconfiguration in response to digital advancements, technological innovations, and escalating demands for sustainable development. Beyond traditional profit maximization, banks are increasingly held accountable for their environmental footprint, social stewardship, and adherence to principles of corporate governance. In this context, the disclosure of environmental, social, and governance (ESG) metrics is pivotal for enhancing information transparency and institutional credibility, while also fortifying risk resilience.

The dual banking system—comprising Islamic and conventional banks—is a distinctive characteristic of the global banking landscape. Islamic banks operate under the mandate of Shariah law, emphasizing ethical tenets, distributive justice, and social responsibility, whereas conventional banks adhere to market-driven financial principles. Consequently, the transmission mechanisms of ESG disclosures may diverge significantly between these two banking archetypes, influencing their respective financial viability.

Despite the criticality of this issue, there exists a conspicuous dearth of direct comparative empirical analyses between Islamic and conventional banks within the same region. To address this scholarly lacuna, the present study aims to empirically investigate and compare the asymmetric effects of ESG disclosure on the financial performance of Islamic and conventional banks within the ASEAN+3 region.

The study anticipates that the application of robust quantitative methodologies will elucidate the various channels by which ESG factors modulate banking models. Moreover, this research advances the theoretical frontier by clarifying the

role of ESG disclosure in the banking sector, thereby enhancing understanding and informing policy implications aimed at promoting systemic transparency and sustainable finance within the regional financial system.

## II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### 2.1. Theoretical Foundation

The study on environmental, social, and governance (ESG) disclosure and the financial performance of banks can be developed by analyzing several theoretical frameworks in finance and corporate governance.

First, Stakeholder Theory posits that firms must satisfy the demands of various stakeholders, including shareholders, customers, employees, and regulators (Freeman, 1984). In the banking sector, ESG reporting contributes to enhancing transparency, stakeholder engagement, and the reputational capital of the institution. Banks that adhere to social responsibility and sustainable governance requirements can effectively optimize capital allocation, attract a broader investor base, and subsequently bolster their financial viability.

Second, Legitimacy Theory proposes that to maintain operational legitimacy, companies must ensure social congruence (Suchman, 1995). As sustainable development gains prominence, disclosing ESG information is considered by many banks as a strategic mechanism to demonstrate a commitment to social responsibility, environmental stewardship, and transparent governance. This, in turn, mitigates reputational risk and prevents the loss of social license to operate.

Third, Signaling Theory suggests that firms leverage information sharing to mitigate information asymmetry between the insiders and external investors (Spence, 1973). For

banks, ESG disclosure serves as a positive signal of governance integrity, risk management proficiency, and long-term strategic trajectory. This provides a competitive advantage when banks seek to enhance market credibility and their financial standing.

Moreover, according to Institutional Theory, organizations frequently adjust their behavior in response to isomorphic pressures and norms within the institutional environment (DiMaggio & Powell, 1983). In the banking industry, escalating demands for sustainability, governance transparency, and digital transformation compel banks to intensify their ESG disclosure to align with international standards and market expectations. From the Islamic banking perspective, Shariah-compliant financial principles—centered on fairness, risk-sharing, and social responsibility—converge in many aspects with ESG objectives. However, the divergent operating principles and governance mechanisms between Islamic and conventional banks may result in an asymmetric impact of ESG disclosure on their respective financial performance.

## 2.2 Literature Review

Numerous empirical studies have demonstrated that the disclosure of environmental, social, and governance (ESG) information maintains a positive correlation with the financial viability of banks (Cornett et al., 2016; Bātae et al., 2021). Cornett et al. (2016) evidenced that banks with superior social responsibility performance tend to achieve higher operational efficiency due to robust risk management and enhanced governance integrity. Similarly, the study by Bātae et al. (2021) on European banks corroborated that ESG performance metrics are positively associated with profitability indicators such as ROA and ROE.

Scholarly inquiry has begun to examine the nexus between social responsibility and financial performance within the Islamic banking paradigm. For instance, Yuen et al. (2022), along with related studies in Asia and the Middle East, elucidated that banks in Islamic jurisdictions often face a dual compliance burden from both Shariah standards and global ESG frameworks. Although not directly comparing the two banking models within a unified quantitative framework, studies such as Azmi et al. (2021) suggest that Islamic banks tend to exhibit a higher degree of social responsibility due to their inherent business philosophy aligned with Shariah tenets and a stakeholder-centric approach. However, the transmission of these social responsibility activities into financial performance often exhibits a time lag, as the reputational capital and stakeholder trust require a gestation period to translate into tangible financial outcomes (Platonova et al., 2018).

Furthermore, several studies in the ASEAN region address the divergent orientations in sustainable finance among financial systems. Lai Nam Tuan (2025) conducted a comparative study on institutional frameworks for green finance development among representative economies in ASEAN through comparative legal and institutional analysis. The empirical results showed that in Malaysia—representing a leading Islamic financial hub—ESG initiatives are intricately linked to Shariah-compliant financial instruments such as Green Sukuk (SRI Sukuk) and central bank guidelines on Value-Based Intermediation (VBI). Meanwhile, in

Singapore—representing a predominant conventional financial market—ESG development is primarily driven by national strategic mandates and the capacity to attract global assets under management (AUM).

Nevertheless, studies providing a direct comparative assessment of the impact of ESG disclosure on financial performance between Islamic and conventional banks remain conspicuously limited, particularly in the context of emerging economies like the ASEAN+3 region. This scholarly lacuna underscores the necessity for a systematic examination of the asymmetric impact of ESG on financial performance between these two distinct banking archetypes.

## III. RESEARCH MODEL AND HYPOTHESES

### Research Model

To examine the differences in the impact of ESG on financial outcomes between Islamic and conventional banks, the study uses a panel data regression model with an interaction variable between ESG and the dummy variable ISLAMIC:

$$FP_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 ISLAMIC_i + \beta_3 (ESG_{it} \times ISLAMIC_i) + \gamma X_{it} + \delta Z_{ct} + \varepsilon_{it}$$

In there:

- $FP_{it}$  is the financial result of the bank  $i$  at the time  $t$ . This is measured through indicators such as ROA, ROE, and NIM.
- $ESG_{it}$  is the ESG information disclosure index of the bank  $i$  at the time  $t$ .
- $ISLAMIC_i$  This is a dummy variable reflecting the type of bank, taking the value 1 if the bank is an Islamic bank and 0 if it is a conventional bank.
- $ESG_{it} \times ISLAMIC_i$  This is an interaction variable used to examine whether the impact of ESG on financial outcomes differs between Islamic banks and conventional banks.
- $X_{it}$  It is a set of control variables at the bank level.
- $Z_{ct}$  It is a set of control variables at the national level, reflecting the macroeconomic factors of the country  $c$  at the time  $t$
- $\alpha$  is the intercept coefficient of the model, and  $\varepsilon_{it}$ . It is a random error.

In this model, the coefficient  $\beta_1$  this reflects the impact of ESG disclosure on financial performance for conventional banks, while the ratio  $\beta_3$  this indicates the degree of difference in the impact of ESG on Islamic banks compared to conventional banks. If the coefficient  $\beta_3$  this is statistically significant, indicating that the relationship between ESG and financial performance differs between the two types of banks.

### Research hypothesis

- H1: Disclosing ESG information has a positive impact on the financial results of banks.
- H2: COVID-19 has weakened the positive impact of ESG disclosure on banks' financial results.
- H3: The impact of ESG disclosure on financial performance differs between Islamic and conventional banks.

## IV. RESULT AND DISCUSSION

The ESG index is constructed based on three foundational pillars: environment (E), society (S), and governance (G). The

composite ESG index in this study was derived using Principal Component Analysis (PCA).

Figure 1 illustrates the loading vectors in the principal component space, showing that the EPL, SPL, and GPL variables exhibit a strong positive correlation, as evidenced by the variable vectors converging in the same direction with acute angles. This indicates that these variables share a common latent structure, which would exacerbate the risk of multicollinearity if they were simultaneously incorporated into

the regression model. Furthermore, all three variables are proximate to the unit circle and exhibit high squared cosine  $\cos^2$  values, indicating that the first two principal components capture the preponderance of the total variance of the original regressors. This result confirms that the information dimensionality of EPL, SPL, and GPL can be efficiently aggregated into principal components with minimal information loss.

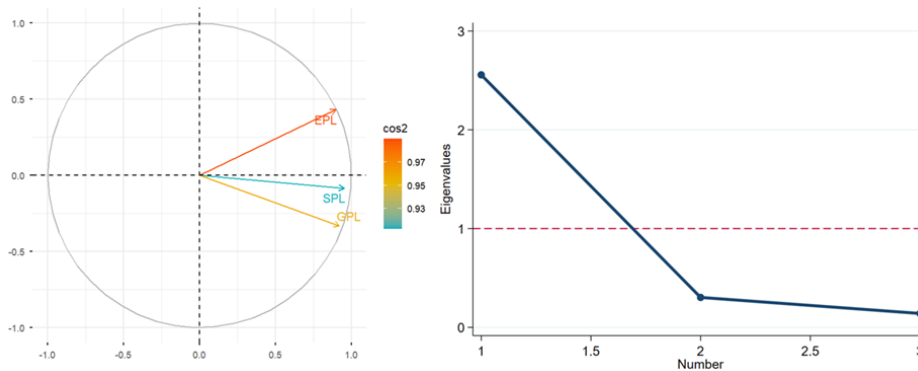


Figure 1. Quality chart of variables

(Source: Calculations by the authors)

The Principal Component Analysis (PCA) results presented in Table 1 demonstrate that the cumulative proportion of variance explained by the first two principal components reaches 94.99%, substantially exceeding the 70% threshold commonly mandated in empirical literature. This indicates that the informational integrity of the original regressors is preserved at an optimal level when utilizing orthogonal components, thereby validating the efficacy of the PCA method for dimensionality reduction. In accordance with the Kaiser-Guttman criterion, only components with eigenvalues exceeding unity ( $\lambda > 1$ ) are retained for further analysis. Consequently, the study extracts the first principal component (PC1) as the composite proxy representing the underlying structure of the constituent variables used to construct the ESG index

TABLE 1. Probability Contributions of Variables

Main ingredients	Individual value	Explanatory variance	Cumulative variance
Main ingredient 1	2.5306	0.8435	0.8435
Main ingredient 2	0.3191	0.1064	0.9499
Main ingredient 3	0.1501	0.0501	1.0000

(Source: Calculations by the authors)

From the above arguments, the weights (W) of the variables all have positive eigenvalues; therefore, the ESG score is calculated using the following formula:

$$ESG = 0.5602 * EPL + 0.5962 * SPL + 0.5751 * GPL$$

TABLE 2. Weights of the variables

Variable	EPL	SPL	GPL
Weight (W)	0.5602	0.5962	0.5751

(Source: Calculations by the authors)

The results presented in Table 3 reflect several diagnostic issues that must be addressed during the data estimation process. First, the study examines cross-sectional dependence through Pesaran's (2021) CD test, a pervasive issue in panel data analysis. The results show that all variables are statistically significant ( $p < 0.01$ ), indicating the existence of inter-unit correlation among the observed cross-sections. Secondly, the study employs the Jarque-Bera test to examine the distributional properties of the variables. The results show that the variables deviate from a normal distribution ( $p < 0.01$ ), implying that the data exhibits skewness and kurtosis, leading to an asymmetrical distribution and potentially the presence of outliers or heavy tails. Third, the study assessed the potential for multicollinearity through the Variance Inflation Factor (VIF). The results yield an average VIF of 1.2, well below the stringent threshold of 2, indicating the absence of significant collinearity among the regressors.

Based on the diagnostic tests above, the study adopts a Bayesian logistic regression model. This estimation framework facilitates a probabilistic approach through posterior distributions without relying on the strict asymptotic normality assumptions. Furthermore, estimation through informative prior distributions and Bayesian inference enhances the robustness and reliability of the parameter estimates. Additionally, the Bayesian method effectively mitigates common econometric pathologies, such as endogeneity, heteroskedasticity, and autocorrelation (Thach, 2020).

In addition, we conducted a correlation matrix test to assess the impact of variables in the dataset and evaluate the phenomenon of multicollinearity. The correlation matrix results, presented in Table 4, show that the coefficients between the independent variables are all at low to medium levels, with

no pair of variables correlated exceeding the threshold of 0.8 – a serious level of multicollinearity. This result implies that the dataset does not exhibit serious multicollinearity, and all

research variables were included in the subsequent regression model.

TABLE 3. Descriptive Statistics

Variables	Mean	Std. Dev	Minimum	maximum	CD Order - Test	Jarque-Bera Test
ROA	1.1443	.8265	-3.08	4.4	19.70***	119.19***
ROE	11.3996	5.6115	-40.34	31.3	20.41***	125.76***
NIM	2.9647	1.5126	0.68	9.45	9.70***	112.96***
ESG	13.0598	3.5199	3.4928	17.3160	97.90***	44.86***
GDP	3.6831	3.6877	-17.9	9.8	67.56***	250.48***
NPL	2.1934	1.7582	0.02	13.63	1.34***	316.04***
SIZE	18.7705	5.5669	-0.2	35.52	80.02***	60.43***
INF	3.4785	5.3662	-1.6	31.23	39.18***	346.05***
COVID	0.2377	.4260	0.0000	1.0000	119.24***	85.76***
CIR	46.9562	12.9736	19.37	88.19	5.32***	10.59***
LTD	82.2901	15.6373	42.41	203.45	8.58***	77.97***
VIF – Test						
Maximun: VIF of variables					1.20	
Maximun: 1/VIF of variables					0.896019	
Mean VIF max					1.39	

(Source: Calculations by the authors)

TABLE 4. Correlation Test

	ESGI	GDP	NPL	SIZE	INF	COVID	CIR	LTD
ESGI	1.0000							
GDP	-0.0823	1.0000						
NPL	-0.0268	-0.1869	1.0000					
SIZE	0.1801	0.1183	-0.2141	1.0000				
INF	0.0405	0.0362	0.2612	0.0092	1.0000			
COVID	0.2000	-0.4454	0.0923	-0.0435	-0.1385	1.0000		
CIR	-0.1128	-0.2255	0.1369	0.0504	0.1279	-0.0149	1.0000	
LTD	0.1114	0.1053	-0.1576	-0.0105	-0.2050	0.0080	-0.2328	1.0000

(Source: Calculations by the authors)

Table 5 Comparison between Islamic banks and conventional banks through Bayesian logistic regression

	Islamic Bank: Financial Results			Conventional banking: Financial results		
	Mean	Std. Dev.	MCSE	Mean	Std. Dev.	MCSE
ESG	-0.1562	0.1152	0.0030	0.1555	0.1168	0.0050
ESG_CV	-0.1939	0.1368	0.0063	0.1855	0.1321	0.0040
GDP	-0.1380	0.1340	0.0036	0.1315	0.1339	0.0029
NPL	0.0145	0.1115	0.0034	-0.0098	0.1142	0.0020
SIZE	-0.2609	0.1251	0.0037	0.2633	0.1255	0.0043
INF	-0.2882	0.1679	0.0041	0.2886	0.1651	0.0044
CIR	-0.3494	0.1272	0.0030	0.3561	0.1265	0.0033
LTD	0.1306	0.1144	0.0032	-0.1369	0.1185	0.0039
CONS	-1.6456	0.1200	0.0025	1.6444	0.1187	0.0026
acceptance rate		0.2615			0.2828	
efficiency: min		0.0156			0.0175	
Gelman–Rubin Rc		1.0070			1.0060	

(Source: Calculations by the authors)

Table 5 presents the Bayesian logistic regression results, delineating the divergent relationship between ESG disclosure and the financial viability of Islamic versus conventional banks. The estimation outcomes indicate that the financial implications of ESG disclosure differ significantly between the two banking archetypes. For Islamic banks, the ESG coefficient is negative, suggesting that an increased intensity of ESG disclosure does not elevate the posterior probability of achieving superior financial performance and may even induce a short-term margin compression. Conversely, for conventional banks, ESG exerts a positive influence, implying that these institutions are more effective at leveraging ESG transparency into a comparable financial advantage. This divergence reflects the

idiosyncratic operating models of Islamic banks, where Shariah-compliant principles inherently mandate social responsibility, ethics, and distributive justice. Consequently, ESG in this context may represent institutional redundancy, resulting in diminishing marginal financial benefits compared to the conventional banking sector.

The moderating role of COVID-19 is further evidenced through the interaction term (ESG\_CV). For Islamic banks, the ESG\_CV coefficient is negative with a substantial magnitude, indicating that during the pandemic, the transmission of ESG into financial results was significantly attenuated. This implies that under systemic shocks like COVID-19, Islamic banks—characterized by conservative capital structures and asset-

backed financing—prioritize systemic stability and Shariah adherence over the expansion of long-term strategic ESG initiatives. Conversely, within the conventional banking group, ESG\_CV is positive, suggesting that during crises, ESG serves as a buffering mechanism to sustain market confidence and enhance financial resilience. This contrast underscores that ESG is not a monolithic strategy with uniform impacts. While conventional banks utilize ESG as a risk-mitigation and reputational-capital-building tool during crises, for Islamic banks, the benefits of ESG are already "internalized" through existing ethical and religious norms. Therefore, intensified ESG disclosure during the COVID-19 volatility did not yield an incremental financial premium and may have even incurred deadweight compliance costs.)

## V. CONCLUSION

### Summary of research process and results

The objective of this study is to investigate the nexus between environmental, social, and governance (ESG) disclosure and the financial viability of Islamic and conventional banks in the ASEAN+3 region. Utilizing longitudinal data harvested from annual and sustainability reports, the study constructs a composite ESG index via Principal Component Analysis (PCA) to aggregate environmental, social, and governance dimensions while mitigating multicollinearity among the constituent variables.

Post-construction of the ESG index, a Bayesian logistic regression framework is employed to estimate the posterior probability of superior financial performance and to delineate the asymmetric impact of ESG across divergent banking archetypes. The empirical evidence indicates that ESG generally enhances the probability of achieving robust financial outcomes. However, the transmission mechanisms differ across banking systems. Specifically, ESG exerts a positive and significant impact on the likelihood of superior financial performance among conventional banks, whereas the relationship is detrimentally correlated for Islamic banks.

These findings suggest that ESG serves as a signaling mechanism for governance integrity, transparency, and risk resilience in conventional banks, thereby bolstering institutional credibility and stakeholder confidence. In contrast, principles such as risk-sharing, distributive justice, and Shariah-compliant ethical standards are already internalized within the Islamic banking model, which may attenuate the marginal signaling value of formal ESG disclosure—a phenomenon indicative of institutional redundancy.

Furthermore, the results indicate that the systemic shock induced by COVID-19 attenuated the influence of ESG on banks' financial performance. During periods of macroeconomic volatility, prudential factors such as capital adequacy and liquidity buffers tend to supersede sustainability-related drivers. Overall, the findings highlight that the financial implications of ESG are not monolithic but are contingent upon banking models and institutional environments, contributing to a nuanced understanding of ESG value creation within the dual banking landscape of the ASEAN+3 region.

### Limitations of the study

The study still has some limitations. Firstly, the ESG index is based on published data, so it may be affected by reporting quality and the potential for "greenwashing." Secondly, the scope of the study is limited to a few countries and a specific time period, thus the generalizability of the results may be limited. Thirdly, the study focuses on financial accounting efficiency and has not extended to market value or long-term efficiency.

### Future research directions

Given these limitations, future research could develop in several directions. First, expanding the research sample to include more geographical areas and longer time periods to test the stability of the results. Second, incorporating market measures such as Tobin's Q or stock prices to more comprehensively assess the value of ESG. Third, analyzing mediating and regulating mechanisms in greater depth, such as the role of ownership structure, governance quality, or the level of development of the financial market.

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