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DOES ENVIRONMENTAL, SOCIAL, AND GOVERNANCE AFFECT FIRM VALUE? THE MEDIATING ROLE OF FINANCING CONSTRAINTS IN SOUTHEAST ASIA

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ABSTRAK

Penelitian ini bertujuan untuk mengevaluasi pengaruh kinerja Environmental, Social, and Governance (ESG) terhadap nilai perusahaan dengan mempertimbangkan kendala pembiayaan sebagai variabel mediasi. Studi dilakukan pada perusahaan non-keuangan yang terdaftar di kawasan Asia Tenggara, mencakup Indonesia, Malaysia, Singapura, Filipina, dan Thailand selama periode 2014 hingga 2023. Nilai perusahaan diukur melalui rasio Tobin's Q, ESG diukur dengan score ESG yang diambil dari Refinitiv Eikon, sementara kendala pembiayaan dinilai menggunakan Indeks KZ. Metode analisis yang digunakan adalah regresi data panel serta uji mediasi menggunakan metode Sobel. Hasil penelitian menunjukkan bahwa kinerja ESG memiliki pengaruh positif terhadap nilai perusahaan di kawasan Asia Tenggara. Selain itu, kendala pembiayaan terbukti menjadi mediator, di mana peningkatan kinerja ESG dapat mengurangi hambatan pembiayaan, yang pada akhirnya berkontribusi terhadap peningkatan nilai perusahaan. Uji regresi dari masing-masing negara dan ketiga pilar dalam ESG juga dilakukan. Dari perhitungan yang dilakukan terdapat adanya variasi yang signifikan, yang tidak tertangkap dalam model panel gabungan. Hal ini menunjukkan adanya heterogenitas struktural dan kontekstual yang memengaruhi hubungan ESG terhadap nilai perusahaan di tiap negara atau tiap aspek ESG.

Kata kunci: ESG, nilai perusahaan, kendala pembiayaan

ABSTRACT

This study aims to evaluate the effect of Environmental, Social, and Governance (ESG) performance on firm value by considering financing constraints as a mediating variable. The study is conducted on non-financial companies listed in the Southeast Asian region, including Indonesia, Malaysia, Singapore, the Philippines, and Thailand during the period 2014 to 2023. Firm value is measured through Tobin's Q ratio, ESG is measured by ESG score taken from Refinitiv Eikon, while financing constraints are assessed using KZ Index. The analysis method used is panel data regression and mediation test using Sobel method. The results show that ESG performance has a positive influence on firm value in Southeast Asia. In addition, financing constraints proved to be a mediator, where improving ESG performance can reduce financing constraints, which in turn contributes to increasing firm value. Regression tests of each country and the three pillars in ESG were also conducted. From the calculation, there is significant variation, which is not captured in the combined panel model. This suggests that there is structural and contextual heterogeneity affecting the relationship of ESG to firm value in each country or each aspect of ESG.

Key words: ESG, firm value, financing constraint

INTRODUCTION

Environmental, Social, and Governance (ESG) practices have emerged as a core consideration in corporate strategy, particularly as global investors, regulators, and communities demand greater corporate accountability in addressing sustainability risks (Fang & Guo, 2025; Wong et al., 2021). The value relevance of ESG has been supported by the rise in sustainable investing, with ESG-managed assets surpassing USD 30.3 trillion globally by 2022 (Global Sustainable Investment Alliance, 2023). ESG performance is no longer viewed as a voluntary or symbolic disclosure, but rather as a strategic signal that can influence investor perceptions, reduce information asymmetry, and enhance firm value (Kim & Park, 2023; Yuan et al., 2022).

Several studies have confirmed the positive relationship between ESG performance and firm value, suggesting that strong ESG signals lower risk profiles and improve access to capital (Ho et al., 2024; Wu et al., 2022). ESG initiatives also serve to legitimize corporate actions in the eyes of stakeholders, potentially reducing financing costs and enhancing long-term market valuation (Davis et al., 2026). However, these findings are not universally consistent, particularly in emerging markets such as Southeast Asia. While some scholars have found a significant positive effect of ESG on firm value (He et al., 2023; Melinda & Wardhani, 2020), others report mixed or even negative results (Prabawati & Rahmawati, 2022), often attributing these differences to country-specific regulatory, institutional, and market conditions (Chen & Zhang, 2024; Goel et al., 2022).

This divergence highlights a critical research gap: the potential mediating mechanism through which ESG affects firm value, particularly via financing constraints. According to capital structure theories, firms in emerging economies are vulnerable to financing friction due to weak investor protection, high perceived risk, and limited financial infrastructure (Habib et al., 2025). ESG disclosures can mitigate such frictions by improving transparency and credibility, thereby reducing external financing constraints and positively influencing firm value (An et al., 2025; Dhaliwal et al., 2014). Such mediation mechanism has been explored in the context of China and other large emerging markets, there is a lack of empirical evidence from Southeast Asia—a region with diverse institutional settings, ESG maturity levels, and financial systems.

This study addresses theis gap by analyzing firms in five key Southeast Asian economies—Indonesia, Malaysia, Singapore, Thailand, and the Philippines—over the period 2014 to 2023. Using panel data regression and mediation analysis, the study investigates whether ESG performance enhances firm value directly and indirectly by reducing financing constraints. In doing so, it aims to answer two central questions: Does ESG performance improve firm value in Southeast Asian companies? And does the reduction in financing constraints serve as a mediating mechanism in this relationship?

By providing regional evidence on the strategic impact of ESG and the financing-constraint channel, this study contributes to the growing literature on sustainable finance in emerging markets and offers practical insights for managers, policymakers, and investors seeking to align financial goals with sustainability objectives.

THEORETICAL REVIEW

This study is grounded in several key theories that explain the relationship between ESG performance, financing constraints, and firm value. The first is Signaling Theory by Choudhury (2024). It suggests that firms signal to the market through voluntary disclosures to reduce information asymmetry. ESG performance particularly serves as a positive signal to investors regarding a firm's long-term commitment, risk profile, and ethical standards when it is measured and disclosed transparently (Chang et al., 2025). Such signals can socially attract responsible

investors and improve market perception, thereby increasing firm value.

The second is Stakeholder Theory. As outlined by Clarke (2024), it posits that firms are accountable not only to shareholders but also to a broader group of stakeholders, including employees, communities, customers, and regulators. Under this theory, ESG practices align corporate behavior with stakeholder expectations, thereby enhancing legitimacy, trust, and sustainable performance. By responding to stakeholder demands for transparency and ethical conduct, firms can build stronger relationships that support long-term value creation.

The third is Legitimacy Theory. Olateju et al. (2021) state that firms seek societal approval to maintain their existence and competitiveness. ESG disclosures are a means of demonstrating firms comply with environmental, social, and governance norms. The societal acceptance may improve firms' access to capital and reduce regulatory and reputational risks.

From a financial perspective, the Theory of Financing Constraints were explained by Kraft (2024) that firms may face barriers to external financing due to imperfect capital markets, information asymmetry, and agency problems. High-quality ESG performance and disclosures can reduce perceived risk and enhance investor confidence, thereby easing these constraints (Zhang et al., 2025). ESG performance may indirectly influence firm value by improving a firm's financial flexibility and reducing its reliance on internal capital.

Prior studies have examined the ESG–firm value relationship. For example, Fang & Guo (2025) found that firms with stronger ESG performance experienced fewer financing constraints and higher valuation. An et al. (2025) also confirmed that ESG disclosure improves firm value through the mediation of financing constraints. However, most of the studies have been conducted in developed markets or large emerging economies such as China, leaving a gap in the literature regarding Southeast Asian economies with different regulatory, economic, and cultural contexts.

Drawing on these theoretical foundations and empirical insights, this study develops a conceptual model in which ESG performance influences firm value both directly and indirectly through the mediating role of financing constraints. This framework, showed in Figure 1, provides the basis for formulating hypotheses and conducting empirical tests.

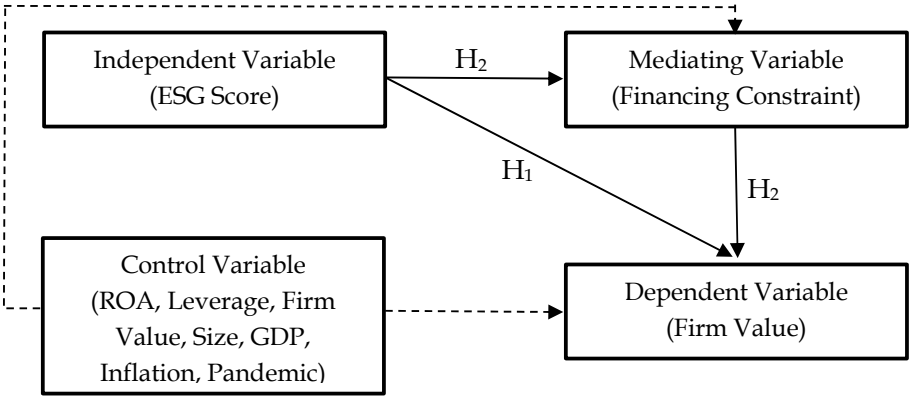

Figure 1
Research Model
Source: Primary Data, 2025

H_1: ESG performance has a positive and significant effect on firm value in Southeast Asia.

H_2: Financing constraints mediate the relationship between ESG performance and firm value.

RESEARCH METHOD

Population and Sample Selection

This study examines non-financial firms listed on the stock exchanges of five Southeast Asian countries: Indonesia, Malaysia, Singapore, Thailand, and the Philippines over the period 2014–2023. These countries were selected due to the availability and consistency of ESG data, as well as their relevance as emerging and developing markets with heterogeneous institutional environments. Its population comprises all publicly listed firms in the five countries during the observation period.

Financial institutions, including banks, insurance companies, and other financial intermediaries, were excluded due to their distinct regulatory frameworks, financial structures, and reporting standards. They may lead to incomparability and potential bias in measuring firm value and financing constraints.

The sample was determined with a purposive sampling approach to ensure data completeness and analytical reliability. Firms were included if they: (1) remained continuously listed throughout the study period; (2) had complete and consistent ESG scores available in the Refinitiv Eikon database; (3) published annual and sustainability reports during the observation period; and (4) provided complete data for all key variables. They involve firm value, ESG performance, financing constraint measures, and control variables such as return on assets (ROA), leverage, and sales growth. Only firms operating in non-financial sectors such as manufacturing, energy, transportation, and consumer goods were considered. The final sample forms a balanced panel dataset that allows for robust cross-country and intertemporal analysis. While minimizing data bias and ensuring comparability across firms and national contexts in Southeast Asia. Table 1 presents the distribution of sample firms across the five Southeast Asian countries.

Table 1
Sample Distribution by Country

Negara	Number of Sample Firms	
Indonesia	27 Companies	21,43%
Malaysia	29 Companies	23,01%
Phillipines	18 Companies	14,29%
Singapore	30 Companies	23,81%
Thailand	22 Companies	17,46%
Total	126 Companies	100%

Source: Author's Compilation, 2025

Data Collection Methods

This study relies entirely on secondary data from publicly, accessible and credible sources. ESG scores were collected from Refinitiv Eikon, a widely recognized global database that provides standardized Environmental, Social, and Governance (ESG) metrics for publicly listed companies. The ESG scores are derived from over 400 indicators across the three pillars and compiled using a transparent, replicable methodology. Financial data, including firm value (Tobin's Q), return on assets (ROA), leverage, firm size, and sales growth, were also retrieved from Refinitiv Eikon and cross-validated with information from companies' annual reports and

sustainability reports. Macro-level control variables, such as GDP growth and inflation rate, were obtained from reliable national sources and international institutions such as the World Bank. The data collection process focused on the period 2014 to 2023, ensuring longitudinal consistency and completeness across firms and countries. All data were screened for completeness and accuracy before being included in the final panel dataset used for statistical analysis.

Statistical Analysis Techniques

To examine the relationship between ESG performance and firm value, as well as the mediating effect of financing constraints, this study employs a series of panel data regression models. The analysis begins with descriptive statistics and correlation analysis to understand the distribution and relationships among variables. Thus, the study applies both fixed effects and random effects models. The Hausman test is conducted to determine the most appropriate estimation method. Robust standard errors are used to address potential heteroskedasticity in the data.

To test for mediation, the study utilizes path analysis combined with the Sobel test, which enables evaluation of the indirect effect of ESG on firm value through financing constraints. Additional regressions are conducted by disaggregating the data by country and by ESG sub-pillars (Environmental, Social, and Governance) to explore structural and contextual heterogeneity across firms in different institutional environments. All statistical analyses are performed using Stata software, with a significance level set at 5%

Research Design

This study employs a quantitative, explanatory research design to test hypotheses on the relationships among ESG performance, financing constraints, and firm value. It is structured to evaluate both direct and indirect effects using panel data from non-financial companies in five Southeast Asian countries over a ten-year period (2014–2023). The design is longitudinal, allowing the researcher to observe variations over time and across firms and to capture dynamic effects that might not be observable in cross-sectional studies. By employing panel regression and mediation analysis, the study seeks not only to identify statistically significant relationships but also to understand the underlying mechanisms—particularly the role of financing constraints in mediating the ESG–firm value link. The approach enables a rigorous empirical investigation grounded in theoretical frameworks such as signaling theory, stakeholder theory, and financing constraint theory, while also accounting for structural heterogeneity across firms and countries in emerging markets. Table 2 summarizes the definitions, measurement formulas, and explanations of the variables in this study.

Table 2
Definition and Measurement of Research Variables

Variable	Formula	Explanation
Firm Value	Tobin's Q = (Market Value of Equity + Total Book Value of Liabilities) / Total Book Value of Assets	Tobin's Q is used to assess firm value because it reflects investor expectations of future corporate performance (Parkash et al., 2016). It is widely used due to its market-based orientation.
ESG	ESG Score	The ESG score evaluates how well a company implements ESG practices based on publicly disclosed and structured sustainability data.
Financing Constraint	KZ = -1.002(CFL/A_t-1) - 39.368(DIV/A_t-1) -	The KZ index is chosen for its ability to capture the complexity of internal financing constraints, and is considered more reliable than alternative indices.

Variable	Formula	Explanation
	1.315(C/A_t-1) + 3.139(Leverage) + 0.283(Q)	
ROA	ROA = Net Profit / Total Assets	Return on Assets (ROA) is used to measure managerial performance in utilizing assets to generate profits.
Leverage	Total Liabilities / Total Equity	Leverage reflects the extent to which a firm is financed by debt, indicating its financial risk and capital structure.
Size	Natural Logarithm of Total Assets	Larger firms typically have more resources and stability, making them more attractive to investors and better positioned to implement ESG practices.
Growth	(Assets_t - Assets_t-1) / Assets_t-1	Growth shows the firm's ability to expand over time, indicating operational success and market competitiveness.
GDP	Data obtained from the World Bank	GDP is used to control for macroeconomic conditions and their influence on the relationship between ESG practices and firm value.
Inflation	((IHK_t - IHK_t-1) / IHK_t-1) * 100%	Inflation indicates the rise in prices of goods and services, which can influence corporate financial performance and economic stability.
Covid	Dummy Variable	The COVID-19 pandemic is considered an exogenous shock that significantly impacted nearly all economic sectors globally (Albuquerque et al., 2020).

Source: Author's Compilation, 2025

ANALYSIS AND DISCUSSION

The descriptive statistics reveal substantial variation across firms and variables in the sample. The average Tobin's Q is 1.52, indicating the market values the firms higher than their book value. It reflects positive investor sentiment and expectations of future growth. The ESG score has a mean of 53.52 out of 100, showing moderate ESG engagement among Southeast Asian firms, with some companies scoring as low as 5.24 and others reaching up to 91.95. The KZ index ranges widely, suggesting heterogeneity in financing constraints. While the mean of 1.28 indicates the presence of moderate overall financial barriers.

Profitability, as measured by ROA, shows that firms generate an average return of 5.19% on their assets, though some firms report negative earnings. Leverage has a mean of 0.49. It implies that about half of the firms' capital structures are financed by debt. The average firm size (log of total assets) is 8.57, representing medium-scale firms, and the growth rate averages 4.59%, suggesting overall positive asset expansion.

On the macroeconomic side, GDP growth and inflation rates show high variability, reflecting different economic conditions across countries and years. The COVID-19 dummy variable indicates that approximately 20% of the observations occurred during the pandemic period. These variations underline the importance of including both firm-level and country-level controls in the regression models to ensure accurate and unbiased estimation. Table 3 reports the descriptive statistics of the variables in empirical analysis.

Table 3
Descriptive Statistics of Research Variables

Variabel	*Maximum*	*Mean*	*Minimum*	*Std.Dev*
Tobin'sQ	7,5915	1,5225	0,4662	1,1408
Indeks KZ	9,5166	1,2847	-8,6471	2,9634

Variabel	***Maximum***	***Mean***	***Minimum***	***Std.Dev***
ESG	91,95	53,5193	5,24	18,9260
ROA	0,3362	0,0519	-0,1077	0,0594
Lev	1,4775	0,4926	0,0217	0,1886
Size	11,5203	8,5682	5,2855	1,1167
Growth	0,5622	0,0459	-0,2022	0,1182
GDP	9,6907	3,5805	-9,5182	3,4611
Inflasi	6,3949	2,3009	-1,1387	2,0472
Covid	1	0,2	0	0,4001

Source: Author's Compilation, 2025

The regression analysis demonstrates that ESG performance has a positive and statistically significant effect on firm value among listed non-financial companies in Southeast Asia. With a coefficient of 0.0055 and a p-value of 0.000, the results indicate that for every unit increase in ESG score, firm value (measured by Tobin's Q) increases by approximately 0.0055, holding other variables constant. The finding supports the Signaling Theory that good ESG practices act as credible signals to investors about the firm's long-term orientation and sound governance. It also aligns with Stakeholder Theory, as firms that actively manage environmental, social, and governance issues tend to receive broader stakeholder support, which translates into greater firm value. Overall, the results provide strong empirical evidence for accepting the first hypothesis: higher ESG performance leads to higher firm value.

The results from regression Model 2 show that ESG performance has a negative and statistically significant effect on financing constraints, with a coefficient of –0.0176 and a p-value of 0.000. This implies that companies with higher ESG scores tend to face fewer financing constraints. The finding suggests that strong ESG practices enhance corporate transparency, accountability, and legitimacy. They reduce the perceived risk among investors and creditors. As a result, firms with better ESG performance have greater access to external funding. This supports the Signaling Theory, where ESG disclosures act as positive signals to capital markets, and aligns with Stakeholder Theory and Legitimacy Theory. It indicates that socially responsible companies are more likely to gain institutional support and public trust. The regressionn results from Model 3 demonstrate that both ESG performance and financing constraints significantly affect firm value. ESG has a positive and significant coefficient of 0.0049 (p-value = 0.001), while financing constraints (KZ index) have a negative and significant coefficient of –0.0356 (p-value = 0.035). The findings indicate that firms with higher ESG scores experience greater firm value, and that lower financing constraints are also associated with higher firm value. Table 4 presents the regression results examining the effect of ESG performance on firm value and the mediating role of financing constraints.

This result confirms the presence of partial mediation, where ESG influences firm value both directly and indirectly through its effect on financing constraints. The model's R-squared value of 0.4160 shows that 41.6% of the variation in firm value can be explained by the independent and mediating variables included in the model. Overall, these findings support the second hypothesis and reinforce the theoretical proposition that ESG not only contributes directly to firm performance but also functions as a mechanism for mitigating financial barriers in capital markets.

Table 4
Empirical Results of Regression Analysis

	(1)	(2)	(3)
KZ			-0,0356**
ESG	0,0055***	-0,0176***	0,0049***
ROA	8,6218***	-22,3541***	7,8254***
Lev	1,3084***	7,7065***	1,5829***
Size	-0,2138***	0,2794***	-0,2038***
Growth	-0,3319	1,7143**	-0,2708
GDP	-0,0268	-0,0444	-0,0284*
Inflasi	-0,0157	0,0497	-0,0139
Covid	-0,2283*	0,3527	-0,2158*
N Observasi	1.260	1.260	1.260
N Perusahaan	126	126	126
Prob > F	0,0000	0,0000	0,0000
R-Square	0.4124	0,5846	0,4160

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

The results of the path analysis (in Figure 2) and Sobel test confirm that financing constraints significantly mediate the relationship between ESG performance and firm value. The Sobel test yields a Z-score of 1.9826 with a p-value of 0.0474, which is statistically significant at the 5% level (Z > 1.96). It means that the indirect effect of ESG performance on firm value through financing constraints is significant, supporting the conclusion that ESG influences firm value both directly and indirectly.

The mediation supports the view that strong ESG performance helps reduce capital market frictions, such as asymmetric information and perceived investment risk, easing firms' access to external financing. In turn, the improved financial flexibility enhances firm valuation. These results strengthen the acceptance of the second hypothesis that financing constraints play a significant mediating role in the ESG–firm value relationship.

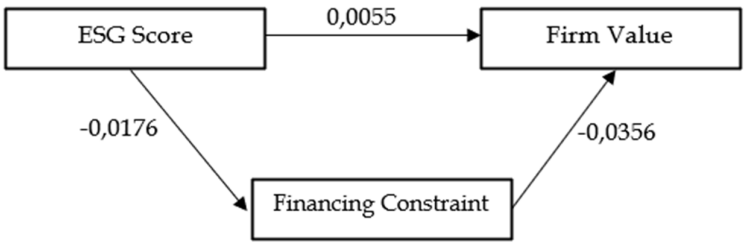

Figure 2
Path Analysis
Source: Primary Data, 2025

Additional Analysis

The results from the country-specific regressions (Table 5, 6, and 7) reveal important heterogeneity in the ESG–firm value relationship and the mediating role of financing constraints across Southeast Asian countries.

In Table 5, ESG performance shows a positive and significant effect on firm value in Indonesia, Malaysia, the Philippines, and

Singapore, with the highest impact observed in Singapore (coefficient = 0.0119, $p < 0.01$). This study suggests that ESG is positively perceived by capital markets in these countries. In contrast, Thailand exhibits a significant negative relationship (coefficient = –0.0307, $p < 0.01$), possibly due to limited ESG enforcement or high compliance costs not yet matched by investor trust.

In Table 6, this study examines the effect of ESG on financing constraints (KZ Index). Its results show a negative and significant effect in all countries except the Philippines, where the relationship is statistically insignificant. This indicates that ESG practices help reduce financing constraints in most countries, by enhancing transparency and credibility.

In Table 7, both ESG and financing constraints are as predictors of firm value. The partial mediation is observed in some countries. ESG remains positively significant in Indonesia, the Philippines, and Singapore, while financing constraints (KZ Index) show a negative impact on firm value in Malaysia and the Philippines. Thailand's results in this model are mixed, as ESG is negatively significant while financing constraints are positively related to firm value, suggesting a unique dynamic in that country.

Overall, the three models demonstrate that the ESG–firm value relationship and the mediating effect of financing constraints are not uniform across countries. The differences emphasize the importance of institutional context, market maturity, and investor awareness in shaping the effectiveness of ESG strategies across Southeast Asia.

Table 5
Model I Regression Results – Country-Level Analysis

Tobin's Q	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Indonesia	0,0105**				
Malaysia		0,0091*			
Phillipines			0,0054***		
Singapore				0,0119***	
Thailand					-0,0307***
ROA	8,9838***	12,7706***	8,7776***	-2,2860	11,9255***
Lev	0,2860**	-0,1680**	0,1897**	0,3136***	-0,0054
Size	-0,0554	-0,3226***	0,1610***	-0,2278***	-0,0846
Growth	-1,4442***	-0,1519	0,3121	0,3957	-0,7990
GDP	0,7320	-0,3857***	-0,0137	0,0937**	0,9449***
Inflasi	0,2300	2,3850***	-0,2513***	-0,0743*	-0,0820
Covid	1,7504	0,0135	-0,3968***	-0,8326**	0,4446
N Observasi	270	290	180	300	220
N Perusahaan	27	29	18	30	22
Prob > F	0,0000	0,0000	0,0000	0,0000	0,0000
R-Square	0,6187	0,7734	0,6146	0,3072	0,6285

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

Table 6
Model II Regression Results – Country-Level Analysis

Indeks KZ	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Indonesia	-0,0235***				
Malaysia		-0,0346***			

Indeks KZ	(1)	(2)	(3)	(4)	(5)
Phillipines			-0,0020		
Singapore				-0,0071***	
Thailand					-0,0211***
ROA	-24,5441***	-25,0253***	-18,2369***	-7,3263***	-10,9974***
Lev	3,1423***	3,0989***	3,2440***	2,7756***	3,2228***
Size	0,1782	0,3157***	0,2043***	0,3122***	-0,1257*
Growth	2,6438**	-0,7617	0,0905	-0,2704	0,2004
GDP	-2,2081	0,6352***	-0,0048	-0,0617	0,8604**
Inflasi	-0,0914	-4,1489***	-0,0270	0,1175**	-0,0627
Covid	-2,9252	-0,2789	-0,0426	0,8835**	0,6457**
N Observasi	270	290	180	300	220
N Perusahaan	27	29	18	30	22
Prob > F	0,0000	0,0000	0,0000	0,0000	0,0000
R-Square	0,8444	0,9182	0,9551	0,8831	0,8759

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

Table 7
Model III Regression Results – Country-Level Analysis

Tobin's Q	(1)	(2)	(3)	(4)	(5)
Indonesia	-0,0865*				
Malaysia		-0,3597***			
Phillipines			-0,1813***		
Singapore				0,0353	
Thailand					0,2256**
ESG	0,0084*	-0,0033	0,0051***	0,0122***	-0,0259***
ROA	6,8604***	3,7692**	5,4701***	-2,0277	14,4061***
Lev	0,5578***	0,9466***	0,7781***	0,2157	-0,7324*
Size	-0,0400	-0,2090***	0,1982***	-0,2388***	-0,0563
Growth	-1,2155**	-0,4259	0,3286	0,4052	-0,8442
GDP	0,5410	-0,1572	-0,0146	0,0959**	0,7508**
Inflasi	0,2221***	0,8925	-0,2562***	-0,0784**	-0,0678
Covid	1,4973	-0,0868	-0,4045***	-0,8637**	0,2990
N Observasi	270	290	180	300	220
N Perusahaan	27	29	18	30	22
Prob > F	0,0000	0,0000	0,0000	0,0000	0,0000
R-Square	0,6275	0,8587	0,6343	0,3081	0,6503

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

The results of the Sobel test conducted individually for each country indicate that none of the five Southeast Asian countries show a statistically significant mediating effect of financing constraints in the relationship between ESG performance and firm value. All Z-scores fall below the 1.96 threshold required for 5% significance: Indonesia (0.703), Malaysia (1.079), the Philippines (0.066), Singapore (–0.111), and Thailand (–0.690). Their contrasts are with the aggregated (pooled) model, where the Sobel test indicated a significant mediating effect.

The lack of significance at the individual country level may be attributed to smaller sample sizes, reducing statistical power and institutional heterogeneity across countries.

Differences in market maturity, ESG regulation, investor awareness, and sustainability enforcement contribute to the variability in how ESG performance affects firm value via financing constraints. Despite the insignificance at the national level, the consistent direction of relationships suggests that ESG still plays an economically meaningful role. These findings reinforce the importance of using cross-country models to capture more stable and generalizable effects of ESG strategies in emerging markets like Southeast Asia.

The regression results across the three models show that the impact of ESG on firm value and financing constraints varies across its individual pillars—Environment (E), Social (S), and Governance (G).

In Table 8, which examines the direct effect of each ESG pillar on firm value, only the social and governance pillars exhibit statistically significant effects. The social pillar has the strongest impact (coefficient = 0.0029, $p < 0.05$). The firms engaged in labor protection, community contribution, and social responsibility are rewarded with higher firm valuation. The governance pillar also shows a positive and marginally significant effect (coefficient = 0.0027, $p < 0.10$), reinforcing the role of transparency and board accountability in reducing risk and enhancing investor confidence. The environmental pillar, however, does not show a statistically significant effect, indicating that environmental initiatives alone may not be fully appreciated by the market in this regional contex.

In Table 9, all three ESG pillars are negatively and significantly associated with financing constraints. They show that stronger ESG performance—particularly in the environmental (–0.0067), social (–0.0091), and governance (–0.0081). The dimensions contribute to reducing capital access barriers. The findings support the signaling theory, where ESG transparency lowers information asymmetry and enhances firms' credibility among lenders and investors.

Table 10 incorporates the KZ index as a mediating variable. None of the ESG pillars have statistically significant direct effects on firm value. However, the financing constraint variable (KZ index) consistently shows a significant negative coefficient across all three specifications, confirming its mediating role. So, the positive effects of ESG performance on firm value operate primarily through the reduction of financing constraints—i.e., firms with higher ESG scores are better to access external financing, which in turn boosts their market valuation

Thus, the findings highlight that not all ESG components contribute equally to firm value. Social and governance aspects appear more influential in direct valuation, while all three pillars contribute to easing financing constraints, supporting an indirect channel through which ESG enhances firm performance.

The Sobel test results for the three ESG pillars—Environment, Social, and Governance. They reveal that none of the pillars exhibit a statistically significant indirect effect on firm value through financing constraints. The Z-scores for Environment (1.66), Social (1.70), and Governance (0.63). They fall below the critical value of ±1.96 required for significance at the 5% level. While the regression models showed individual ESG pillars reduce financing constraints and contribute to firm value, the indirect mediation effect via financing constraints is not strong enough when tested separately by pillar.

The findings imply that the mediating role of financing constraints is only clearly observable when ESG is treated as a composite score, rather than disaggregated into separate pillars. Therefore, the full impact of ESG on firm value appears more evident when environmental, social, and governance efforts are integrated, rather than evaluated in isolation. This supports the notion that a holistic ESG strategy sends a more credible and unified signal to the market compared to fragmented sustainability initiatives.

Table 8
Model I Regression Results – ESG Pillars

Tobin'sQ	(1)	(2)	(3)
E	0,0014		
S		0,0029**	
G			0,0027*
ROA	8,7419***	8,6678***	8,7673***
Lev	0,1703***	0,1713***	0,1670***
Size	-0,1811***	-0,1818***	-0,1769***
Growth	- 0,2147	-0,2161	-0,2080
GDP	-0,0356**	-0,0341**	-0,0357**
Inflasi	-0,0244	-0,0257*	-0,0259*
Covid	-0,1998	-0,2766*	-0,2430*
N Observasi	1260	1260	1260
N Sampel	126	126	126
Prob > F	0,0000	0,0000	0,0000
R-square	0,3780	0,3793	0,3788

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

Table 9
Model II Regression Results – ESG Pillars

Indeks KZ	(1)	(2)	(3)
E	-0,0067***		
S		-0,0091***	
G			-0,0081***
ROA	-20,8453***	-20,7251***	-21,0297***
Lev	2,8495***	2,8471***	2,8601***
Size	0,2072***	0,2025***	0,1875***
Growth	1,2711***	1,2963***	1,2722***
GDP	-0,0081	-0,0118	-0,0068
Inflasi	0,0712***	0,0792***	0,0799***
Covid	0,7051***	0,7796***	0,6722***
N Observasi	1260	1260	1260
N Sampel	126	126	126
Prob > F	0,0000	0,0000	0,0000
R-square	0,8505	0,8514	0,8507

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

Table 10
Model III Regression Results – ESG Pillars

Tobin's Q	(1)	(2)	(3)
Indeks KZ	-0,0813**	-0,0786**	-0,0797**
E	0,0008		
S		0,0022	
G			0,0020
ROA	7,0459***	7,0371***	7,0893***
Lev	0,4021***	0,3953***	0,3952***

Tobin's Q	**(1)**	**(2)**	**(3)**
Size	-0,1642***	-0,1658***	-0,1619***
Growth	-0,1112	-0,1141	-0,1065
GDP	-0,0362**	-0,0350**	-0,0363**
Inflasi	-0,0185	-0,0194	-0,0195
Covid	-0,1424	-0,2153	-0,1893
N Observasi	1260	1260	1260
N Sampel	126	126	126
Prob > F	0,0000	0,0000	0,0000
R-square	0,3847	0,3855	0,3852

Symbols ***, **, and * represent significance levels at 1%, 5%, and 10%, respectively.
Source: Author's Compilation, 2025

Discussion

The findings of this study confirm that ESG performance has a positive and significant effect on firm value in Southeast Asia. It aligns with signaling theory and stakeholder theory. They suggest that sustainability initiatives act as credible signals to the market and help strengthen relationships with various stakeholders. A strong ESG profile improves firm reputation, mitigates risk, and increases investor trust, thereby enhancing firm valuation. The findings are consistent with prior empirical research in other markets (Liu & Zhou, 2025; Melinda & Wardhani 2020). They argue that ESG practices contribute to market value through improved transparency and reduced perceived risk.

In addition to the direct impact, this study demonstrates that financing constraints mediate the relationship between ESG performance and firm value. Firms with higher ESG scores tend to experience fewer financing frictions, likely due to improved information transparency and stakeholder credibility. The mediation result supports the framework proposed by An et al. (2025). ESG disclosures reduce capital market frictions, thereby facilitating access to capital and ultimately increasing firm value. The use of the KZ index as a proxy for financing constraint further validates the robustness of this finding, which supports Hou (2023).

However, the analysis reveals substantial heterogeneity in the ESG–value relationship across countries and ESG pillars. The country-level regressions indicate that institutional differences, regulatory frameworks, and ESG maturity levels significantly influence the strength and direction of the relationships. For instance, firms in Singapore and Malaysia may benefit more from ESG performance due to stronger governance systems and capital markets. While firms in countries with lower investor protection may not experience the same valuation premium. Additionally, the effects of environmental, social, and governance components vary, suggesting that firms cannot adopt ESG in a fragmented manner but rather as an integrated strategy.

The results offer practical implications for corporate managers, investors, and policymakers. For companies, investing in comprehensive ESG strategies can not only enhance value but also ease financing constraints. For investors, ESG ratings may serve as useful signals for identifying firms with strong long-term potential and lower financial risk. Finally, for regulators, the findings highlight the importance of improving ESG disclosure standards and supporting mechanisms to reduce information asymmetry in capital markets.

CONCLUSION AND SUGGESTION

This study concludes that Environmental, Social, and Governance (ESG) performance has a positive and significant effect on firm value in Southeast Asian markets. The relationship is strengthened by the presence of financing constraints as a mediating variable. Firms with strong ESG performance are more likely to experience lower financial barriers, thus improving their

market valuation. The analysis confirms that financing constraints play a crucial role in transmitting the benefits of ESG efforts into tangible firm value, supporting the theoretical propositions of signaling theory and capital market imperfections.

However, the effect of ESG on firm value is not homogeneous across all contexts. The regression results by country and by ESG sub-pillar indicate substantial structural and contextual differences that are not fully captured in the aggregate panel model. It suggests that the effectiveness of ESG initiatives in enhancing firm value may depend on country-specific institutional environments, regulatory frameworks, and stakeholder expectations.

Given these findings, firms are encouraged to adopt integrated ESG strategies that align with both internal value creation and external credibility, especially in markets where financing access is constrained. Policymakers and regulators should promote ESG transparency, harmonize regional reporting standards, and provide incentives for sustainable corporate behavior to strengthen market trust and investment flows.

Suggestions for Future Research

Future research is advised to expand the mediation framework by adopting multiple mediation or moderated mediation approaches. Researchers may also consider employing bootstrapping techniques instead of the Sobel test for more robust inference. In addition, alternative measures of financing constraints—such as the WW Index or SA Index—could be tested to validate the consistency of results across different methodologies.

To enrich the understanding of the ESG–value relationship, future studies could incorporate institutional and legal variables as moderators, allowing for a more nuanced analysis of how regulatory environments shape the impact of ESG. Researchers may also apply mixed methods approaches by integrating quantitative data with qualitative interviews to capture market perceptions and investor sentiment, which are particularly relevant in emerging economies.

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