ESG Performance and Its Impact on Mitigating Cost of Capital: Evidence from Southeast Asia

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ABSTRACT

In response to global challenges such as climate change, social injustice, and the growing demand for corporate ethics, Environmental, Social, and Governance (ESG) factors have become central to business, investment, and public policy agendas. This study aims to provide empirical evidence on the impact of ESG performance on the cost of capital. The research sample consists of non-financial companies listed on stock exchanges in developing Southeast Asian countries from 2018 to 2023. Using panel data regression analysis with STATA version 17, the findings reveal a significant positive relationship between overall ESG performance and the environmental pillar's impact on the cost of capital. However, the social and governance pillars do not show a significant effect on the cost of capital. Further analysis reveals that while ESG performance significantly reduces the cost of debt, it has no impact on the cost of equity. These results suggest that ESG-related practices are not yet fully valued by capital markets and stakeholders in developing Southeast Asian countries.

Keywords: *Environmental Score; Social Score; Governance Score; ESG Performance; Cost of Capital*

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ABSTRAK

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Kata Kunci: *Environmental score; Social score; Governance score; ESG performance; Cost of Capital*

INTRODUCTION

In recent decades, awareness of the importance of Environmental, Social, and Governance (ESG) factors has grown significantly. ESG encapsulates key elements of sustainability, social responsibility, transparency, and efficiency in corporate management. According to an analysis by Oxford University & GlobeScan (2021), the three most pressing risks facing the global business world today are ESG performance (46%), pandemic response (32%), and geopolitical risk (31%).

Investors are increasingly recognizing the link between ESG practices and corporate resilience in times of crisis. Both institutional and individual investors are now more inclined to include ESG considerations in their evaluation of investment risks and opportunities, prompting companies to adopt more sustainable business practices (Broadstock et al., 2021). Ellili (2020) highlights that shareholders and creditors now consider not only financial statements but also non-financial information, such as environmental, social, and governance issues. Similarly, Chen et al. (2023) assert that corporate efforts in environmental protection, social responsibility, and governance help reduce operational and market risks, making these companies more attractive to investors.

The shift in investor preferences towards sustainable investments has been driven by technological advancements and improvements in data analysis, which have contributed to the expansion of the ESG market. As ESG data becomes more accessible, investors and financial institutions are better equipped to evaluate companies' sustainability performance and adjust their investment portfolios accordingly. In response to this trend, numerous countries have introduced policies and regulations that promote sustainable investment practices, including tax incentives, disclosure requirements, and sustainability reporting standards. These regulatory frameworks create an environment conducive to sustainable finance and encourage market participants to integrate sustainability into their investment decisions (Amir & Serafeim, 2018).

This study focuses on the emerging markets in the Southeast Asian region, comprising 11 countries: Indonesia, Singapore, Malaysia, Thailand, the Philippines, Vietnam, Myanmar, Laos, Cambodia, Brunei Darussalam, and Timor-Leste. According to the International Monetary Fund (IMF), the emerging markets and developing economies in this region include Indonesia, Malaysia, Thailand, the Philippines, Vietnam, Myanmar, Laos, Cambodia, Brunei Darussalam, and Timor-Leste.

This research focuses on a select group of countries—Indonesia, Vietnam, Thailand, Malaysia, and the Philippines. These countries were chosen because they are the only emerging markets and developing economies in Southeast Asia that are members of the Sustainable Stock Exchange (SSE) Initiative, a global effort to promote sustainability and transparency in capital markets. According to a report by Pan (2021), these five nations have mandated some form of ESG disclosure, with government-issued guidelines to help issuers prepare and disclose sustainability information.

Previous research has examined the relationship between specific ESG components, such as Corporate Social Responsibility (CSR), and the cost of capital. Studies by El Ghoul et al. (2011); Dhaliwal et al. (2014); Michaels & Grüning (2017);

Megumi Suto (2017) have shown that companies engaged in socially responsible and environmentally friendly practices often experience a lower cost of capital.

The cost of capital is a fundamental concept in corporate finance and investment decision-making, representing the expected rate of return that investors require to fund a specific investment (Harrington et al., 2021). It reflects the expense a company incurs to finance new projects or existing capital. To create value for shareholders, companies must ensure that the return on investment exceeds the cost of capital. ESG considerations have become increasingly critical in these financial decisions, as investors, creditors, and other stakeholders now incorporate ESG performance when assessing a company's long-term sustainability and value (Broadstock et al., 2021). This perspective highlights the importance of effective risk management related to environmental, social, and governance issues, suggesting that strong ESG practices can enhance a company's ability to attract funding and increase its long-term value (Raimo et al., 2021). Research by Sharfman & S. Fernando (2010) indicates that companies with strong environmental performance attract more investors, which, in turn, reduces their cost of capital. Investors interpret a low cost of capital as a sign that the company is managing risks effectively, has profitable projects, and demonstrates long-term growth potential.

This study is further motivated by previous recommendations, such as those by Eliwa et al. (2021), which called for more investigation into ESG practices in developing economies. Findings by Atan et al. (2018) suggest that stakeholders in developing countries have yet to fully embrace ESG initiatives, which could potentially reduce the cost of capital, as has been observed in more developed economies. This presents an opportunity to explore the impact of ESG on the cost of capital in Southeast Asian developing countries. The region is of particular interest due to the early-stage development of ESG practices and the limited research on this topic in Southeast Asia (Saleh & Maigoshi, 2024).

Previous studies have provided mixed evidence regarding the relationship between ESG performance and the cost of capital. Some research, such as that by Gonçalves et al. (2022), identified a positive correlation between ESG performance and the cost of debt. This suggests that companies may not only neglect implementing risk reduction strategies for ESG activities but may also view them as a misallocation of resources, resulting in higher financing costs. In such cases, ESG activities are not perceived as significantly enhancing value or reducing risk. Conversely, Eliwa et al. (2021) found a negative correlation between ESG performance and the cost of debt, indicating that companies can reduce their debt financing costs by integrating sustainability issues into their decision-making processes. Other studies, including those by Raimo et al. (2021); Li & Liu (2018); Gonçalves et al. (2022), demonstrated a significant negative impact of ESG disclosure on the cost of equity. These findings imply that equity markets recognize sustainable investment as a source of value, supporting the argument that ESG practices mitigate risk, with investors rewarding companies that exhibit strong corporate and social performance by demanding a lower equity premium.

The varied findings from previous research, such as those by Eliwa et al. (2021); Raimo et al. (2021); Li & Liu (2018); Gonçalves et al. (2022), Atan et al. (2018),

have prompted further investigation into the impact of ESG on the cost of capital, particularly in emerging markets. Much of the current discourse on this topic has been conducted in developed countries, raising questions about whether companies in emerging markets that adopt stronger ESG practices experience a lower cost of capital due to perceptions of reduced risk and enhanced sustainability. This study is motivated by the inconsistencies in prior research findings, the recommendations for further exploration, and the need to assess the influence of ESG on the cost of capital in an emerging market context.

As industrial development progresses from lower to higher stages, the burden on environmental resources increases Chen et al. (2023). When the strain on resources and the environment exceeds the pace of economic growth, economies may face downturns. This underscores the growing acceptance of sustainable development worldwide, as it becomes increasingly evident that environmental degradation and health problems can hinder long-term economic progress.

According to signaling theory (Spence, 1973), information holders attempt to convey signals that can be utilized by recipients. In line with this theory, companies may choose to disclose ESG information to generate positive reactions from stakeholders, who interpret such involvement as a "good signal" (Khanchel & Lassoued, 2022). ESG performance disclosure can serve as a signaling mechanism, offering companies advantages through favorable evaluations by stakeholders. Decision-makers believe that the economic benefits of environmental protection, social responsibility, and governance will outweigh the associated costs, thereby positively impacting the company's financial performance. When a company discloses strong ESG performance, stakeholders assume it is effectively managing risks, pursuing profitable projects, and positioning itself for long-term growth Sharfman & S. Fernando (2010).

According to legitimacy theory, first introduced by (Dowling & Pfeffer, 1975), the interaction between companies and society is paramount. The theory posits that society plays a critical role in a company's long-term development. Organizations seek to engage in activities that align their operations with societal norms and expectations (Deegan & Unerman, 2011). As such, companies must ensure their operations are perceived as legitimate by external stakeholders. This legitimacy is often achieved through activities that generate positive societal perceptions, such as transparent environmental and social practices (DiMaggio & Powell, 1983).

In this context, ESG disclosure enhances the legitimacy of a company's operations and strengthens the signals sent to stakeholders. By legitimizing its practices, a company builds public trust, which in turn amplifies the effectiveness of its ESG disclosures. ESG reporting serves as both a signal to attract investors and a tool to increase corporate value. Legitimacy theory thus provides a foundation for the success of signaling strategies, with both theories contributing to a company's long-term reputation, both economically and socially.

Recent studies support the argument that ESG performance positively influences overall company performance. For example, Buallay (2019) examined 235 European Union companies over a ten-year period (2007–2016), resulting in 2,350 observations. The findings indicate that ESG is positively correlated with

operational, financial, and market performance. Additionally, studies by Michaels & Grüning (2017); Megumi Suto (2017); Ellili (2020) demonstrate a significant negative relationship between ESG performance and the cost of capital. This suggests that shareholders and creditors consider non-financial information, such as ESG factors, in their investment decisions. Companies with sustainable practices are often viewed as more attractive and cost-effective investment options. Building on these theoretical foundations and previous research, the following hypothesis is proposed:

H_1: ESG performance negatively impacts the cost of capital.

The environmental pillar of ESG assesses a company's impact on ecosystems and natural resources, including air, soil, and water (Thomson.Reuters, 2024). Signaling theory plays an essential role in environmental performance disclosure, as it enables companies to convey key information to stakeholders (Dye, 1985). This theory supports the idea that such disclosures can enhance positive perceptions among investors and stakeholders, thereby reducing the cost of capital. Legitimacy theory further underpins the credibility of these signals, asserting that companies with strong social legitimacy send more credible and accepted environmental signals to the market. From this perspective, positive environmental performance disclosure offers companies an opportunity to address global scrutiny of their operations (Gerab, 2017). Consequently, environmental disclosure can help enhance or maintain a company's legitimacy, improve long-term profitability, and reduce operational risks (Rao, 2023). Previous research indicates that environmental performance disclosure negatively impacts the cost of capital (Ellili, 2020; Rao, 2023; Khanchel & Lassoued, 2022; Eliwa et al., 2021). Based on this evidence, the second hypothesis is proposed:

H_2: Environmental performance negatively impacts the cost of capital.

The social pillar reflects a company's capacity to foster trust and loyalty among key stakeholders, including employees, customers, and the broader community, through the adoption of best management practices (Thomson.Reuters, 2024). From the perspective of legitimacy theory, securing approval and support from society is critical for a company's long-term sustainability and existence. One way to achieve societal approval is by aligning with the social values prevalent within the surrounding community (Burlea-schiopoiu, 2013). A review of prior research suggests that disclosures related to social performance are associated with a reduction in the cost of capital (Rao, 2023; Eliwa et al., 2021). Based on this evidence, the researcher posits the following hypothesis:

H_3. Social performance negatively impacts the cost of capital.

Signaling theory, as outlined by Ross (1977), addresses the information asymmetry between managers, who possess detailed knowledge of the company's operations, and shareholders and the broader market. Governance performance disclosures serve to provide stakeholders with insights into the company's commitment to and effectiveness in implementing best practices in corporate governance. Such transparency helps reduce company risk by minimizing uncertainties or unexpected events that could adversely affect performance (Lassoued & Elmir, 2012). In line with legitimacy theory, as described by Patten (1992), governance disclosures are also used to address reputational challenges or

external pressures, including ethical concerns, compliance issues, or governance-related problems. By making these disclosures, companies can manage specific risks, reduce the potential for unethical allegations, and safeguard their reputations against negative repercussions (Burlea-schiopoiu, 2013). A review of existing research indicates that governance performance disclosure similarly reduces the cost of capital (Ellili, 2020; Khanchel & Lassoued, 2022). Consequently, the researcher proposes the following hypothesis:

H_4. Governance performance negatively impacts the cost of capital.

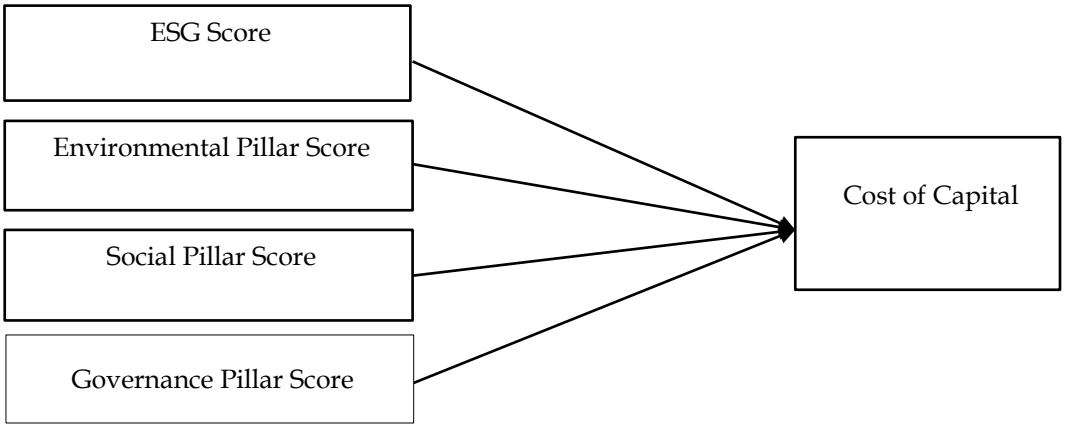

Figure 1. Research Model

Source: Research Data, 2024

RESEARCH METHODS

This study employs a verification research design with a quantitative approach, focusing on empirically testing the impact of ESG performance on the cost of capital during the period from 2018 to 2023. The analysis utilizes balanced panel data regression to test the proposed hypotheses, conducted using STATA version 17. This version of STATA was selected due to its robust capabilities in managing complex panel data and its ability to enhance the efficiency of large-scale data processing, ensuring more precise and valid results.

The population for this research consists of all non-financial companies listed on stock exchanges in developing countries within the Southeast Asian region. The focus on the non-financial sector is based on its direct and measurable social and environmental impacts. Companies in this sector are closely tied to sustainability concerns, including resource use, waste management, and social responsibility. Given the increasing global emphasis on climate change, environmental sustainability, and corporate social responsibility, non-financial companies are deemed to have a greater influence on these issues compared to the financial sector.

The study covers the period from 2018 to 2023, targeting developing Southeast Asian countries that have adopted sustainability reporting standards and regulations. Secondary data is sourced from Thomson Reuters (Refinitiv Eikon) publications. A purposive sampling method is used to select the sample, based on specific criteria outlined below.

Table 3.1 Sample

No	Sample Criteria	Total Data
1	Non-financial companies on the stock exchange in each emerging Southeast Asian country from 2018 to 2023	3607
2	Companies that do not have an ESG score listed on Thomson Reuters consecutively from 2018-2023.	(3477)
3	Companies that do not have complete financial data related to research variables, such as Cost of Capital (WACC, Cost of Debt, Cost of Equity), Company Size, Leverage and Profitability (ROA) documented on Thomson Reuters during the period 2018-2023.	(1)
	Sample Companies	129
	Year of Research	5
	Total Research Samples	**645**

Source: Research Data, 2024

In this study, the Cost of Capital serves as the dependent variable. It represents the anticipated rate of return that market participants require to channel funds into a specific investment (Pratt & Grabowski, 2014).

Measurement of the cost of capital variable as follows:

Variable	Notation	Size
Cost of Equity	CE	*Risk Free Rate* + *Beta* (*Expected Market Return-Risk Free Rate*)
Cost of Debt	CD	[(*Note Rate* × *Short Debt*/*Total Debt*) + (*Bond Rate* × *Long Term Debt*/*Total Debt*)] × (1-*Effective Tax Rate*)
Cost of Preferred Equity	CPE	*Preferred Dividend*/*Preferred Equity*
Cost of Capital	COC	CE × (*Equity*/*Equity* + *Debt*) + CD × (*Debt*/*Equity* + *Debt*) + CPE × (*Preferred Equity*/*Equity* + *Debt*)

Source: Research Data, 2024

The independent variables in this study consist of the composite ESG score and its three underlying components: Environmental, Social, and Governance performance, all of which are derived from assessments by Refinitiv Eikon. The following provides a detailed description of the independent variables, based on evaluations from (LSEG, 2022) and (Thomson.Reuters, 2024):

Variable	Notation	Description
ESG Score	ESG	This score represents the overall ESG performance of a company, providing an average evaluation of the environmental, social, and governance pillars based on publicly disclosed information.
Environmental Pillar Score	ES	This metric assesses the company's impact on natural systems, both living and non-living, including air, land, water, and ecosystems.
Social Pillar Score	SS	This score reflects the company's capacity to build trust and loyalty among its employees, customers, and society through the application of best management practices.
Governance Pillar Score	GS	This score evaluates the company's governance structures, ensuring that board members and executives act in the long-term interests of shareholders

Thomson Reuters' ESG assessment categorizes scores into four distinct ranges, further refining the evaluation of corporate ESG performance.

Table 3.2 ESG Score Value

Score	Description	
0-25	First Quartile	Scores within this range reflect a lower level of ESG performance and inadequate public disclosure of essential ESG information.
>25-50	Second Quartile	Scores in this category signify a satisfactory level of ESG performance along with a moderate degree of public disclosure regarding significant ESG information.
>50-75	Third Quartile	Scores in this range demonstrate a reasonably good level of ESG performance and are perceived to have above-average transparency in public reporting of ESG information.
>75-100	Fourth Quartile	Scores in this range concerning the public disclosure of significant ESG data show a high level of ESG performance and strong transparency.

Source: Research Data, 2024

There are 3 (three) control variables in this study, including:

Firm Size: Firm size serves as a parameter for assessing the scale of a company, encompassing several factors such as total assets, equity, profitability, sales volume, market share, and other elements.

$$\text{SIZE} = \text{Ln (Total Assets)} \quad \text{……(1)}$$

Leverage: Leverage represents the sources of financing that a company requires to ensure its sustainability.

$$\text{Leverage} = \frac{\text{Total Liabilities}}{\text{Total Assets}} \times 100\% \quad \text{……...(2)}$$

Profitability: The profitability of a company (ROA) is considered a key determinant of future investments. Higher profitability expectations will reduce the friction faced by the company in the market.

$$\text{Return On Asset} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100\% \quad \text{……(3)}$$

The model structure for testing the impact of ESG on the cost of capital is as follows:

Model 1:

$$\text{COC}_{i,t+1} = \alpha_{it} + \beta_1 \text{ESG}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{ROA}_{it} + e_t \quad \text{.....……...(3)}$$

Model 2:

$$\text{COC}_{i,t+1} = \alpha_{it} + \beta_2 \text{ES}_{it} + \beta_3 \text{SS}_{it} + \beta_4 \text{GS}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{ROA}_{it} + e_t \quad \text{.....(4)}$$

Description :

$\text{COC}_{i,t+1}$	=	Company's Cost of Capital in year t+1, measured by Weighted Average Cost of Capital (WACC)
α_{it}	=	constant
ESG_{it}	=	ESG Performance (ESG Score) of company i in year t
ES_{it}	=	Environmental Performance (Environmental Pillar Score) of company i in year t
SS_{it}	=	Social Performance (Social Pillar Score) of company i in year t
GS_{it}	=	Governance Performance (Governance Pillar Score) company i in year t

$SIZE_{it}$	=	Company Size i in year t, measured by the logarithm of Total Assets
LEV_{it}	=	Leverage of Company i in year t, measured by the ratio of Total Liabilities to Total Assets
ROA_{it}	=	Profitability of Company i in year t, measured by the Ratio of Net Income to Total Assets
e_t	=	error

RESULTS AND DISCUSSION

Derived from Thomson Reuters, the sample consists of 3,607 firm-years drawn from the population of publicly listed companies in 5 (five) emerging economies: Indonesia, Vietnam, Thailand, Malaysia and the Philippines. The population was selected by applying a presumptive sampling technique.

The results of the descriptive analysis are presented in the table below:

Table 4.1 Descriptive Statistics Results

Variable	Observation Data	Mean	Std.Dev	Min	Max
COC	645	0,080	0,036	0,004	0,288
COD	645	0,037	0,019	-0,003	0,226
COE	645	0,105	0,049	0,003	0,347
ESG	645	54,259	18,209	6,659	91,754
ES	645	48,383	24,140	0	97,290
SS	645	60,025	20,301	5,297	97,507
GS	645	51,459	21,768	2,977	95,413
SIZE	645	22,242	1,072	19,180	25,315
LEV	645	0,567	0,197	0,083	1,287
ROA	645	0,058	0,086	-0,564	0,800

Source: Research Data, 2024

Table 4.1 reveals that the average cost of capital is 8%, with a standard deviation of 3.6%, and a range spanning from a minimum of 0.4% to a maximum of 28.8%. For the cost of debt and cost of equity, the average values range from 3.7% to 10.5%, indicating that some companies are entirely equity-financed. Additionally, the table shows that the average score for the social pillar is 60.025, the highest among the ESG pillars. This elevated social pillar score suggests a stronger focus on social factors within Southeast Asia, potentially driven by societal expectations or political regulations that promote corporate social responsibility. Consequently, financial markets in the region appear to place greater emphasis on social issues, prompting companies to prioritize this pillar.

Moreover, Table 4.1 indicates that the average ESG score for emerging companies in Southeast Asia falls within the third quartile, with a standard deviation in the first quartile. The highest score reaches the fourth quartile, while the lowest remains in the first quartile. These results suggest that ESG performance among emerging companies in Southeast Asia is not yet well-developed, with most companies' ESG rankings falling within the first and second quartiles, indicating a lower-middle level of performance. This can be attributed to the fact that many Southeast Asian countries are still in the early stages of ESG development, where regulatory requirements and disclosure obligations are not

yet fully established. As a result, ESG practices have not garnered significant attention from most listed companies in the region.

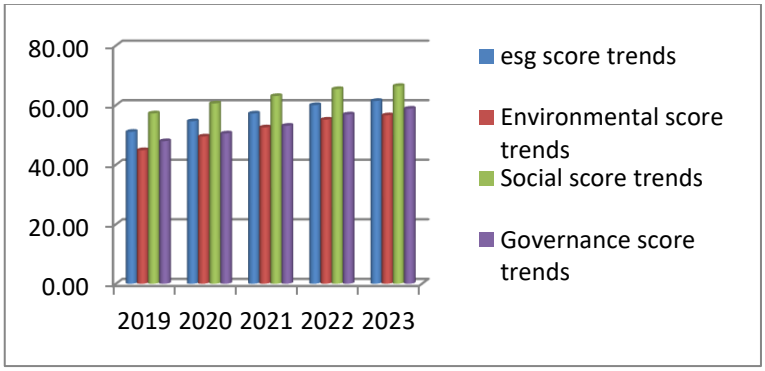

Figure 4.1 The trend of ESG scores.

As depicted in Figure 4.1, the trends in ESG scores, including the individual scores for environmental, social, and governance factors, show a consistent upward trajectory. The average overall ESG score for companies listed on the financial markets of five Southeast Asian countries has steadily increased from 2019 to 2023. This upward trend reflects a growing awareness among Southeast Asian companies of the importance of sustainable practices related to environmental, social, and governance factors. The overall rise in ESG scores indicates that firms in the region are increasingly recognizing the value of sustainability and social responsibility in their operations.

In the regression analysis phase, selecting an appropriate regression model is critical to ensuring the validity and accuracy of parameter estimates. After conducting multiple stages of testing, the Hausman test was employed to identify the most suitable regression model. According to Table 4.2, the Prob>chi2 value for Model 1 is 0.004, and for Model 2, it is 0.001. Since both values are below the significance threshold of 0.05, it can be concluded that the fixed effects model is the most appropriate for estimating the panel data in this study.

Table 4.2 Hausman Test Results

	Model 1	**Model 2**
Prob>chi^2	0.004	0.001

Source: Research Data, 2024

By choosing the fixed effect model, the regression equation of this research model needs to be tested for classical assumptions.

Table 4.3 Model 1

Shapiro-Wilk W test for normal data					
Variable	obs	w	v	z	Prob>z
Residual values	645	0.965	14.792	6.550	0.000

Source: Research Data, 2024

Table 4.4 Model 2

Shapiro-Wilk W test for normal data					
Variable	obs	w	v	z	Prob>z
Residual values	645	0.967	14.045	6.424	0.000

Source: Research Data, 2024

The normality test with the Shapiro-Wilk test shows the probability value of model 1 and model 2 is 0.000 below 0.05. This means that the remaining research

data is not normally distributed. However, the sample in this study is more than 30 (n ≥ 30) and based on the central limit theorem (CLT), the data in this study are said to be as expected or considered normal.

Table 4.5 Model 1

Variable	VIF	1/VIF
ESG	1.04	0.961
SIZE	1.26	0.793
LEV	1.18	0.849
ROA	1.27	0.790
Mean VIF	1.19	

Source: Research Data, 2024

Table 4.6 Model 2

Variable	VIF	1/VIF
ES	2.14	0.466
SS	2.30	0.436
GS	1.37	0.731
SIZE	1.33	0.754
LEV	1.19	0.838
ROA	127	0.789
Mean VIF	1.60	

Source: Research Data, 2024

The test results show that both models do not have multicollinearity symptoms in the variables used. The evidence is that the VIF value in each panel is lower than ten and has a 1/VIF or tolerance value above 0.1.

Table 4.7 Model 1

Breusch-Pagan test for heteroskedasticity
Asssumption: Normal error terms
Variable: Fitted Values of COC

H0: Constant variance

Chi2(1) = 3.58
Prob>chi2 = 0.059

Source: Research Data, 2024

Table 4.8 Model 2

Breusch-Pagan test for heteroskedasticity
Asssumption: Normal error terms
Variable: Fitted Values of COC

H0: Constant variance

Chi2(1) = 2.51
Prob>chi2 = 0.113

Source: Research Data, 2024

The test results show that, since the significance value of Prob>chi2 > 0.05, the panel research regression model shows no signs of heteroscedasticity.

Table 4.9 Model 1

Durbin-Watson d-statistic (5, 645) = 0.769

Source: Research Data, 2024

Table 4.10 Model 2

Durbin-Watson d-statistic (7, 645) = 0.789

Source: Research Data, 2024

The result of this test is that there are no autocorrelation symptoms in all research models because the Durbin-Watson value in each model is in the range of -2 to +2.

Table 4.11 Regression Analysis Output

	Model 1			**Model 2**		
	COC			**COC**		
Variable	**Coefficients**	**t**	**p-value**	**Coefficients**	**t**	**p-value**
Constant	-0.422	-3.07	0.002	-4.008	-2.89	0.004
ESG	**0.004**	**2.68**	**0.008*** **			
ES				**0.003**	**1.82**	**0.070***
SS				**0.001**	**0.73**	**0.466**
GS				**0.001**	**0.56**	**0.578**
SIZE	0.065	1.04	0.298	0.056	0.88	0.377
LEV	-0.109	-0.57	0.569	-0.111	-0.58	0.562
ROA	-0.392	-0.14	0.885	-0.016	-0.06	0.952
N	645			645		
F Sig	**2.81**	**Prob > F**	**0.025**	**2.17**	**Prob > F**	**0.049**
Adj R2			**0.022**			**0.025**

*p<0,1; **p<0,05; ***p<0,01

Source: Research Data, 2024

The first hypothesis explores the relationship between ESG performance and the cost of capital. According to the research findings, ESG performance shows a positive correlation with the cost of capital, with a significance level of (0.008 < 0.05). This suggests that the hypothesis proposing a significant negative effect of ESG on the cost of capital is rejected, indicating that as a company's ESG performance improves, its cost of capital rises. These results challenge the foundational principles of signaling theory. Signaling theory posits that companies report sustainability information to generate positive stakeholder reactions, as stakeholders perceive sustainability disclosures as a favorable signal. Therefore, it is generally expected that firms with strong ESG performance would convey positive signals to stakeholders, resulting in a reduction in their cost of capital (Muneer et al., 2023). However, the findings of this study reveal that improved ESG practices are associated with an increased cost of capital, contradicting the expectations of signaling theory.

This result aligns with the conclusions of (Atan et al., 2018), who found that stakeholders in developing countries may not yet fully trust corporate ESG initiatives, which would otherwise reduce the cost of capital as seen in developed markets. Additionally, this outcome may stem from the limited use of ESG data by capital markets in these regions or from weak regulatory frameworks related to sustainability. From the perspective of legitimacy theory, as suggested by (Hutchins et al., 2019), companies seek to operate within societal norms and expectations. ESG practices, in this context, can be viewed as efforts to meet social and environmental standards, enhancing legitimacy among external stakeholders. Nonetheless, the findings of this study indicate that while companies may aim to strengthen their legitimacy through ESG practices, this does not necessarily

translate into a lower cost of capital. The significant positive effect of ESG on the cost of capital suggests that capital markets in Southeast Asian developing countries may view such practices as introducing additional risks or as responses to external pressures (Magnanelli & Izzo, 2017). Previous research also indicates that stakeholders in developing countries may perceive sustainability efforts as inefficient or a waste of resources (Dua & Sharma, 2024).

The second hypothesis examines the effect of environmental performance on the cost of capital. According to the results from Model 2, a significant positive correlation is found between environmental performance and the company's cost of capital, with a significance level of (0.070 < 0.1). This leads to the rejection of the hypothesis that environmental performance has a negative effect on the cost of capital. This finding implies that improvements in environmental practices may not necessarily reduce a company's cost of capital as previously anticipated. These results suggest that investors or creditors may perceive environmentally responsible companies as riskier or less financially stable, which could result in a higher cost of capital.

From a signaling theory perspective, as noted by (Delmas et al., 2015), these findings may reflect how the market interprets environmental performance improvements as an indication that the company is facing specific challenges or weaknesses requiring additional efforts to bolster financial performance. As a result, the market may view an increase in the cost of capital as a response to perceived higher risks or uncertainties regarding the company's future. Although companies invest in enhanced environmental practices, the market might interpret these actions as reactive, rather than proactive, leading to an increase in the cost of capital. From the legitimacy theory viewpoint, the rise in environmental performance, alongside an increase in the cost of capital, may reflect companies' efforts to maintain or improve their legitimacy in the eyes of stakeholders (Page & Indriana, 2022). Despite the additional costs incurred through environmental initiatives, companies may enhance their environmental performance in response to stakeholder pressure, to uphold their market reputation, or to comply with regulatory requirements (Daddi et al., 2022). Consequently, the increase in the cost of capital may be seen as a byproduct of companies' legitimacy strategies to demonstrate environmental responsibility to the public.

The third hypothesis examines the impact of social performance on the cost of capital. The analysis of Model 2 reveals a positive, though statistically non-significant, correlation between social performance and the cost of capital, with a significance level of (0.466 > 0.05). As a result, the hypothesis proposing that social performance negatively affects the cost of capital is rejected. These findings suggest that investors or creditors do not directly associate a company's social performance with its risk profile or level of trust (M. Li et al., 2019). This indicates that other factors play a more prominent role in influencing the market's assessment of a company's cost of capital. Moreover, the results highlight that stakeholders may not yet factor corporate social responsibility into their evaluation of risk and trust. This could stem from a lack of awareness of social issues, a prioritization of financial returns, or other considerations that drive investment decisions. Additionally, stakeholder perceptions of corporate social responsibility can vary significantly (Bozoklu, 2018). The findings also reflect the developmental

stage of Southeast Asian markets, which may not yet fully value or integrate corporate social responsibility as a key determinant of a company's cost of capital, as has been observed in developed markets (Yilmaz, 2022) (Khanchel & Lassoued, 2022).

The fourth hypothesis investigates the effect of governance performance on the cost of capital. The analysis of Model 2 shows a positive correlation between governance performance and the cost of capital, though it is statistically non-significant, with a significance level of (0.578 > 0.05). Therefore, the hypothesis suggesting that governance performance has a negative impact on the cost of capital is rejected. According to signaling theory, disclosing governance performance provides stakeholders with insights into a company's commitment to and effectiveness in applying best practices in corporate governance. This should reduce company risk by minimizing uncertainties that could disrupt performance. However, the findings suggest that, despite improved governance disclosures, the market or stakeholders do not perceive governance performance as a strong or relevant indicator of the company's quality or stability (Umar et al., 2022). Furthermore, the results suggest that governance disclosures by companies in developing countries may not fully meet stakeholders' expectations or adequately address reputational or risk concerns. Governance-related strengths and weaknesses appear to be of lesser importance to stakeholders (Erragragui, 2018). The lack of a significant relationship between governance performance disclosure and the cost of capital may indicate that the market does not yet strongly associate governance quality with risk or trust in the company. This could result from a lack of market awareness of governance issues or a focus on other factors deemed more crucial in evaluating a company's performance and sustainability.

Most studies on ESG performance and its effects focus on two main components of a company's cost of capital: the cost of debt and the cost of equity. Given that debt and equity represent distinct sources of financing, stakeholders may view these differently when assessing the company. Therefore, this study analyzes both components separately as supplementary analyses to further substantiate the research findings.

The results of the supplementary tests are presented in the following table:

Table 4.12 Panel Data Regression Analysis Results (Supplementary Analysis)

	COD			COE		
Variable	Coefficients	t	p-value	Coefficients	t	p-value
ESG	0.014	5.41	0.000***	0.003	1.60	0.110
ES	0.007	2.86	0.004***	0.004	2.35	0.019***
SS	0.003	1.17	0.241	-0.001	-0.34	0.736
GS	0.004	2.24	0.025***	-0.001	-0.44	0.659
SIZE	0.375	3.48	0.001***	0,118	1.67	0.095*
LEV	0.950	2.90	0.004***	-0.124	-0.57	0.566
ROA	0.982	2.11	0.035***	-0.295	-0.96	0.336
N	640			645		

*p<0,1; **p<0,05; ***p<0,01

Source: Research Data, 2024

Table 4.5 reveals a significant positive relationship between ESG performance and the cost of debt, with a significance level of 0.000, which is well below the 0.05 threshold. This suggests that enhanced sustainability performance

has not resulted in lower debt costs. One possible explanation is that creditors may be willing to lend at higher interest rates to companies with stronger ESG performance during the lending process. These findings are consistent with previous research (Magnanelli & Izzo, 2017; Gonçalves et al., 2022). Model 2 further supports this observation, showing that both environmental and governance performance have significant positive correlations with the cost of debt, with significance levels of 0.004 and 0.025, respectively. However, social performance does not have a significant effect on the cost of debt. This indicates that lenders may perceive sustainability initiatives, particularly in environmental and governance areas, as a potential misallocation of resources, leading to higher interest rates for companies that excel in these domains (Gonçalves et al., 2022).

Additionally, the analysis shows that company size, leverage, and profitability are significantly and positively related to the cost of debt. Larger companies with higher profitability tend to incur higher borrowing costs, and an increase in leverage also leads to higher debt costs. These results suggest that the cost of debt is influenced not only by sustainability performance but also by various other financial factors.

Regarding the impact of ESG performance on the cost of equity, the analysis indicates that ESG factors do not significantly influence the cost of equity, as evidenced by a significance value of 0.110, which is greater than 0.05. This implies that ESG-related factors may not significantly alter investors' perceptions of risk concerning the company's future cash flows, as reflected in the cost of equity. However, Model 2 results reveal that environmental performance has a significant positive effect on the cost of equity, while social and governance disclosures do not have a significant impact. The positive relationship between environmental performance and the cost of equity suggests that strong environmental performance does not lower the company's cost of equity but, instead, increases it. This finding is consistent with the research of (S. Li & Liu, 2018), which also found a positive correlation between environmental performance and the cost of equity.

This suggests that investors in developing countries may impose higher equity capital costs on companies that transparently disclose and manage their environmental impacts. One possible reason is that shareholders perceive ESG initiatives as inefficient or unproductive (Hutagaol-martowidjojo et al., 2023) (Dua & Sharma, 2024). Investors may associate companies focused on environmental concerns with higher risks, resulting in elevated equity capital costs for these firms.

CONCLUSION

Based on the analysis and discussion, it is concluded that in emerging Southeast Asian countries, ESG-related practices are still not fully valued by stakeholders. This highlights the need to enhance awareness and understanding of social, environmental, and corporate governance responsibilities within the business environment of these emerging markets. Companies in Southeast Asia must work towards increasing stakeholder awareness and understanding of sustainability practices, as well as the importance of incorporating ESG data into investment decision-making. Achieving this requires more effective communication strategies with capital markets and other stakeholders.

Additionally, regulators and governments in developing countries should strengthen sustainability-related regulations and provide incentives for companies to adopt better sustainability practices. This would help reduce market uncertainty surrounding sustainability initiatives.

The limitations of this study suggest areas for improvement and development in future research on this topic. First, regarding data availability, this study relied solely on data from Refinitiv Eikon. Future research could benefit from utilizing data on the cost of capital and ESG scores from additional databases to allow for more comprehensive comparisons. Another limitation is the relatively short observation period; extending the study period in future research could allow for an exploration of the long-term impacts of ESG performance on the cost of capital. This would provide a deeper understanding of how effective ESG practices can reduce financing costs. While this study did not fully demonstrate that strong ESG practices lead to lower costs of capital, as suggested by previous research, further investigation is needed to confirm these findings over a longer time horizon.

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