



Effect of Environmental, Social, and Governance Factors on Stock Returns in ASEAN Firms

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Abstract. This study examines the influence of Environmental, Social, and Governance (ESG) factors on the stock returns of listed firms in the ASEAN region. This study effectively addresses endogeneity concerns and improves the accuracy of estimations by utilizing the Generalized Method of Moments (GMM) on a dataset consisting of 412 firms across six ASEAN countries from 2012 to 2022. The findings reveal a statistically significant and favorable association between ESG ratings and stock returns. Environmental and social factors had the greatest impact. Companies with higher ESG ratings have better financial success, supporting the idea that including ESG aspects in their investment strategies may enhance returns. Robustness tests provide further evidence of the durability of these connections, indicating that variations in model assumptions do not substantially affect the influence of ESG on stock returns. This study provides comprehensive insights into the benefits of ESG practices in emerging economies and significantly contributes to the existing body of knowledge. Furthermore, it highlights the need to promote sustainable and responsible company practices to achieve exceptional financial success. The results of this study hold essential consequences for politicians, investors, and scholars who support the integration of ESG elements into company plans and investment choices.

Keywords: Environmental Pillar Score, ESG Score, Governance Pillar Score, Social Pillar Score, Stock Returns.

1 Introduction

The recent focus on integrating Environmental, Social, and Governance (ESG) factors into investment strategies reflects an increasing recognition of their possible impact on stock returns. This finding suggests that strong ESG ratings boost stock performance [1]. This study examines how ESG factors affect ASEAN firms' stock returns. This study argues that ASEAN firms' stock returns benefit from high ESG ratings, which indicates ESG standards [2].

There are significant studies on ESG factors and financial performance, but there is a dearth of studies on ESG and stock returns in ASEAN-listed non-financial firms. Most recent studies have focused on developed markets, neglecting developing economies [3-5]. In addition, previous studies on ESG have examined various aspects of ESG

separately rather than their total effect, ignoring potential synergies and interconnections across the three pillars [6]. This study examined the overall ESG score and each pillar's score to address these issues. This technique provides a complete ESG impact analysis. A large ASEAN dataset fills the key gap in this study. This enabled a more complete study to account for regional variance. Prior studies usually covered a small geographic range or used data from a single country, limiting their application [7]. This study includes data from several ASEAN countries from a broader perspective and provides more relevant conclusions. This study also includes profitability, firm size, industry, country, and year dummies. These factors help isolate the effects of ESG on stock results.

Reference [5] show that firms with strong ESG practices may exceed the performance of their competitors, challenging the idea that financial returns and ESG concerns cannot coexist. This study improves the theoretical framework by linking the ESG components to stock returns. In addition, it provides a better understanding of how these factors affect traditional financial indicators. This study examined the aggregate and individual effects of ESG factors. This dual approach offers a more detailed analysis of the ESG variables that affect stock returns. This study is relevant for investors, politicians, and academics.

This study's empirical finding that ESG ratings boost ASEAN's stock returns is crucial. These findings suggest that including ESG factors in investment decisions may boost financial performance and encourage sustainable company practices. We conclude that emerging economies should include aspects of ESG.

2 Methods

This research focuses on non-financial firms listed on stock exchanges in the ASEAN region, excluding financial institutions. The sample includes companies from Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. This study uses data from 2012 to 2022 obtained from the LSGE-Eikon database. A total of 412 firms were included in the sample, with each country providing proportional representation. Control variables such as profitability, firm size, industry, country, and year dummies are considered, along with critical variables such as ESG and stock returns. To address endogeneity and improve estimation precision, this study employs a generalized method of moments (GMM) with instrumental variables (IVs) instead of conventional regression models. Previous stock return values are used as IVs, and a two-step dynamic specification of the GMM is applied to reduce reverse causality and measurement errors. This approach enhances the analysis and provides a comprehensive understanding of the relationships between stock returns, leverage, corporate governance mechanisms, and firm growth. Thus, a dynamic panel model that includes the lagged values of the dependent variable (e.g., stock returns) as regressors with one lag is generally stated as follows:

$$y_{it} = a + bx_{it} + \rho y_{it-1} + \varepsilon_{it} \quad (1)$$

The empirical model is as follows:

$$\ln STR_{it} = \alpha_0 + \alpha_1 EVNPS_{it-1} + \alpha_2 SOCPS_{it} + \alpha_3 GOVPS_{it} + \alpha_4 ESGS_{it} + \sum_2^N \alpha_i X_{it} + \delta_i + \delta_t + \varepsilon_{it} \quad (2)$$

Where:

- $\ln STR_{it}$ stock returns for individual firms are at the time t .
- α_0 Is the constant.
- $EVNPS_{it}, SOCPS_{it}, GOVPS_{it}, ESGS$ are the Environmental, Social, and Governance Pillar Scores and the overall ESG Scores for individual firms.
- i at the time t They are the control variables of profitability and firm size for individual firms i at the time t and the time, year, and country dummies.
- ε is the error term
- $\alpha_1 - \alpha_4$ are the coefficients for the variables.

3 Results and Discussion

3.1 Pearson Correlation Matrix and Descriptive Statistics

Table 1 shows the study variables' mean values and standard deviations, along with their correlations. The findings demonstrated a notable positive correlation between ESG scores and market returns, suggesting that higher ESG scores indicate improved stock returns. According to the correlations identified between stock returns and the ESG components (ENVPS, SOCPS, GOVPS), these particular factors influence financial performance. This study enhances our understanding of the associations between environmental, social, and governance (ESG) parameters and stock performance, suggesting that firms with higher ESG ratings frequently exhibit superior financial outcomes.

Table 1. Pearson correlation matrix and descriptive statistics.

Var.	STR	ENVPS	SOCPS	GOVPS	ESGS	ROA	FSIZE	Mean	SD
lnSTR	1							2.716	0.924
ENVPS	0.037**	1						38.169	0.637
SOCPS	0.178**	0.183*	1					43.722	0.945
GOVPS	0.073**	0.137**	0.472**	1				19.515	0.094
ESGS	0.292***	0.047**	0.371*	0.008	1			57.079	0.332
ROA	0.019	0.380**	0.291**	0.057*	0.045	1		0.122	1.785
FSIZE	0.028	0.283*	0.003	0.202**	0.073	0.087*	1	13.602	0.753

Note(s): ***,**,* signify 0.010, 0.05, and $p < 0.1$, respectively. lnSTR, natural log of stock returns; ENVPS, environmental pillar score; SOCPS, social pillar score; GOVPS, governance pillar score; ESG, environmental, social, and governance pillar score; ROA, return on assets; FSIZE, firm size.

3.2 GMM Regression Analysis

Table 2 presents the results of the baseline, sensitivity, and robustness tests on the correlation between ESG factors and stock returns for non-financial firms in the ASEAN region. The findings provide evidence of a strong positive relationship between ESG components and stock returns, thus supporting the notion that high ESG scores are beneficial for stock performance. This study demonstrates a significant and favorable association between improvements in the environmental, social, and governance pillar scores, the overall ESG score (ESGS), and an increase in stock returns.

Table 2. Baseline and sensitivity and robustness test results on ESG factors and stock returns.

Variable	Dependent variable: lnSTR		
	Baseline model	Sensitivity and robustness test model	Decision
	Two-Step System GMM	Diff GMM	
lnSRt(-1)	0.127*** (24.76)	0.024*** (6.34)	Supported
ENVPS	0.406* (1.79)	0.020** (2.50)	Supported
SOCPS	0.137** (2.82)	0.115*** (6.10)	Supported
GOVPS	0.798*** (19.33)	0.764*** (217.46)	Supported
ESGS	0.012*** (4.83)	0.019*** (4.60)	Supported
ROA	0.023* (2.61)	0.118*** (27.93)	Supported
FSIZE	0.283*** (5.55)	0.152*** (6.93)	Supported
Year Dummies	Yes	Yes	
Country Dummies	Yes	Yes	
Industry Dummies	Yes	Yes	
AR(1)	(0.320)	(0.485)	
AR(2)	(0.600)	(0.614)	
Sargan Test	(0.845)	(0.727)	
Hansen J-test	(0.584)	(0.486)	
Wald χ^2	70.28**	69.19**	
Instruments	26	26	
Firms	410	410	
Observations	3,798	3,865	

Note(s): ***, **, * signify 0.010, 0.05, and $p < 0.1$, respectively. lnSTR, natural log of stock returns; ENVPS, environmental pillar score; SOCPS, social pillar score; GOVPS, governance pillar score; ESG, environmental, social, and governance pillar score; ROA, return on assets; FSIZE, firm size.

The findings from the baseline model show that stock returns are positively and statistically substantially influenced by all ESG components and overall ESG scores. For example, the governance pillar score has a strong positive effect, indicating that investors value governance procedures that significantly improve company performance. Prior research, such as the study conducted by He et al. [2], supports the importance of governance in connection with business performance, aligning with our

findings. Similarly, albeit to a lesser extent, social and environmental scores exhibit positive effects, aligning with the research of Pinheiro [1] and Ahmed et al. [5], who highlight the growing importance of social and environmental factors in investment decision-making.

The sensitivity and robustness test results conducted using different GMM consistently corroborate the robustness of the findings. The positive coefficients associated with the ESG scores in both models show that the link between ESG performance and stock returns is stable and unaffected by changes in the model specification. Consistent with previous research on the influence of financial health and company size on stock market performance, including control variables such as return on assets and firm size shows significant beneficial impacts on stock returns. This aligns with the findings presented by Giese et al. [7], which asserts that ESG elements favorably affect organizations' growth potential and financial resilience.

These findings have significant implications for investors, governments, and scholars. The positive relationship between ESG ratings and stock returns implies that incorporating ESG factors into investment strategies could improve investors' financial outcomes. This is particularly important in ASEAN markets, with an increasing inclination towards sustainable investment. The results highlight the importance of politicians attaching to approving ESG guidelines to attract investment and improve business performance. This study offers new insights into the impact of ESG in emerging countries, thus contributing to the growing body of academic studies examining the connection between ESG and financial performance.

This study highlights the importance of ESG in impacting stock returns. This finding supports the notion that implementing sustainable and responsible company practices may improve financial performance. The findings provide a comprehensive understanding of how ESG variables impact traditional financial indicators, which aligns with the theoretical framework linking ESG factors and stock returns. This study provides evidence for the integration of ESG aspects into investment strategies by demonstrating the favorable impact of ESG ratings on stock performance. This fosters the development of a more sustainable and responsible investment strategy in the ASEAN region.

4 Conclusions

This study examines the effect of ESG factors on stock returns in ASEAN-listed non-financial firms. According to the study's findings, the study concludes that ESG factors significantly and positively affect the stock returns of non-financial firms in the ASEAN region. According to research, superior stock performance is strongly correlated with higher scores on the environmental, social, and governance pillars. These findings offer additional evidence for previous studies highlighting the importance of ESG factor considerations in investment decision-making and financial performance evaluation. According to the study, incorporating ESG factors into corporate strategies and investment portfolios may result in enhanced financial outcomes, fostering sustainable business practices. This underscores the potential advantages investors,

policymakers, and academicians may derive from advocating for and implementing ESG standards to foster sustainable development in emerging markets and attain superior financial outcomes.

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