

The effects of Environmental, Social, and Governance (ESG) scores on firm values in ASEAN member countries

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ABSTRACT

This study examines the effect of Environmental, Social, and Governance (ESG) scores on firm value in ASEAN. This study uses data from 184 public companies listed on the stock exchanges of each country from 2010 to 2019. This study finds that ESG scores have a negative effect on firm value (Tobin's Q). This finding shows that the higher the ESG value, the lower the firm value (undervalued) in ASEAN. Furthermore, this study shows the influence of each pillar, namely the environmental, social, and governance. The environmental and social pillars negatively affect firm value, while the governance pillar has no effect. In ASEAN, a high ESG score is not considered an advantage for a company. This research has implications for companies to consider increasing information and compliance with environmental and social aspects of the company to increase their values. In addition, it also adds to the literature regarding the determinants of firm value on non-financial factors.

Introduction

The organization's demands to be more responsible for the environment and society were increasing (Arif et al., 2021). Correspondingly, many companies adopted stakeholder-oriented strategies and maximize social value, such as focusing on corporate sustainability (Alsayegh et al., 2020). Furthermore, uncertain market conditions, such as the global financial crisis, required countries to make sustainable choices and important organizational decisions (Elgergeni et al., 2018; Garcia-Sanchez et al., 2014). Therefore, they implement corporate social responsibility (CSR) programs to achieve sustainability. The company's CSR activities should be disclosed to external parties, including investors. CSR disclosure communicated the social and environmental impacts of an organization's economic actions on specific interest groups and society (Gray et al., 1996). In addition, a higher disclosure level helps companies attract capital and maintain investor confidence in their stock market.

Various methods could be used to measure CSR, such as disclosure or content analysis, reputation index, questionnaire surveys, and single dimension-based measures (Ehsan et al., 2018). However, the most widely used method for measuring CSR is the reputation index or scale collected by various data providers, such as environmental, social, and governance (ESG) scores. ESG considered the environmental, social, governance, and financial factors in the investment decision-making process (MSCI, 2020). The ESG scores are published by several data providers, such as Thomson Reuters, Bloomberg, and MSCI. These are calculated using ten elements from each pillar, comprising resource use, emissions, innovation, workforce, product responsibility, community, human rights, management, investors, and CSR strategies. Therefore, ESG measurements are interesting to study for several reasons. First, its score effectively reflected a company's efforts in ESG (Humphrey et al., 2012). Second, it is a more objective approach to measuring a company's sustainable performance. Third, recent ESG research has renewed interest in the role of ESG management in developing countries (Xu et al., 2020).

ASEAN member countries have different ESG development and implementation policies. In line with this, ESG awareness, disclosure, and transparency have increased significantly in recent years. This was seen in the active promotion and encouragement of changes in policies, regulations, and guidelines by stakeholders in the private and public sectors, such as civil society or government-led initiatives in ASEAN member countries (Korwatanasakul, 2020). For instance, non-governmental and professional organizations, such as the National Center for Sustainability Reporting in Indonesia, highlight the importance of ESG disclosure. Moreover, the Business Sustainability Program in Malaysia was established to promote and educate companies to incorporate sustainability into their business strategies.

Previous studies have examined the relationship between CSR and company performance. In contrast, this research specifically examines market performance from the firm value perspective. According to Lumoly et al., (2018), firm value showed performance as indicated by the stock price formed due to the demand and supply of the capital market. Furthermore, Melinda & Wardhani (2020) showed that ESG scores positively affect firm value in Asia. Similar results were obtained in Egypt, the United States, and Brazil. In contrast, research in India found a negative relationship between ESG, environmental and governance pillars, and firm value.

This study on ESG is an interesting research topic because many sustainability issues in ASEAN have not been studied thoroughly. The novelty of this research is, first, this research focuses on companies in the ASEAN region. Previous research focused on developed and developing countries with inconsistent results in Europe, Australia, and Asia. In ASEAN countries, awareness about sustainability has been still very diverse in its application (Melinda & Wardhani, 2020; Alareeni and Hamdan, 2020; Chouaibi et al., 2022). Therefore, this study analyzes the importance of ESG practices in developing countries in ASEAN. Second, research on ESG in the non-financial sector is still limited. So far, sustainability studies have been in the financial industry (Korwatanasakul & Majoe, 2019). Third, the data range used is relatively long, namely from 2010 to 2019, while previous research used relatively short periods. Fourth, this study adds to empirical evidence regarding the determinants of firm value by focusing on the assessment of investors in ASEAN.

Literature Review

Environmental, Social, Governance (ESG)

The stakeholder theory has stated that the company aims to create value and maximize shareholders' or stakeholders' prosperity (Signori et al., 2021). In line with this, Jensen (2017) stated that maximizing stakeholder prosperity increased firm value in the long term. Additionally, firm value was increased by ethical behavior and company responsibility to improve society's welfare (Jensen, 2017). ESG is the consideration of environmental, social, and governance, and financial factors in the investment decision-making process (MSCI, 2020). According to Tarmuji et al. (2016), the ESG measurement described additional dimensions of company performance not disclosed in financial data. However, ESG is broader than CSR, which includes the environment and company social behavior, the first two elements of ESG. In contrast, ESG combines the company's environmental and social impacts with the performance of corporate governance. Therefore, ESG has been often called CSR with governance, and its disclosure score has been used as a CSR measurement index (Han et al., 2016).

ESG comprises environmental, social, and governance pillar. First, the environmental pillar focuses on the impact of a company's operations on the environment, such as resource use, emissions, and innovation (Reuters, 2017). In this case, the environmental performance shows the efforts to reduce resource consumption and emissions (Kim et al., 2018). Second, the social pillar focuses on behavior related to social issues, covering aspects of the workforce, product responsibility, society, and human rights (Reuters, 2017). Therefore, company social performance shows the attitude towards human rights, quality of work, product responsibility, and public relations (Kim et al., 2018). Third, the governance pillar shows the company's internal operation or behavior, including management, investors, and CSR strategies (Reuters, 2017). Also, it indicates the rights and responsibilities of the company's management or governance structure (Kim et al., 2018).

Firm Value

Firm value is the investors' main concern and perception of the company's success, which is closely related to its stock price (Sujoko, 2018). The company's long-term goal to maximize its value implies increasing the welfare of shareholders. Several methods can be used to measure firm value, such as Tobin's Q. According to Gharaibeh and Qader (2017), Tobin's Q assesses fair firm value by providing the most relevant information, comprising elements of the debt and share capital, company assets, ordinary shares, and equity.

ESG Scores and Firm Value

ESG is a set of guidelines for a firm's operations that socially and environmentally conscious investors use to evaluate potential investments. Several previous studies showed the effects of ESG in aggregate on firm value. For instance, Melinda and Wardhani (2020), Kim et al. (2018), Miralles et al. (2018), Aboud and Diab (2018), and Alareeni and Hamdan (2020) found a positive relationship between ESG scores and firm value. This means that ESG disclosure brings several benefits to the company. Alsayegh et al. (2020) stated that ESG integration would enable a company to gain a competitive advantage and improve its operational efficiency and reputation. Furthermore, Ionescu et al. (2019) stated that efficient use of resources, relationship with shareholders, and better governance could lead to better company market value. Also, Chairani and Siregar (2021) argued that ESG performance could increase stakeholder confidence that the company had carried out its activities following their expectations. Albuquerque et al. (2012) showed that ESG was a strategic product that a corporation could sell to

its consumers and that this product could generate more favorable revenues. Exploiting ESG performance will improve the economic expectations of investors and other stakeholders. Therefore, ESG improves relations with stakeholders, affecting the firm value by increasing stock prices.

H₁: ESG scores positively affect firm value.

Environmental Pillar Scores and Firm values

Previous research found that environmental performance improved company image, increased revenue, reduced costs, and showed positive abnormal stock returns from disclosure (Melinda & Wardhani, 2020). Moreover, Kim et al. (2018), Alareeni and Hamdan (2020), and Melinda and Wardhani (2020) discovered that the disclosure of environmental scores was positively and significantly associated with firm value.

Environmental performance includes carbon emission productivity and water efficiency (Abrams et al., 2021). Regarding the environmental pillar, the existence of environmental regulations will have an impact on saving the company's production costs and will increase customer satisfaction. It will also bring about many innovations within companies, making them able to produce products/services that are also environmentally friendly. In line with the stakeholder theory, companies are considered responsible for the environmental impacts of their business activities. It will bring a good relationship between the company and the community. Environmental disclosures in their annual reports preserve their credibility with their external shareholders. For this reason, companies use environmental disclosure as part of their strategy to create added value for their products. This is because effective environmental disclosure attracts stakeholders by increasing their willingness to buy and invest (Alareeni & Hamdan, 2020). Investors will see this as a good indicator for the company's long-term performance.

H₂: Environmental pillar scores positively affect firm value.

Social Pillar Score and Firm Value

The social pillar has a focus on corporate behavior related to social issues. Research conducted by Yoon et al. (2018) and Melinda and Wardhani (2020) showed the positive influence of social performance on firm value in South Korea and countries in Asia. Miralles et al. (2018) also found that the market positively and significantly valued Brazilian companies' social pillars and practices. The scores reflect the company's social performance, including workforce, human rights, product responsibility, and society. By adhering to this pillar, a company has rights, obligations, and responsibilities to society and other citizens (Melinda & Wardhani, 2020). Concern for these social issues will make the company accepted by the community. This is confirmed by the stakeholder theory, in which the company applies not only to the interests of shareholders but also to other stakeholders such as the local community, employees, and customers. It is a long-term value investment to be able to create a reputation and product image in the market. Also, social disclosure is part of the company's strategy to create added value for its products (Alareeni & Hamdan, 2020). Therefore, stakeholders appreciate the company, as indicated by increased market prices (Fauziah et al., 2020).

H₃: Social pillar scores positively affect firm value.

Governance Pillar Scores and Firm Value

The governance scores reflect how a company operates in relationship to its management, CSR strategy, and shareholders. The pillar of corporate governance indicates the rights and responsibilities of the company's management or governance structure (Kim et al., 2018). Therefore, a company with higher governance scores has higher firm values (Aboud & Diab, 2018). According to Melinda and Wardhani (2020), higher governance ESG value improves corporate governance performance. Also, it allows the company to continue running sustainably (Alareeni & Hamdan, 2020). High scores also indicate that the company is managed by harmonizing the shareholders' and management interests. CG methods are used to coordinate enterprises' actions aimed at increasing business and corporate responsibility in order to recognize long-term shareholder value while addressing the interests of other stakeholders (Tarmuji et al., 2016). It shows the company's good quality, implying the shareholders' positive response to governance disclosure.

H₄: The governance pillar scores positively affect firm value.

Research Methods

Population and Sample

This research used a sample consisting of companies listed on the stock exchanges of each ASEAN member country for the 2010-2019 period. The selected companies were listed on the stock exchanges of each ASEAN member country in the 2010-2019 period and had ESG scores by Thomson Reuters. Also, they were non-financial

companies with positive equity values. The Thomson Reuters data terminal showed that 233 companies published ESG scores during the 2010-2019 period. After being processed with predetermined criteria, 184 companies were obtained.

Table 1. Sampling Results

No	Sample Criteria	Total
1	Non-financial companies with ESG scores by Thomson Reuters 2010 - 2019	233
2	Companies that perform closing outside of December	-39
3	Companies with negative equity value in 2010 - 2019	-2
4	Companies have outliers	-8
Total Sample		184
Total observation		968

This research used public companies from several ASEAN member countries as samples, consisting of the Philippines, Indonesia, Malaysia, Singapore, Thailand, and Vietnam (ASEAN-6). However, the Thomson Reuter data terminal showed no ESG information on Brunei Darussalam, Cambodia, Laos, and Myanmar. According to Korwatanasakul and Majoe (2019), ESG awareness in Brunei Darussalam is still in its early stage due to the absence of an independent institution to regulate and supervise ESG practices. Similarly, awareness in Cambodia is limited and almost non-existent, while Laos and Myanmar have no policies related to CSR, ESG, and company sustainability. The composition of the sample by country is presented in Table 2.

Table 2. Cross-Country Sample Distribution

Countries	Total Samples	
	Companies	%
Philippine	16	8.70%
Indonesia	33	17.93%
Malaysia	34	18.48%
Singapore	36	19.57%
Thailand	63	34.24%
Vietnam	2	1.09%
Total	184	100%

Data Types and Sources

This quantitative research used secondary data in the form of ESG scores, firm values, and other financial data. The data on companies listed on the stock exchanges of each ASEAN country in the 2010-2019 period were obtained from the Thomson Reuters data terminal. Furthermore, inter-country control variables, such as WGI, were obtained through the World Bank Dataset (<https://info.worldbank.org/governance/wgi/>). Financial data based on the respective country's currency were first converted into the United States dollar exchange rate using data from the ASEAN Statistical Yearbook 2020 (https://www.aseanstats.org/publication/asyb_2020/).

Operational Definition and Measurement of Dependent Variables

Firm value shows performance as indicated by the stock price formed by the demand and supply of the capital market, reflecting the public or investor's assessment. This research used Tobin's Q, an indicator that measures company performance in asset management, especially firm value. According to Chung & Pruitt (1994), Tobin's Q is measured by the following formula: $(\text{Market Value Equity} + \text{Total debt}) / \text{Total assets}$. MVE: Share price at the end of the period x number of common shares outstanding; Total Debt: Company debt value; Total Assets: Company asset value.

Independent Variables

Environmental, social, and governance (ESG)

Morgan Stanley Capital International or MSCI (2020) defined ESG as considering environmental, social, and governance, and financial factors in the investment decision-making process. The ESG score consists of the environmental, social, and governance pillars. The ten categories measured in all pillars are Resource Use, Emission Reduction, Innovation, Human rights, Society, Product Responsibility, Management, Shareholders Score, and CSR Strategy. A maximum of 100 scores was obtained from the Thomson Reuter data terminal. According to Reuters (2017), the calculation of the ESG score and the proportion of each pillar is as follow.

$$\text{ESG} = \text{Environmental pillar (0.34)} + \text{Social pillar (0.42)} + \text{Governance pillar (0.24)}$$

Environmental Pillar

The company's environmental performance shows the efforts to reduce resource consumption and emissions (Kim et al., 2018). The environmental pillar score ranges from 0 to 100. The first dimension in the environmental pillar is the Resource Use Score, which reflects the performance and capacity to reduce the use of materials, energy, or water. Also, it shows the ability to find more environmentally friendly solutions by improving supply chain management. Second, the Emission Reduction Score measures the commitment to reduce environmental emissions in production and operational processes effectively. Third, the Innovation Score reflects the capacity to reduce environmental costs and burdens for its customers. This facilitates the creation of new market opportunities through new environmental technologies and processes or environmentally friendly products.

Social pillar

The social pillar focuses on company behavior related to social issues and covers the workforce, product responsibility, society, and human rights (Reuters, 2017). Furthermore, company social performance shows the attitude towards human rights, quality of work, product responsibility, and public relations (Kim et al., 2018). The social pillar score ranges from 0 to 100. The first category of assessment in the social pillars is the Workforce Score, which measures the company's effectiveness towards job satisfaction and a healthy and safe workplace. Also, it measures the maintenance of diversity and equality of opportunity and development opportunities for the company's workforce. Second, the Human Rights Score measures the company's effectiveness in respecting basic human rights conventions. Third, the Community Score measures the commitment to being a good citizen, protecting public health, and respecting business ethics. Fourth, the Product Responsibility Score reflects the capacity to produce quality goods and services that integrate customer health and safety, data integrity, and privacy.

Governance pillar

The governance pillar refers to the company's internal operating processes and its behavior, including management, investors, and CSR strategies (Reuters, 2017). It denotes the rights and responsibilities of the company's management or governance structure (Kim et al., 2018). The governance pillar score ranges from 0 to 100, covering three categories. First, the Management Score shows the company's commitment and effectiveness to follow the best corporate governance principles. Second, the Shareholders Score measures the company's effectiveness towards equal treatment of shareholders and use of anti-takeover tools. Third, the CSR Strategy Score reflects the company's communication that integrates economic (financial), social, and environmental dimensions into daily decision-making processes.

Control variables

This research used five control variables in testing the effect of ESG on firm value. These were divided into control variables between companies and countries. The Return on Assets (ROA) ratio shows the company's ability to generate profits efficiently from the total assets owned (Atidhira & Yustina, 2017), calculated as follows: $\text{Return on Asset} = \text{Net income after tax} / \text{total Assets}$. Leverage as a ratio used to measure how a company's activities are financed with debt. This research also used the Debt to Equity Ratio (DER). Firm size is determined based on its total assets, sales, and share value (Widiastari & Yasa, 2018). Dang et al. (2018) stated that research must use market capitalization to control the firm size in the stock market. Therefore, the control variable of firm size is measured by the market capitalization log. According to Widiastari & Yasa (2018), the calculation of firm size is $= \text{Ln}(\text{Market Cap})$. The World Governance Index (WGI) consists of six dimensions, consisting of Voice and Accountability, Political Stability and Absence of Violence or Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Corruption Control. According to Wu (2021), good state governance improves company performance and value. The WGI aggregate value ranges from -2.5 to 2.5.

Data analysis technique

The data were analyzed using multiple linear regression analysis methods with statistical tool Eviews 11. Also, a regression model selection test was performed using the Chow and Hausman tests. Four multiple linear regression equations were developed to test the four hypotheses. The first hypothesis using model 1 is as follows:

$$\text{Tobin's } Q_{it} = \alpha + \beta^1 \text{ESG Score}_{it} + \beta^2 \text{ROA}_{it} + \beta^3 \text{DER}_{it} + \beta^4 \text{FirmSize}_{it} + \beta^5 \text{WGI}_{it} \quad (1)$$

Models 2, 3, and 4 are used to examine the effect of the environmental, social, and governance pillars.

$$\text{Tobin's } Q_{it} = \alpha + \beta^1 \text{Env Score}_{it} + \beta^2 \text{ROA}_{it} + \beta^3 \text{DER}_{it} + \beta^4 \text{FirmSize}_{it} + \beta^5 \text{WGI}_{it} \quad (2)$$

$$\text{Tobin's } Q_{it} = \alpha + \beta^1 \text{Soc Score}_{it} + \beta^2 \text{ROA}_{it} + \beta^3 \text{DER}_{it} + \beta^4 \text{FirmSize}_{it} + \beta^5 \text{WGI}_{it} \quad (3)$$

$$\text{Tobin's } Q_{it} = \alpha + \beta^1 \text{Gov Score}_{it} + \beta^2 \text{ROA}_{it} + \beta^3 \text{DER}_{it} + \beta^4 \text{FirmSize}_{it} + \beta^5 \text{WGI}_{it} \quad (4)$$

Description: Tobin's Q: firm value; i: company order; t: year of observation; α : constant; β : coefficient; ESG Score: Aggregate ESG score; Env Score: Environmental pillar score; Soc Score: Social pillar score; Gov Score: Score of governance pillars; ROA: Return on Assets; DER: Debt to Equity Ratio; Firm Size; WGI: World Governance Index

Results and Discussion

Descriptive Statistics

Table 3 shows that the number of samples used was 968. The dependent variable is the firm value with the lowest Tobin's Q measurement of 0.550741 obtained by Wing Tai Holdings Ltd (WTHS.SI). The maximum value is 9.734373, obtained by Banpu Public Company Ltd (BANPU.BK) with a mean value of 1.512785, while the standard deviation value is 1.35159. Several companies in ASEAN have a value of less than 1, meaning they are undervalued by the market. Furthermore, the mean value higher than the standard deviation indicates small data distribution, implying no large gap between the lowest and highest Tobin's Q ratios.

Table 3. Descriptive Statistics

	<i>n</i>	<i>Mean</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Std. Dev.</i>
Tobin's Q	968	1.985063	1.512785	9.734373	0.550741	1.35159
ESG	968	46.01496	46.66096	88.2761	4.28154	18.831
Environmental	968	38.36244	36.6743	96.89818	1.168208	22.75653
Social	968	49.78789	48.82897	97.15289	3.693159	22.17583
Governance	968	48.63581	49.23096	98.70056	1.396396	22.53048
DER	968	1.825587	1.351989	11.39165	0.049577	1.879086
Ln Market Cap	968	22.33021	22.39675	24.60204	19.64302	0.988533
ROA	968	0.069192	0.059721	0.308117	-0.09077	0.056853
WGI	968	0.204765	-0.17	1.64	-0.54	0.689703

The independent variable of ESG Score (aggregate) has a minimum value of 4.28154 obtained by Jardine Matheson Holdings Ltd (JARD.SI). The maximum value is 88.2761 obtained by PT Bukit Asam Tbk (PTBA.JK) with a mean value of 46,01496, while the standard deviation value is 18.831. The mean value greater than the standard deviation indicates small data distribution, implying no big gap between the lowest and the largest ESG. Furthermore, the environmental pillar variable has a minimum value of 1.168208 obtained by Suntec Real Estate Investment Trust (SUNT.SI). The maximum value is 96.89818 obtained by Delta Electronics Thailand Pcl (DELTA.BK) with a mean value of 38.36244, while the standard deviation is 22.75653. The mean value greater than the standard deviation indicates small data distribution.

The descriptive statistical analysis for the social pillar variable resulted in a minimum value of 3.693159 obtained by Suntec Real Estate Investment Trust (SUNT.SI). The maximum value is 97.15289 obtained by PT Bukit Asam Tbk (PTBA.JK) with a mean value of 49.78789, while the standard deviation value is 22.17583. The mean value greater than the standard deviation indicates small data distribution. Moreover, descriptive statistics for the governance pillar variable have a minimum value of 3.693159 obtained by Dairy Farm International Holdings Ltd (DAIR.SI). The maximum value is 97.15289 obtained by Sime Darby Plantation Bhd (SIME.KL) with a mean value of 49 78789, while the standard deviation value is 22.17583.

The control variable of leverage ratio (DER) has a minimum value of 0.049577, a maximum value of 11.39165, a mean value of 1.825587, and a standard deviation of 1.879086. The mean value lower than the standard deviation indicates small data distribution. Furthermore, the firm size variable (Ln Market) has a minimum value of 19.64302, a maximum value of 24.60204, a mean value of 22.33021, and a standard deviation of 0.988533. The mean value higher than the standard deviation indicates small data distribution. Moreover, the control variable ROA has a minimum value of -0.09077, a maximum value of 0.308117, a mean value of 0.069192, and a standard deviation of 0.056853. The WGI variable has a minimum value of -0.54, a maximum value of 1.64, a mean value of 0.204765, and a standard deviation of 0.689703. The mean value higher than the standard deviation signifies small data distribution. Also, the positive mean of 0.069192 or above 0 means the overall governance index in ASEAN is fairly good.

Hypothesis Testing of Panel Data Regression Analysis

The regression testing results of the four equation models are shown in Table 4.

Table 4. Regression Results

Variable	+/-	Model 1	Model 2	Model 3	Model 4
ESG Score	-	-0.0052 Sig. 0.0010***			
Environmental pillar	-		-0.0044 Sig. 0.0004***		
Social pillar	-			-0.0042 Sig. 0.0005***	
Governance pillar	-				-0.0017 Sig. 0.2070
Leverage	-	-0.0359 Sig. 0.0999*	-0.0366 Sig. 0.926*	-0.0373 Sig. 0.865*	-0.0035 Sig. 0.1089
Ln Market	+	0.5293 Sig. 0.0000***	0.5312 Sig. 0.0000***	0.5239 Sig. 0.0000***	0.5216 Sig. 0.0000***
ROA	+	6.286 Sig. 0.0000***	6.1915 Sig. 0.0000***	6.2693 Sig. 0.0000***	6.6141 Sig. 0.0000***
WGI	-	-0.5632 Sig. 0.00101**	-0.5873 Sig. 0.0068***	-0.5441 Sig. 0.0132**	-0.6947 Sig. 0.0013***
Adjusted R Squared		0.895182	0.895428	0.895342	0.893920
F test		0.000000	0.000000	0.000000	0.000000
N		968	968	968	968

The number in the first line is the coefficient value*sig 10%; ** *sig 5%; *** sig 1%

Table 4 shows that the independent and control variables simultaneously affect the dependent variables of firm value. The adjusted R² value of 0.895182 or 89.5% means that the independent and control variables explain the dependent variable quite well.

Partial Regression Test (t-Test)

Based on Table 4, the coefficient value of the Aggregate ESG variable denoted by ESG is -0.0052 with a significance of 0.0001 (sig < 0.05). These results indicate that the aggregate ESG negatively affects firm value, meaning that hypothesis 1 is rejected. Based on table 4, the coefficient value of the environmental pillar score variable is -0.0044 with a significance of 0.0004 (sig < 0.05). These results indicate that the environmental pillars negatively affect firm value, meaning that hypothesis 2 is rejected.

Table 4 shows that the SOCIAL PILLAR SCORE is -0.0042 with a significance of 0.0005 (sig < 0.05). These results indicate that the social pillars negatively affect firm value, indicating that hypothesis 3 is rejected. Table 4 shows that the coefficient value of the environmental pillar variable symbolized by the governance pillar score is -0.0017 with a significance of 0.2070 (sig > 0.05). These results indicate that governance pillars do not affect firm value, signifying that hypothesis 4 is rejected. Table 4 shows that ROA and firm size (Ln Market) have a positive and significant effect. In contrast, the leverage ratio (DER) negatively affects the 10% significance level in equations 1, 2, and 3. Furthermore, the World Governance Index (WGI) as a control variable between countries negatively affects firm value.

Discussion

Effect of ESG (Environmental, Social, and Governance) scores on firm value

The t-test was conducted to determine the individual effect of the independent variables on the dependent variables. The test results prove that the ESG variable negatively affects firm value. Therefore, an increase in the ESG score reduces firm value, supporting Fahad and Busru (2021), which showed similar results in India. However, this finding contradicts Melinda and Wardhani (2020), Aboud and Diab (2018), and Alareeni and Hamdan (2020), which found a positive effect of ESG on firm value.

Korwatanasakul (2020) stated that ESG implementation has been generally at an early stage in Asia, in which some companies still consider the practice unnecessary or even burdensome. Also, many investors and policymakers do not understand the importance of ESG, considering it expensive and unprofitable. This is due to the different characteristics of investors in developed and developing countries. For instance, developing countries' institutions, market, and environmental characteristics have created differences found in several previous studies (Bing & Li, 2019). Furthermore, stakeholders in developing countries do not focus on non-financial factors. Although the government has adopted various policies to promote CSR and ESG development, the practice is still far behind in developed countries (Guo et al., 2020).

The sample in this research comprises developing ASEAN member countries, whose economies lag behind developed countries. This is indicated by the average value of Tobin's Q, which is much lower than that of Melinda and Wardhani (2020) sample that consisted of Asia's developing and developed countries. According to Melinda and Wardhani (2020), the average value of Tobin's Q reached 46.86, while the maximum value was 95.57, with no significant gap between developing and developed countries' ESG scores. Melinda and Wardhani (2020) found an ESG mean of 50.10, higher than that found in this research (46.01496).

Effect of environmental pillar score on Firm Value

The test results show that the environmental pillar variable negatively affects firm value. This means that good environmental performance weakens the firm value. This finding supports Smith et al. (2007) and Fahad & Busru (2021), who found the negative influence of environmental pillars. This is due to the development of the financial reporting process in Malaysia, particularly in environmental reporting (Smith et al., 2007). Furthermore, the environmental pillar test shows the same results as the aggregate ESG score, implying the importance of considering a country's economic development (Bing & Li, 2019). In this case, stakeholders in developing countries have low environmental awareness compared with those in developed countries. Investors in developing countries use financial factors as the main consideration for investing, and companies with good environmental performance are not considered an advantage or attractive. Therefore, the increase in firm value only occurs in companies with high profitability (economic factors). In addition, the outcome is more consistent with the cost and benefit theory than with the stakeholder theory, in which a company invests in a community initiative until the point at which the cost is more than or equal to the value (Alareeni & Hamdan, 2005).

Effect of social pillar score on firm value

The test results show that the social pillar variable negatively affects firm value. This means that disclosure of social practices for the community, customers, and suppliers affects the firm value significantly. The finding supports Fahad and Busru (2021) and Miralles et al. (2018), who found the negative influence of social pillars in India and Brazil. According to Nguyen et al. (2015), information on charitable donations or funding activities is popularly disclosed but makes no difference when compared with other companies. Therefore, stakeholders may perceive social disclosure trivial because it is less attractive to investors compared with the aggregate ESG and the environmental pillar. In addition, this could be because companies that participate in socially responsible initiatives have higher financial costs and weaker operational and financial performance (Alaareni and Hamdan, 2020). According to Buallay (2019), CSR emerges as a result of executive management and boards of directors engaging in social initiatives for their own gain.

The effect of the governance pillar score on firm value

The test results show that the governance pillar variable does not affect firm value, supporting Fahad and Busru (2021), Kim et al. (2018), and Miralles et al., (2018). Although good corporate governance practices have been adopted in ASEAN, the results show that governance scores do not affect firm value. This is because investors in developing country companies are more concerned with financial factors in analyzing companies, making governance not a determinant of firm value.

Conclusion

This research indicates that the aggregate ESG score, and environmental and social pillars negatively affect firm value. It means that a higher ESG value reduces the firm value. The governance pillar does not influence the firm value individually. Therefore, the aggregate ESG score, and each pillar negatively affect firm value in ASEAN, which comprises developing countries with different and unique characteristics. Stakeholders in developing countries hardly focus on non-financial factors. Also, investors use financial factors in decision-making, meaning that a high ESG score is not considered an advantage of a company.

This research does not separate the analysis based on each industry sector. As a result, different industry characters may lead to different views of ESG activity for investors. Moreover, the research did not use variables that control economic growth and development differences, such as Gross Domestic Products (GDP). An increase in GDP increases consumption and company profits and value. Therefore, further research should separate each industrial sector and add control variables, such as GDP and the Sustainable Development Index (SDI).

This study implies that governments in ASEAN countries are more likely to promote and seriously monitor companies' environmental and social performance. It is intended to focus on environmental and social performance for the long-term goals. In addition, this will create trust among shareholders in the company and not in the company's competitors.

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