

ESG Disclosure, Firm Size, and Stock Prices: Evidence from IDX Leaders Mining Companies, 2020–2024

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Abstract

This study examined the effect of Environmental, Social, and Governance (ESG) disclosure and firm size on stock prices of mining companies listed in the Indonesia Stock Exchange (IDX) Leaders Index during the 2020–2024 period. A quantitative research approach was employed using secondary data obtained from sustainability reports. The sample was selected through purposive sampling, and the data were analyzed using descriptive statistics and multiple linear regression analysis. The findings indicated that ESG disclosure had a positive and significant effect on stock prices, while firm size had a negative and significant effect. Simultaneously, ESG disclosure and firm size significantly affected stock prices, with the model explaining 46% of the variation in stock prices. The results suggested that investors positively responded to ESG disclosure, whereas larger firm size did not necessarily lead to higher stock prices in the mining sector. This study was limited to mining companies included in the IDX Leaders Index during 2020–2024 and only examined ESG disclosure and firm size. The findings contributed to the literature by providing empirical evidence on the relationship between ESG disclosure, firm size, and stock prices in the Indonesian capital market.

Keywords: ESG Disclosure, Firm Size, Stock Price

1. INTRODUCTION

The mining sector plays an important role in supporting Indonesia's economic growth through its contribution to state revenue, employment, and industrial development. According to statistics Indonesia, this sector has consistently contributed to national economic growth in recent years. To sustain business operations and expansion, mining companies rely on the capital market as a source of long-term financing. In the capital market, stock prices represent investors' assessments of a company's performance, risk, and future prospects. Stock prices are also considered an important indicator for evaluating company performance and management effectiveness, as they can reflect how well a company is managed (Aspriyadi, 2020; Aflah, Sahade, & Imran, 2024). Furthermore, because stock investment offers relatively high return opportunities while also carrying considerable risk, investors require accurate and relevant information regarding company performance when making investment decisions and assessing stock prices (Yuliana & Maharani, 2022). Information reflected in the capital market can therefore provide an overview of stock price movements and investors' assessments of a company (Chasanah & Prasetyo, 2020). Therefore, companies are expected to maintain investor confidence by improving both financial and non-financial performance (Alamsyah, 2024). The importance of stock prices is not limited to measuring company performance and value but also reflects investors' confidence and expectations regarding the company's future business prospects (Novianti & Oktapiani, 2023).

Recently, investors have increasingly considered Environmental, Social, and Governance (ESG) disclosure as an important source of non-financial information. ESG reflects a company's commitment to sustainable business practices and provides insight into its long-term performance and risk management (Putri & Susanti, 2025). Companies with better ESG practices are generally perceived to have stronger reputations and greater stakeholder trust (Nurdin & Hastuti, 2020). ESG disclosure can also help companies reduce risks and controversies related to environmental, social, and governance issues by increasing transparency and strengthening oversight (MSCI, 2024). In investment decision-making, investors may also prefer companies that incorporate environmental considerations into their business operations because such practices can provide signals regarding the company's commitment to sustainability (Asyari & Hernawati, 2023). In addition to ESG disclosure, firm size is also considered an important determinant of stock prices because larger firms tend to have better access to capital markets, stronger operational stability, and lower business risk (Alamsyah, 2024). Companies

with larger asset bases are also considered to have greater control over market conditions, enabling them to better withstand economic competition and maintain their operational activities ([Kurnia & Akbar, 2021](#)). However, empirical evidence from mining companies listed in the IDX Leaders Index during 2020–2024 indicates that improvements in ESG disclosure and firm size were not always accompanied by increases in stock prices. Several companies experienced declining stock prices despite higher ESG disclosure or larger company size, suggesting that investors may still prioritize short-term financial performance over long-term sustainability information ([Rino, & Artiani, 2024](#); [Schmidt, 2019](#)). This phenomenon is particularly relevant in the mining sector because mining activities are closely associated with environmental and social impacts, while companies are also exposed to governance and sustainability-related risks. Consequently, ESG disclosure may provide investors with additional information for evaluating corporate risks and long-term prospects. At the same time, firm size may influence investors' perceptions of a company's ability to withstand market competition and maintain operational stability. The existence of these contrasting considerations makes the relationship between ESG disclosure, firm size, and stock prices important to investigate in the mining sector.

Previous studies have also reported inconsistent findings, including recent empirical evidence. [Schmidt \(2019\)](#), [De, Pazienza, and Bartlett \(2020\)](#), and [Davu, Maya, and Budhi \(2025\)](#) found that ESG disclosure positively affects stock prices. In contrast, [Rino and Artiani \(2024\)](#) reported a negative relationship, while [Rendragraha and Parahyanti \(2026\)](#) found no significant effect. Similarly, [Rahma, Santoso, and Abdurachman \(2021\)](#) concluded that firm size positively influences stock prices, whereas [Winarso \(2023\)](#) reported no significant effect. These recent and inconsistent findings indicate that the relationship between ESG disclosure, firm size, and stock prices remains empirically inconclusive. Therefore, further investigation is necessary to provide more recent and sector-specific evidence, particularly within the Indonesian mining industry.

The focus on mining companies included in the IDX Leaders Index provides an important research context because these companies represent firms that receive considerable attention from capital market participants. Examining companies within this index enables the study to assess whether ESG disclosure and firm size are reflected in stock prices among companies that are relevant to investors in the Indonesian capital market. Furthermore, the 2020–2024 period provides an important observation window because it captures changes in market conditions following the COVID-19 pandemic and a period of increasing attention to corporate sustainability and ESG information. Investigating this period can therefore provide a more relevant understanding of whether ESG disclosure and firm size were associated with stock price movements amid changing investor expectations and market conditions. The combination of the mining sector, IDX Leaders Index, and 2020–2024 observation period consequently provides a specific context that remains relatively important for examining the relationship between sustainability-related disclosure, company characteristics, and market valuation. Therefore, this study aims to examine the effect of ESG disclosure and firm size on the stock prices of mining companies listed in the IDX Leaders Index during the 2020–2024 period. By focusing on this specific sector, index, and observation period, this study seeks to provide more recent empirical evidence concerning the relationship between ESG disclosure, firm size, and stock prices. The findings are expected to enrich the literature on sustainable finance and provide insights for investors and corporate management regarding the role of sustainability disclosure and company characteristics in influencing stock market valuation.

2. LITERATURE REVIEW

2.1 Signaling Theory

This study is based on signaling theory, which explains that companies provide information to reduce information asymmetry between management and investors. According to [Brigham and Houston \(2019\)](#), managers convey signals about a company's current condition and future prospects through financial and non-financial disclosures. Signals may also take the form of information indicating that a company is better than others ([Ayuningtyas & Bagana, 2023](#)). Positive signals help investors evaluate corporate performance and support investment decisions. Corporate information can influence market reactions because investors respond to signals reflecting future business

prospects. Thus, transparent and credible disclosure is expected to strengthen investor confidence and potentially affect stock prices ([Chen & Xie, 2022](#)).

Corporate disclosure can also improve the information environment by providing relevant information about corporate risks, performance, and future prospects. [Krueger, Sautner, Tang, and Zhong \(2024\)](#) found that mandatory ESG disclosure improves firm-level stock liquidity, particularly for firms with weaker information environments. This indicates that disclosure provides economically relevant information to capital market participants. Accordingly, signaling theory provides a theoretical foundation for explaining how ESG disclosure and firm size may influence stock prices. ESG Disclosure signals sustainability practices, risk management, and governance quality, while Firm Size signals corporate resources, stability, and financial capacity.

2.2 ESG Disclosure

Environmental, Social, and Governance (ESG) disclosure represents a company's communication of information concerning environmental responsibility, social performance, and corporate governance. ESG has become an important consideration for investors because it provides information beyond conventional financial statements ([Kartika, Dermawan, & Hudaya, 2023](#)). Companies implementing ESG practices are expected to improve risk management, strengthen corporate reputation, and create sustainable value for stakeholders ([Romli & Abdurrohman, 2024](#)). [Ropiah and Jayanti \(2024\)](#) found that companies with strong ESG management tend to achieve positive long-term stock performance.

ESG disclosure provides information regarding environmental risks, social relationships, and governance quality that may not be fully captured by conventional financial statements. Therefore, it can reduce information gaps and help investors assess companies' long-term prospects. [Krueger, Sautner, Tang, and Zhong \(2024\)](#) further found that mandatory ESG disclosure improves stock liquidity, especially among firms with weaker information environments. In this study, ESG Disclosure is measured using the Global Reporting Initiative (GRI) Standards, covering environmental, social, and governance indicators ([Putri & Susanti, 2025](#)). Higher ESG disclosure indicates stronger corporate transparency and accountability, which may positively influence investor perceptions ([Romli & Abdurrohman, 2024](#)).

2.3 Firm Size

Firm size reflects the scale of a company's operations and economic resources. It can be measured using total assets, total sales, market capitalization, or number of employees. According to [Rofalina et al. \(2022\)](#), firm size describes a company's condition based on its total assets or resources. Larger companies generally have greater financial capacity, stronger operational stability, and easier access to external financing ([Sudradjat & Maryani, 2025](#)). Larger firms also tend to have broader access to funding ([Rudangga & Sudiarta, 2016](#)) and provide more extensive disclosures, attracting greater public and investor attention. From a signaling perspective, firm size provides information about a company's resources, stability, and financial capacity. Large firms generally possess greater assets, stronger operational capabilities, and broader access to financing, which may reduce investors' perceptions of risk. [Yin and Liao \(2021\)](#) found that large firms tend to maintain more stable profitability shocks over the long term than small firms. In this study, firm size is measured using the natural logarithm of total assets because it represents the company's overall scale and financial strength ([Tanisa & Maharani, 2024](#)).

2.4 Stock Price

Stock price represents the market value of a company's shares and reflects investors' assessments of current performance and future prospects. It is determined by market demand and supply and influenced by financial and non-financial information ([Darmayanti, & Valianti, 2016](#); [Prasetyo, Utami, Abdusshomad, Wijaya, & Kalbuana, 2021](#)). The closing price is considered a representative measure because it reflects the final market valuation after a trading session and incorporates publicly available information ([Brigham & Houston, 2019](#)). Therefore, this study uses the closing price as the measure of stock price. Corporate information concerning financial condition, future prospects, risks, and sustainability can influence investor valuation and market prices. [Zhang,](#)

[Ding, Chen, and Zhang \(2023\)](#), using evidence from 45 countries, found that mandatory ESG disclosure improves price discovery efficiency and enables firm-specific information to be incorporated into stock prices more timely. This supports the view that corporate disclosure can influence market valuation.

2.5 ESG Disclosure and Stock Price

According to signaling theory, ESG disclosure can serve as a positive signal that reduces information asymmetry between companies and investors. Higher ESG disclosure demonstrates greater transparency and commitment to sustainable business practices while providing information about environmental risks, social responsibility, governance quality, and long-term sustainability. When perceived as credible and favorable, such information can strengthen investor confidence and increase demand for shares. Empirical evidence supports this relationship. [Li, Feng, Pan, and Sohail \(2022\)](#) found that ESG performance significantly increased firms' cumulative abnormal returns during the COVID-19 market crisis. [Yin, Li, and Su \(2023\)](#) found that ESG performance positively affects stock returns among listed companies in China. [Zhang, Ding, Chen, and Zhang \(2023\)](#) found that mandatory ESG disclosure improves price discovery efficiency and firm valuation, while [Krueger, Sautner, Tang, and Zhong \(2024\)](#) reported that mandatory ESG disclosure improves stock liquidity, particularly for firms with weaker information environments.

ESG disclosure may also improve stock market information efficiency. [Ruan, Li, and Huang \(2024\)](#) found that ESG disclosure reduces the influence of noise on stock prices through mechanisms such as reduced earnings management and increased analyst attention. [Shakil \(2022\)](#) found that ESG performance significantly reduces stock price volatility in a global sample of textile and apparel firms. Previous studies generally report a positive relationship between ESG disclosure and stock prices. [Schmidt \(2019\)](#), [De, Pazienza, and Bartlett \(2020\)](#), [Davu, Maya, and Budhi \(2025\)](#), and [Hasan \(2026\)](#) found positive effects, while [Setyahuni and Handayani \(2020\)](#) and [Zhou and Zhou \(2022\)](#) also found that ESG information positively affects stock prices. However, [Rino and Artiani \(2024\)](#) found a negative relationship, while [Khasanova \(2025\)](#) found no significant effect. These inconsistent findings indicate that the effect of ESG disclosure may depend on disclosure quality, information environment, market conditions, and firm characteristics.

H₁: ESG Disclosure has a positive effect on stock prices

2.6 Firm Size and Stock Price

Firm size is often associated with stronger financial performance, operational stability, and lower investment risk. Larger companies, as indicated by total assets, are considered more financially stable and capable of providing returns to shareholders ([Kurnia & Akbar, 2021](#)). They generally have more stable cash flows and broader capital market access, while their scale can serve as a positive signal of corporate prospects ([Amalia, Rosalina, & Anggita, 2026](#)).

From the perspective of signaling theory, large firms provide information about their resources, financing capacity, operational capabilities, and stability. These characteristics may reduce uncertainty and strengthen investor expectations regarding sustainable future cash flows. [Yin and Liao \(2021\)](#) found that large firms tend to maintain more stable profitability shocks than small firms, suggesting that firm size may be associated with more stable corporate performance and investor returns. [Rahma, Santoso, and Abdurachman \(2021\)](#) found that firm size positively influences stock prices because large companies are perceived as more reliable and financially secure. In contrast, [Asyari and Hernawati \(2023\)](#) found no significant effect, indicating that investors may consider other financial and non-financial factors. Thus, firm size does not necessarily generate a positive stock price response.

H₂: Firm Size has a positive effect on stock prices

2.7 ESG Disclosure, Firm Size, and Stock Price

ESG disclosure and firm size provide different but complementary information about a company's sustainability, resources, and financial strength. ESG disclosure reflects environmental,

social, and governance practices, while firm size reflects the scale of resources and operational capacity. From the perspective of signaling theory, both variables can therefore serve as signals that investors use to assess corporate quality and future prospects. A company with extensive ESG disclosure signals transparency, sustainability, and responsible management, while a larger company generally has greater resources and financial capacity to implement such practices. The combination of ESG information and organizational resources may strengthen investors' assessment of a company's ability to manage risks and create sustainable value, potentially affecting investor confidence, investment decisions, and stock prices.

[Shakil \(2022\)](#) found that ESG performance significantly reduces stock price volatility in a global sample of textile and apparel firms and examined firm size as a potential moderating factor, although the moderating effect was not statistically significant. [Sudradjat and Maryani \(2025\)](#) found that ESG disclosure and firm size jointly influence firm value, with firm size strengthening the effectiveness of ESG implementation. Previous studies also support positive relationships between ESG disclosure and stock prices ([Schmidt, 2019](#); [De, Pazienza, & Bartlett, 2020](#); [Davu, Maya, & Budhi, 2025](#)) and between firm size and stock prices ([Putri & Susanti, 2025](#)). Nevertheless, inconsistent findings indicate a research gap regarding the combined effect of ESG disclosure and firm size on stock prices, particularly among mining companies listed in the IDX Leaders Index during 2020–2024. This study therefore provides additional empirical evidence on these relationships.

H₃: ESG disclosure and firm size have a positive effect on stock prices

3. RESEARCH METHODOLOGY

This study employed a quantitative research approach to examine the effect of Environmental, Social, and Governance (ESG) disclosure and firm size on the stock prices of mining companies listed in the IDX Leaders Index during the 2020–2024 period. According to [Sugiyono \(2020\)](#), quantitative research is a scientific method used to collect numerical data and analyze it statistically to test predetermined hypotheses. This approach was selected because it enables the measurement of the relationship between independent variables and the dependent variable using objective statistical techniques. The population consisted of mining companies included in the IDX Leaders Index during the 2020–2024 period. Based on the population identification, 11 mining companies met the initial population criteria. The sample was selected using purposive sampling to ensure that only companies meeting the predetermined research criteria were included. The sampling criteria, such as mining companies listed in the IDX Leaders Index during the observation period, companies that remained included in the index during the 2020–2024 observation period, companies that published annual reports and/or sustainability reports containing information required to measure ESG disclosure, and companies with complete data on ESG disclosure, total assets, and year-end stock prices for the entire observation period. Based on these criteria, nine companies were selected as the final sample, resulting in 45 firm-year observations (9 companies × 5 years).

This study utilized quantitative secondary data obtained from the annual reports and sustainability reports of the selected companies. The reports were collected from the Indonesia Stock Exchange (IDX) and the respective companies' published reports. Secondary data refer to information previously collected and documented by other parties for research purposes. Data collection was conducted using the documentation method by reviewing, identifying, and recording relevant information contained in annual reports, sustainability reports, and other supporting documents related to ESG disclosure, firm size, and stock prices. The study involved two independent variables and one dependent variable. ESG disclosure (X_1) was measured using an ESG disclosure index based on the proportion of disclosed ESG indicators relative to the total applicable indicators ([Fatemi, Fooladi, & Tehranian, 2015](#)). To improve measurement consistency and reproducibility, ESG disclosure was assessed based on the GRI Standards 2021 framework, comprising 89 indicators applicable to the scope of this study. Each indicator was assessed using a binary scoring approach, in which a score of 1 was assigned when the company disclosed information corresponding to the indicator and a score of 0 was assigned when the indicator was not disclosed. The ESG disclosure index was then calculated by dividing the total number of disclosed indicators by the total number of applicable indicators,

producing a value ranging from 0 to 1. A higher index value indicates a greater extent of ESG information disclosure. The assessment was conducted by examining the content of the companies' annual reports, sustainability reports, and other relevant disclosures to identify information corresponding to each ESG indicator.

Firm size (X_2) was measured using the natural logarithm of total assets (Ln total assets), following [Brigham and Houston \(2019\)](#), because total assets represent the company's economic resources and operational scale. The dependent variable was stock price (Y), measured using the year-end closing price, which reflects the market's final valuation of the company's shares at the end of each fiscal year ([Hartono, 2017](#)). All variables were measured using a ratio scale. To examine the relationship among variables, this study employed multiple linear regression analysis. The regression model is expressed as follows:

$$Y = \alpha + \beta_1 ESGDisclosure + \beta_2 FirmSize + \varepsilon \quad (1)$$

Formula 1 shows Y represents stock price, α is the regression constant, β_1 and β_2 are the regression coefficients, and ε denotes the error term. Multiple linear regression was selected because the study investigates the simultaneous influence of two independent variables on a single dependent variable. Prior to hypothesis testing, descriptive statistical analysis was conducted to summarize the characteristics of the data, including the minimum value, maximum value, mean, and standard deviation for each research variable. Data processing and statistical analyses were performed using Microsoft Excel and IBM SPSS Statistics version 26.

To ensure that the regression model met the assumptions required for multiple linear regression analysis, several classical assumption tests were performed. Normality was evaluated using graphical analysis and the Kolmogorov–Smirnov test, where a significance value greater than 0.05 indicates normally distributed residuals. Multicollinearity was assessed using Tolerance and Variance Inflation Factor (VIF), with Tolerance values greater than 0.10 and VIF values below 10 indicating the absence of multicollinearity. Autocorrelation was examined using the Durbin–Watson test, while heteroscedasticity was tested using the Glejser test, where a significance value greater than 0.05 indicates homoscedastic residuals. The explanatory power of the regression model was evaluated using the coefficient of determination (R^2), which measures the proportion of variation in stock prices explained by ESG disclosure and firm size. A higher R^2 value indicates a stronger explanatory capability of the regression model. Furthermore, hypothesis testing was conducted using the t-test to examine the partial effect of each independent variable on stock price and the F-test to evaluate the simultaneous effect of ESG disclosure and firm size on stock price. Statistical significance was determined at the 5% significance level ($\alpha=0.05$).

4. RESULTS AND DISCUSSION

4.1 Descriptive Analysis

Descriptive analysis is an analytical method used to describe research data and provide a general overview of the variables being examined.

Table 1. Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
ESG Disclosure	45	0.18	0.94	0.60	0.22367
Firm Size	45	6,415,949,730	19,517,282,889,000	1,886,159,441,560	5,385,736,016,346.25
Stock Price	45	83	39,025	4,838	7,902.81

Table 1 shows this study consists of 45 observations from mining companies listed in the IDX Leaders Index during the 2020–2024 period. ESG disclosure has a mean value of 0.60, with a minimum value of 0.18 in 2020, a maximum value of 0.94 in 2023 and 2024, and a standard deviation of 0.22367. The increasing ESG disclosure score indicates that companies have demonstrated stronger

sustainability performance and greater compliance with Environmental, Social, and Governance (ESG) practices. Firm size has an average total asset value of IDR 1,886,159,441,560, ranging from IDR 6,415,949,730 in 2024 to IDR 19,517,282,889,000 in 2020, with a standard deviation of IDR 5,385,736,016,346.25. These results suggest considerable variation in the asset size of the sampled companies, reflecting differences in their operational capacity and available resources. Meanwhile, stock price has an average value of IDR 4,838, with a minimum value of IDR 83 in 2020, a maximum value of IDR 39,025 in 2022, and a standard deviation of IDR 7,902.81. The relatively high stock prices of several companies indicate stronger market valuation and higher investor confidence in the companies' performance and future prospects, while the large standard deviation reflects substantial variation in stock prices across the sample.

4.2 Quantitative Analysis

Quantitative analysis is a research method that utilizes numerical data and statistical techniques to test hypotheses and examine the relationships among variables. In this study, classical assumption tests, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests, were conducted to ensure the validity of the regression model. Subsequently, multiple linear regression analysis was employed to examine the effects of ESG disclosure and firm size on stock price.

Table 2. Classical assumption tests

Classical Assumption Tests	Indicator	Result	Information
Normality Test	Asymp. Sig. (2-tailed)	0.200	The data are normally distributed
Multicollinearity Test	Tolerance & VIF	0.991<0.10 & 1.009>10	No multicollinearity is detected
Autocorrelation Test	Durbin Watson $du < dw < 4-du$	1,6148<1.898<4–1.6148	No autocorrelation is detected
Heteroscedasticity Test	Sig absolute residual	0.935>0.05 & 0.203>0.05	No heteroscedasticity is detected

Classical assumption tests were conducted to evaluate whether the multiple linear regression model satisfied the statistical assumptions required for reliable estimation. Normality test is used to determine whether the regression residuals are normally distributed. Table 2 shows the Kolmogorov–Smirnov test produced a significance value of 0.200, which is greater than 0.05, indicating that the residuals were normally distributed. Multicollinearity test aims to examine whether there is a high correlation among the independent variables. The results showed tolerance values of 0.991 (>0.10) and Variance Inflation Factor (VIF) values of 1.009 (<10) for both independent variables, indicating that no multicollinearity existed in the regression model. Furthermore, the autocorrelation test, measured using the Durbin–Watson statistic, is intended to determine whether residuals are correlated across observations. The obtained Durbin–Watson value was 1.898, which falls between the upper critical value ($du=1.6148$) and $4-du$ (2.3852), indicating that the regression model was free from autocorrelation. Finally, heteroscedasticity test is performed to determine whether the residual variance remains constant across observations. The Glejser test showed significance values of 0.935 for ESG disclosure and 0.203 for firm size, both of which exceeded the 0.05 significance level, indicating that heteroscedasticity was not present in the regression model. Overall, these results demonstrate that the regression model satisfies all classical assumption requirements and is therefore appropriate for subsequent multiple linear regression analysis.

4.3 Coefficient of Determination (R^2)

Table 3. Coefficient of determination

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	0.678 ^a	0.460	0.434	0.96862

Table 3 shows the coefficient of determination (R^2) is 0.460, indicating that 46% of the variation in stock price is explained by the two independent variables, namely ESG disclosure and firm size.

The remaining 54% of the variation is explained by other factors not included in the regression model. Furthermore, the Standard Error of the Estimate (SEE) is 0.96862 thousand US dollars, indicating the average prediction error of the regression model. A smaller SEE value reflects a more accurate regression model in predicting the dependent variable.

4.4 Multiple Linear Regression Analysis

Table 4. Multiple linear regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.745	1.752		9.558	0.000
	ESG	1.512	0.660	0.261	2.291	0.027
	Firm Size	-0.398	0.070	-0.651	-5.716	0.000

$$StockPrice = 16.745 + 1.512ESG - 0.398FirmSize \quad (2)$$

Table 4 and Formula 2 show the constant value of 16.745 indicates that when the independent variables (ESG and firm size) are equal to zero, the stock price is 16.745. The regression coefficient of ESG is positive (+1.512), indicating that a 1% increase in ESG, while firm size remains constant at zero, will increase stock price by 15.12%. This positive coefficient indicates a direct relationship between ESG disclosure and stock price. Meanwhile, the regression coefficient of firm size is negative (−0.398), indicating that a 1% increase in firm size, while ESG disclosure remains constant at zero, will decrease stock price by 39.8%. The negative coefficient indicates an inverse relationship between firm size and stock price.

4.5 Hypothesis Test

4.5.1 Partial t-test

The t-test was conducted to examine the partial effect of each independent variable, namely ESG disclosure and firm size, on the dependent variable, stock price. T-test is used to determine whether an individual independent variable has a statistically significant effect on the dependent variable. The results indicate that ESG disclosure has a positive and statistically significant effect on stock price. The regression coefficient is positive, with a t-statistic of 2.291, which is greater than the t-table value of 2.018, and a significance value of 0.027, which is below the 0.05 significance level. Therefore, H_1 is accepted, indicating that ESG disclosure partially has a positive and significant effect on stock price. These findings suggest that companies with higher levels of ESG disclosure tend to have higher stock prices, as investors perceive sustainability disclosure as a positive signal regarding the company's long-term performance and commitment to sustainable business practices. In contrast, the results show that firm size has a statistically significant but negative effect on stock price. The regression coefficient is negative, with a t-statistic of −5.716 and a significance value of 0.000, which is lower than the 0.05 significance level. Although the effect is statistically significant, its direction is contrary to the proposed hypothesis. Therefore, H_2 is rejected, indicating that firm size has a significant negative effect on stock price. This finding implies that an increase in firm size does not necessarily lead to a higher stock price among mining companies included in the IDX Leaders Index during the 2020–2024 period.

4.5.2 Simultaneous F-test

The F-test was performed to examine whether ESG disclosure and firm size simultaneously affect stock price. F-test evaluates the overall significance of the regression model by determining whether all independent variables jointly explain the variation in the dependent variable. The ANOVA results show an F-statistic of 17.879, which is greater than the F-table value of 3.21, with a significance value of 0.000, which is below the significance level of 0.05. Therefore, the regression model is statistically significant, indicating that ESG disclosure and firm size simultaneously have a significant effect on stock price. These findings demonstrate that the two independent variables jointly

explain variations in the stock prices of mining companies listed in the IDX Leaders Index during the 2020–2024 period, supporting the overall regression model used in this study.

4.6 Discussion

4.6.1 The Effect of ESG Disclosure on Stock Price

The results of this study indicate that ESG disclosure has a positive and statistically significant effect on stock price. The multiple linear regression analysis shows a positive regression coefficient of 1.512, with a t-statistic of 2.291 and a significance value of 0.027, which is below the 5% significance level. Therefore, the first hypothesis (H_1) is accepted, indicating that ESG disclosure positively influences the stock prices of mining companies listed in the IDX Leaders Index during the 2020–2024 period. These findings suggest that companies with higher levels of ESG disclosure tend to achieve higher stock prices. Comprehensive ESG disclosure demonstrates a company's commitment to environmental protection, social responsibility, and sound corporate governance. Such disclosure enhances transparency and accountability, thereby strengthening investor confidence in the company's long-term sustainability. As investor confidence increases, demand for the company's shares also rises, which ultimately contributes to higher stock prices.

The findings are consistent with signaling theory, which explains that companies communicate both financial and non-financial information to reduce information asymmetry between management and investors. ESG disclosure serves as a positive signal regarding the company's sustainability performance and future prospects. Investors interpret comprehensive ESG reporting as evidence of responsible corporate management and lower long-term business risk, resulting in a more favorable market valuation. The results of this study are consistent with the findings of [Schmidt \(2019\)](#), [Lucia et al. \(2020\)](#), and [Davu, Maya, and Budhi \(2025\)](#), who concluded that ESG disclosure has a positive effect on stock price. These studies suggest that investors increasingly value sustainability information as an important consideration in investment decisions. Therefore, higher ESG disclosure by mining companies enhances investor confidence in the company's future prospects and sustainability performance, leading to an increase in stock prices.

4.6.2 The Effect of Firm Size on Stock Price

The empirical results reveal that firm size has a statistically significant but negative effect on stock price. The regression coefficient of firm size is -0.398 , with a t-statistic of -5.716 and a significance value of 0.000, indicating that the second hypothesis (H_2), which proposed a positive relationship, is rejected. These findings imply that an increase in firm size does not necessarily lead to higher stock prices among mining companies listed in the IDX Leaders Index during the 2020–2024 period. The negative relationship is an unexpected finding because larger firms are generally expected to have greater resources, stronger financial capacity, and more stable operations, which may increase investor confidence.

Based on the perspective of signaling theory, firm size can provide information about a company's scale and resources; however, size alone does not necessarily constitute a positive signal to investors. Investors may evaluate whether the assets owned by a large company are efficiently utilized to generate profits and future cash flows. Therefore, a larger asset base may not increase stock prices when it is not accompanied by stronger profitability, efficient asset utilization, or favorable growth prospects. In this context, the negative coefficient may indicate that investors place greater emphasis on the quality and productivity of corporate resources rather than on the absolute amount of assets owned. This interpretation is particularly relevant to the mining industry, which is characterized by substantial capital requirements, long-term investments, high maintenance expenditures, and exposure to fluctuations in commodity prices. An increase in total assets may therefore increase the scale of operations while simultaneously increasing fixed costs, capital requirements, and financial risks. If additional assets do not generate proportional increases in earnings or cash flows, investors may perceive the larger asset base as less efficient. Consequently, firm size may have a negative association with stock price when asset expansion is not accompanied by improvements in operational efficiency and profitability.

The finding can also be explained through the information considered by investors in the mining sector. Stock prices reflect market expectations regarding future performance rather than merely the current scale of a company. Investors may therefore pay greater attention to profitability, earnings prospects, commodity price movements, leverage, operational efficiency, and environmental and governance performance. This is consistent with the findings of [Aspriyadi \(2020\)](#), who examined mining companies listed on the IDX during 2018–2024 and found that firm size did not significantly affect stock returns. Their findings suggest that company size is not necessarily a primary consideration for investors in the mining sector, while external factors such as commodity prices, global economic conditions, and regulations may play a more important role in determining stock market performance.

The negative direction found in this study is also supported by several empirical studies, although the dependent variables and research contexts differ. [Ayuningtyas and Bagana \(2023\)](#) found that firm size had a significant negative effect on stock price in Indonesian consumer goods manufacturing companies. This result demonstrates that larger firm size does not universally translate into higher stock prices. Similarly, [Tanisa and Maharani \(2024\)](#), using a sample of 22 mining companies listed on the IDX during 2016–2020, found that firm size had a significant negative effect on firm value. Although firm value is not identical to stock price, the finding provides supporting evidence that greater asset scale may not automatically be interpreted positively by the market, particularly when the additional resources do not translate into higher value creation. More recently, [Novianti and Oktapiani \(2023\)](#) also reported a significant negative effect of firm size on firm value in Indonesian mining companies during 2022–2024, further indicating that larger asset size may be associated with lower market valuation when it is not supported by effective resource utilization. Nevertheless, the result of this study differs from studies reporting a positive relationship between firm size and stock price. For example, research on mining family businesses listed on the IDX during 2020–2022 found that firm size had a significant positive effect on stock price, both directly and through profitability. This difference suggests that the effect of firm size may depend on the characteristics of the sample, observation period, industry conditions, and other variables included in the model. In the present study, the sample is limited to mining companies included in the IDX Leaders Index during 2020–2024, a period characterized by substantial changes in commodity markets and economic conditions. Therefore, the negative effect of firm size should not be interpreted as evidence that larger companies inherently have lower stock prices, but rather as an empirical finding specific to the characteristics and period of the observed sample.

Overall, the negative and significant effect of firm size indicates that company scale alone is insufficient to explain investor valuation in the mining sector. Investors appear to consider the effectiveness of asset utilization and the company's ability to convert resources into sustainable earnings and future cash flows. Thus, the results provide an important qualification to the conventional assumption that larger companies necessarily have higher stock prices. For mining companies, increasing asset size should be accompanied by efficient asset management, strong profitability, prudent financing, and sustainable operational performance so that the expansion of company scale can generate a positive signal to investors.

4.6.3 The Effect of ESG Disclosure and Firm Size on Stock Price

The simultaneous test results demonstrate that ESG disclosure and firm size jointly have a significant effect on stock price. The regression model produced an F-statistic of 17.879, which exceeds the F-table value of 3.21, with a significance value of 0.000, indicating that the third hypothesis is supported. Furthermore, the coefficient of determination (R^2) is 0.460, meaning that ESG disclosure and firm size collectively explain 46% of the variation in stock price, while the remaining 54% is explained by other variables not included in this study. These findings indicate that investors consider both sustainability disclosure and company characteristics when evaluating mining companies. ESG Disclosure provides information regarding a company's environmental, social, and governance performance, while firm size reflects its operational scale and financial resources. Together, these variables provide important signals regarding the company's long-term sustainability and business capacity, thereby influencing investors' perceptions and investment decisions.

The findings also support signaling theory, which suggests that companies can reduce information asymmetry by providing credible financial and non-financial information to the market. ESG disclosure functions as a positive signal regarding corporate sustainability, whereas firm size reflects the company's ability to maintain business operations and manage available resources. Although firm size individually shows a negative effect in this study, its simultaneous contribution with ESG disclosure indicates that both variables remain important in explaining stock price movements. Therefore, improving ESG transparency while maintaining efficient management of corporate resources may strengthen investor confidence and enhance corporate market value.

5. CONCLUSIONS

5.1 Conclusion

This study provides empirical evidence on the role of ESG disclosure and firm size in explaining stock price among mining companies listed in the IDX Leaders Index during the 2020–2024 period. The findings show that ESG disclosure positively influences stock price, indicating that greater transparency in environmental, social, and governance practices can strengthen investor confidence and support market valuation. In contrast, firm size has a negative influence on stock price, suggesting that greater asset scale does not necessarily translate into higher market valuation when it is not accompanied by effective resource utilization and favorable corporate performance. Overall, this study contributes to the sustainable finance literature by demonstrating that ESG transparency may be an important consideration for investors in Indonesia's mining sector, while firm size alone is insufficient to explain stock price performance.

5.2 Research Limitations

This study is limited to mining companies included in the IDX Leaders Index during the 2020–2024 period, which may limit the generalizability of the findings to other industries or periods. In addition, the study examines only ESG disclosure and firm size, while other factors that may influence stock price, such as profitability, leverage, liquidity, commodity prices, and macroeconomic conditions, are not included in the model.

5.3 Suggestions and Directions for Future Research

Based on the findings and limitations of this study, Companies are encouraged to strengthen the quality and transparency of ESG disclosure and improve the efficiency of asset utilization to support investor confidence and market valuation. Future research may extend the observation period, examine other industrial sectors, and incorporate additional variables such as profitability, leverage, liquidity, Good Corporate Governance (GCG), commodity prices, and macroeconomic indicators. Future studies may also apply panel data or other analytical approaches to provide more comprehensive evidence on the determinants of Stock Price.

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AUTHOR CONTRIBUTIONS

FKS contributed to the conceptualization, research design, data collection, data analysis, and manuscript preparation. NM contributed to the development of the theoretical framework, methodological review, and critical revision of the manuscript. AN contributed to the validation of research findings, academic supervision, and final manuscript review. All authors have read and approved the final version of the manuscript.

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