

The Effect Environmental, Social, Governance Disclosure on the Stock Price Volatility of Manufacturing Companies

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Abstract—This study aims to analyze the effect of Environmental, Social, and Governance (ESG) disclosure on stock price volatility in manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the period 2021-2023. The population in this study included 200 manufacturing companies, with purposive sampling techniques producing a sample of 58 companies or 174 data observations. Secondary data in the form of ESG index scores were obtained through the BGK Foundation. The analysis method used was multiple linear regression analysis with the help of descriptive statistics and classical assumption tests. The results show that the Environmental (X1), Social (X2), and Governance (X3) variables each have a positive and significant effect on stock price volatility (Y). These findings indicate that the transparency of environmental, social, governance disclosure in the Indonesian manufacturing sector actually triggers a heterogeneous market reaction and increases transaction intensity, thereby impacting higher stock price fluctuations. Contrary to the global literature consensus that views ESG as a risk mitigation mechanism, this study finds that ESG disclosure has a significant positive effect on stock price volatility. This finding indicates that in the Indonesian capital market, complex ESG information is not yet fully absorbed as a signal of fundamental quality, but rather tends to be perceived as noise that increases uncertainty and speculation among investors. Theoretically, these results support Signaling Theory, in which non-financial information is responded to by investors as signals that influence trading decisions in the capital market.

Keywords: Environmental; Governance; Social; Stock Price Volatility

1. INTRODUCTION

Environmental issues continue to be an important and hot topic of discussion in various countries. A number of countries have implemented and strengthened practices and regulations that support sustainable development and environmental conservation. Climate change as a global challenge remains a major concern today, where this issue is a factor that poses risks and creates opportunities with significant financial implications (Castro et al., 2021). After the industrialization period, the Intergovernmental Panel on Climate Change (IPCC) report shows that the rate of climate change is accelerating and has a major impact on various aspects of people's lives. The impacts of climate change are increasingly being felt widely, which has led to greater public awareness of its negative consequences and encouraged all parties to understand the importance of applying sustainability principles in business and development activities (Intergovernmental Panel on Climate Change, 2022).

Transparency through ESG information disclosure has become a crucial tool for investors in assessing a company's risk profile. Today's investors tend to avoid issuers with a poor track record in waste management, human rights violations, or corrupt practices, as these can trigger litigation and reputational risks that will result in financial losses. Along with the increasing interest in sustainable investment, sustainability reports that include ESG criteria have become an important signal sought by the market to determine the stability of issuers' performance amid global economic uncertainty (Ardianto & Sukardi, 2024). In the context of the capital market, one of the main indicators that reflect investment risk is stock price volatility. Volatility describes the magnitude of stock price fluctuations over a certain period, which is often triggered by information uncertainty or information asymmetry between company management and shareholders (Hasanah et al., 2024). High volatility levels indicate significant risk, so the market needs non-financial information such as ESG as a risk mitigation tool. The manufacturing sector in Indonesia is a highly complex sector with high dependence on natural resources and a large workforce. Based on national economic data, this sector contributes significantly to GDP, but on the other hand, its production processes often directly intersect with issues of environmental pollution and employee welfare. Therefore, the extent to which ESG disclosure can reduce stock price volatility in manufacturing companies is a highly relevant and urgent research question that needs to be answered (Amila, 2025).

There have been several previous studies that have applied quantitative descriptive methods using environmental, social, governance, and stock price volatility as variables for analysis, such as the study by (Castro et al., 2021) with the research result that the environment has a positive effect on stock price volatility. The study by (Hasanah et al., 2024) found that social factors have a positive effect on stock price volatility. The study by (Wang, 2025) found that governance has an effect on stock price volatility. Previous studies show that there are variations in the results regarding the effect of environmental, social, and governance factors on stock price volatility. Given the differences in the results of the studies by (Castro et al., 2021) and (Wang, 2025) based on the inconsistency of these research results, this study will re-examine them to provide more comprehensive evidence, particularly on environmental, social, and governance factors on the stock price volatility of manufacturing companies listed on the Indonesia Stock Exchange.

A deep understanding of the mechanism of how ESG affects stock price volatility can be explained through two main theories, namely Signaling Theory and Stakeholder Theory. Signaling Theory was first introduced by Spence

(1973). This theory explains the mechanism of management in conveying signals in the form of relevant information that is not yet known to the public to external parties as a basis for decision making. In practice, the quality and depth of these signals are crucial because they will influence market reactions and determine investor confidence levels. Through the disclosure of transparent information, both through financial reports and non-financial disclosures, companies seek to build a positive image of their performance and future business prospects. ESG disclosures are seen as positive signals sent by companies to the market to show that they have good management quality and controlled future risks.

Although some literature, such as Wang (2025), shows that ESG performance can significantly reduce stock price volatility, other studies conducted by Hasanah et al. (2024) and Wahyudyatmika & Astuti (2024) found varying results for different ESG components. This inconsistency in findings is believed to be due not only to differences in the observation period and ESG measurement standards used, but also to differences in the characteristics of the markets in which companies operate. Developed markets tend to have better information efficiency, while Indonesia, as an emerging market, has unique volatility characteristics and investor sensitivity to sustainability issues. In addition, specific regulatory pressures in Indonesia, such as the sustainability reporting requirements regulated by the Financial Services Authority (POJK), create a different compliance landscape compared to other countries. Therefore, the lack of consensus in global literature requires specific empirical evidence for the Indonesian context to determine whether ESG disclosure is effective as a risk mitigation signal amid the dynamics of the market and evolving national regulations.

Stakeholder Theory by (Freeman, 2015) is a paradigm in the capitalist system that emphasizes the importance of harmonious interactions between companies and various strategic groups, such as customers, suppliers, employees, investors, the community, and other related parties. The essence of this perspective is a shift in business orientation, where entities no longer focus solely on maximizing profits for shareholders, but are required to create added value that provides tangible benefits for all stakeholders at large (Subroto dan Endaryati, 2023). Environmental refers to important aspects related to the impact of a company's activities on the surrounding environment. This includes various things such as energy use, waste management, greenhouse gas emissions, pollution prevention, conservation of natural resources, and protection of living things in the environment (Baratta et al., 2023). It is hoped that companies can address these impacts in order to help preserve the environment while ensuring the continuity of their business (Fachrizal et al., 2024).

Social encompasses the company's relationships with various external parties such as employees, consumers, suppliers, as well as the community and society in general. This social section focuses on how companies protect human rights, maintain safety and health in the workplace, and actively participate in social development in their surrounding environment. Disclosure of social aspects in ESG not only assesses a company's social responsibility, but also shows the extent to which the company consistently implements this responsibility for the welfare of its stakeholders (Fachrizal et al., 2024). The social aspect also involves economic empowerment for local communities, employee participation in social activities, and the implementation of programs that directly benefit the community, such as in the fields of education, health, and environmental conservation (Nuralam et al., 2025b).

Governance is a series of oversight mechanisms, operational practices, and internal procedures implemented by an organization to develop structures, make appropriate decisions, comply with laws and regulations, and respond to the demands of stakeholders outside the company. Governance is defined as a set of rules, practices, and processes that guide and control company activities to ensure efficient operations while maintaining a balance of stakeholder interests (Tarihoran et al., 2025). This component contributes to reducing stock price fluctuations through optimal risk management and transparent data reporting. Empirical studies indicate that governance is able to maintain the stability of company valuations by acting as a moderator on the impact of ESG on market volatility (Sumarno dan Pratomo, 2025). ESG disclosure through Signaling Theory and Stakeholder Theory synergistically strengthens market stability by reducing information asymmetry and building long-term trust from investors and stakeholders. Thus, these two theories provide a solid theoretical foundation for manufacturing companies in managing stock price volatility through continuous transparency. Overall, this research is expected to contribute theoretically by enriching the literature on the role of ESG in developing capital markets. Practically, the results of this study are expected to serve as a guide for investors in conducting non-financial risk-based portfolio analysis and for regulators in designing more effective ESG disclosure policies in Indonesia. Although ESG is theoretically expected to mitigate risk, in the context of emerging markets such as Indonesia, the transparency of this information can give rise to a different phenomenon. Extensive ESG disclosure sometimes creates 'market noise' and triggers heterogeneous reactions from investors in interpreting this new information. As a result, rather than reducing risk, this disclosure has the potential to increase speculative trading activity, which leads to increased stock price volatility.

2. RESEARCH METHODS

2.1 Basic Research Framework

This study uses quantitative research with a descriptive approach. Sugiyono (2023) explains that quantitative research is a research method based on the positivism paradigm, which is applied to investigate specific populations or samples, with data collection through structured research instruments. The descriptive quantitative approach is designed to present the profile of research variables through statistical measures such as mean, median, standard deviation, and data distribution patterns, without intervening or experimentally manipulating these variables. This approach is highly

relevant in financial accounting theses because it facilitates the depiction of trends in the relationship between ESG disclosure as an independent variable and stock price fluctuations as a dependent variable.

According to Sugiyono (2023) a population is a generalization area consisting of objects or subjects that have specific numbers and characteristics, which are determined by researchers to be studied in depth in order to conclude the main findings. The population in this study is all companies included in the list of manufacturing companies in 2021-2023 registered on the IDX, totaling 200 companies. A sample is a part of the population that reflects the number and main characteristics of the entire group (Sugiyono, 2023). The sampling technique used in this study was purposive sampling using several criteria. The criteria for sample elimination are manufacturing companies that publish their Environmental, Social, and Governance disclosure scores on the BGK Foundation. According to Sugiyono (2023) purposive sampling is a technique for determining samples based on specific considerations. After elimination, the sample in this study consisted of 58 companies that met the sample selection criteria. The data used in this study is secondary data. According to Sugiyono (2023), secondary data is data that has been collected and is available from other sources. Therefore, researchers do not collect data directly for the purposes of the study being conducted. The data used in this study was obtained from the BGK Foundation, which can be accessed via the website <https://www.bgkfoundation.org/> in the form of Environmental, Social, and Governance Index Scores for 2021–2023.

The variables used in this study are dependent and independent variables. Independent variables include Environmental, Social, and Governance. Each pillar is measured based on disclosure indicators that reflect the company's commitment to sustainability and business ethics. The dependent variable in this study is stock price volatility. Volatility is measured using the standard deviation of the company's daily stock returns over a certain period, which indicates the degree of stock price fluctuations and the level of investment risk perceived by the capital market.

Environmental in the context of ESG refers to important aspects related to the impact of a company's activities on the surrounding environment. This includes various things such as energy use, waste management, greenhouse gas emissions, pollution prevention, conservation of natural resources, and protection of living things in the environment (Baratta et al., 2023). It is expected that companies can address these impacts in order to help preserve the environment while ensuring the continuity of their business (Fachrizal et al., 2024). Disclosure of environmental aspects in corporate sustainability reports is an important tool for measuring how companies address the environmental risks arising from their business activities. This includes steps taken by companies to reduce fossil fuel use, reduce carbon emissions, and implement environmentally friendly technologies (Alsayegh dan Rahman, 2020). Thus, this disclosure serves as a means of transparency for stakeholders regarding the company's commitment to preserving the environment (Adiwibowo dan Hartomo, 2023)

Social includes the company's relationships with various external parties such as employees, consumers, suppliers, as well as the community and society in general. This social section focuses on how companies protect human rights, maintain safety and health in the workplace, and actively participate in social development in their surrounding environment. Disclosure of social aspects in ESG not only assesses a company's social responsibility, but also shows the extent to which the company consistently implements this responsibility for the welfare of its stakeholders (Fachrizal et al., 2024). In ESG research, the social aspect also involves economic empowerment for local communities, employee participation in social activities, and the implementation of programs that directly benefit the community, such as in the fields of education, health, and environmental preservation. Companies that are able to manage this social dimension effectively tend to build strong and positive relationships with the community and various other stakeholders, which contributes to improving the company's reputation and performance (Nuralam et al., 2025a)

Governance is a set of oversight mechanisms, operational practices, and internal procedures implemented by an organization to establish structure, make appropriate decisions, comply with laws and regulations, and respond to the demands of stakeholders outside the company. Governance is defined as a set of rules, practices, and processes that guide and control company activities to ensure efficient operations while maintaining a balance of stakeholder interests (Tarihoran et al., 2025) Stock price volatility is the high and low movements of stock price charts over a certain period. In general, stock price volatility is an indicator used to estimate the level of investment risk, as it measures stock price movements over a certain period (Hutama dan Budhidharma, 2022). High price volatility reflects uncertainty about future market conditions, thereby reducing investor interest in trading activities. This condition increases the risk faced by investors when volatility is also at a high level (Sukamana, 2023).

Sugiyono (2023) argues that a good conceptual framework will explain the theoretical relationship between the variables to be studied. Thus, the relationship between independent and dependent variables needs to be explained theoretically. The conceptual framework in this study is as follows:

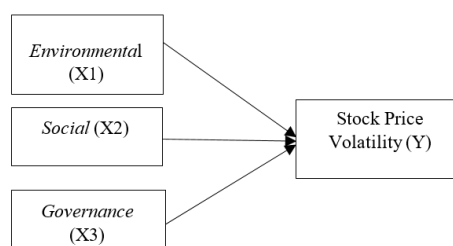


Figure 1. Conceptual Framework

Based on the above framework, the following hypotheses related to Environmental, Social, and Governance factors on stock price volatility are established:

H1 : ESG disclosure of environmental criteria has a positive effect on the stock price volatility of manufacturing companies listed on the Indonesia Stock Exchange.

H2 : ESG disclosure of social criteria has a positive effect on the price volatility of manufacturing companies listed on the Indonesia Stock Exchange.

H3 : ESG disclosure of Governance criteria has a positive effect on the stock price volatility of manufacturing companies listed on the Indonesia Stock Exchange.

2.2 Method of Analyst

Descriptive statistics are used to summarize and describe data characteristics in a simple manner through measures such as mean, median, standard deviation, minimum, and maximum, thereby providing an initial overview of the distribution, central tendency, and variability of the data prior to further analysis. In the study of the effect of ESG on the volatility of BEI manufacturing stock prices, descriptive statistics analyze the Environmental, Social, Governance scores from the Foundation and stock price volatility to identify data patterns, validate sample quality, and support multiple linear regression interpretation.

Classical assumption tests are conducted to ensure that the research results are consistent with the data used, and that the regression coefficient estimates are theoretically consistent, efficient, and unbiased:

Normality Test, Data normality testing aims to evaluate whether the residuals or confounding variables in the regression model follow a normal distribution or not (Ghozali, 2016). To test whether the data is normally distributed or not, the One-Sample Kolmogorov-Smirnov test can be used. The requirements in this normality test include:

- a. If the asymp Sig. (1-tailed) value $> \alpha$ (0.05), then the data is considered to be normally distributed.
- b. If the asymp Sig. (1-tailed) value $< \alpha$ (0.05), then the data is considered to be non-normally distributed.

Multicollinearity tests, are used to determine whether there is a correlation between independent variables in a regression model. To identify multicollinearity, two main methods that can be used are Tolerance and Variance Inflation Factor (VIF) from SPSS output. Tolerance measures the proportion of variability in the independent variable that is not explained by other independent variables, while VIF is the inverse of the Tolerance value. The criteria for drawing conclusions are as follows:

- a. If the Tolerance value is > 0.10 or VIF is < 10 , then it is indicated that there is no multicollinearity between independent variables.
- b. If the Tolerance value is < 0.10 or VIF > 10 , then there is an indication of multicollinearity between independent variables.

Heteroscedasticity test is conducted to examine whether the residual variance between observations in the regression model is unequal Ghozali (2016). A good regression model must satisfy the assumption of homoscedasticity, which is a condition where the residual variance remains constant across all observations, while the inequality of residual variance is called heteroscedasticity. The existence of homoscedasticity can be visualized through a scatterplot that shows a random pattern between the predicted values (ZPRED) and the standard residuals (SRESID).

According to Ghozali (2016) autocorrelation refers to a condition in which there is a correlation between observations ordered by time (such as time series data) or space (such as cross-sectional data). To detect the presence of autocorrelation in data, various methods can be used, including the most commonly used Durbin-Watson test. The Durbin-Watson (DW) statistic is used to test for a linear relationship between the residuals in period t and the residuals in the previous period. The DW value ranges from 0 to 4, with the following conditions: There is no autocorrelation problem if DW is in the range $DU < DW < 4 - DU$.

Multiple linear regression analysis, is used to determine the direction and magnitude of the influence of independent variables on dependent variables. This multiple linear regression technique is applied when there is more than one independent variable that affects the dependent variable (Ghozali, 2016). The general equation for multiple linear regression according to (Ghozali, 2016) can be written as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad (1)$$

Hypothesis Testing, The t-test aims to examine the extent to which independent variables, namely Environmental, Social, and Governance, individually influence the dependent variable, namely stock price volatility. The t-test is conducted at a significance level of 0.05 ($\alpha = 5\%$). According to Sugiyono (2023), the formula for the t-test is as follows:

$$t = \frac{r\sqrt{n-2}}{1-r^2} \quad (2)$$

The following are the basic analyses used in the t-test:

Comparison of significant values with the actual level

- a. If the Significant value \geq significance level (0.05), then H_0 is accepted and H_a is rejected.
- b. If the Significant value \leq significance level (0.05), then H_0 is rejected and H_a is accepted.

3. RESULTS AND DISCUSSION

In this section, the analysis results are presented in stages, beginning with an overview of the data through descriptive statistics, followed by data quality verification through classical assumption tests and hypothesis testing. This step is taken to ensure accurate data interpretation and transparency in the research hypothesis verification process. Before proceeding to hypothesis testing, descriptive statistical analysis is performed first to map the characteristics of the sample data of manufacturing companies listed on the IDX with predetermined criteria. Descriptive statistical analysis is performed to provide an overview of the characteristics of the variables studied in this research. In descriptive statistical analysis, the characteristics of the sample data used in this study are displayed, including the number of observations (N), minimum value, maximum value, sample mean, and standard deviation.

Table 1. Descriptive Statistical Test

	Descriptive Statistics				
	N	Minimum	Maksimum	Mean	Std. Deviation
X1 E	174	4,0000	81,0000	37,022989	17,5321188
X2 S	174	5,0000	83,0000	35,528736	18,9048968
X3 G	174	5,0000	83,0000	35,459770	19,1071240
Y1 VOLATILITAS	174	,0152	,2294	,090831	,0503517

The descriptive analysis table presents the results of Descriptive Statistics analysis for the variables used in this study. Based on the processed data, the valid N value of 174 indicates that all data on the four variables are complete and can be used in further analysis (no data is missing). The following is a detailed description of the data distribution for each variable.

The descriptive statistics results show that X1 (environmental) has a minimum value of 4.00 and a maximum value of 81.00. The wide data range indicates that there is considerable variation between companies in terms of environmental disclosure. The mean value is 37.02 with a standard deviation of 17.53, indicating a wide gap between companies. This shows that, in general, the level of disclosure of environmental aspects in manufacturing companies on the IDX is still at a fairly good level. This means that there are companies that are very compliant (scores well above 37), but there are also companies whose environmental disclosure is still very minimal (scores well below 37).

Variable X2 (social) has a minimum value of 5.00 and a maximum value of 83.00. The wide range of data indicates that there is considerable variation between companies in terms of social disclosure. The social disclosure variable has an average value of 35.53. This shows that, on average, manufacturing companies listed on the IDX have disclosed their social information, but have not yet reached an optimal level. The standard deviation value of 18.90, which is quite large, reflects a significant diversity (gap) in social aspect transparency practices among manufacturing companies.

Furthermore, variable X3 (governance) data shows a minimum value of 5.00 and a maximum of 83.00. The wide data range indicates considerable variation among companies in the disclosure of governance aspects. The mean value of 35.46 shows that, on average, the level of governance disclosure among manufacturing companies on the IDX is still at a fairly good level. The large standard deviation value of 19.11 reflects a wide gap between companies that have implemented good governance transparency and companies that still have minimal disclosure.

The dependent variable Y (stock price volatility) has a minimum value of 0.01 and a maximum value of 0.22. Its price movement is very small, fluctuating only around 1%. Stocks like this are considered low risk by investors. The maximum value has a very high price fluctuation rate of 22%, which indicates that the stock price is very reactive to market information, rumors, or company performance, reflecting a higher investment risk. The mean value of 0.09 indicates that the level of systematic risk reflected in stock prices is relatively controlled. A standard deviation value that is smaller than the average value of $0.05 < 0.09$ indicates that the distribution of stock price volatility data is fairly even or does not have extreme gaps between companies.

Before testing the hypothesis through regression analysis, a series of classical assumption tests were conducted to ensure that the resulting regression model met the criteria that must be fulfilled. The classical assumption tests used in this study were normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests. The results of the classical assumption tests can be explained as follows.

Table 2. One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			174
Normal Parameters ^{a,b}	Mean		,0000000
	Std. Deviation		,04125496
Most Differences	Extreme Absolute		,040
	Positive		,040

Watson (DW) test, it was found that the DW value was 2.199. This shows that the DW value lies between $DU < DW < 4-DU$, so it can be concluded that there is no autocorrelation problem.

Table 6. Multiple Linear Regression Test

Model		Unstandardized		Coefficients ^a		t	Sig.	Collinearity Statistics	
		Coefficients		Standardized				Tolerance	VIF
		B	Std. Error	Coefficients					
1	(Constant)	,020	,008			2,410	,017		
	X1 E	,001	,000	,245		3,263	,001	,703	1,422
	X2 S	,001	,000	,257		3,380	,001	,682	1,466
	X3 G	,001	,000	,217		3,000	,003	,757	1,320

a. Dependent Variable: Y1 VOLATILITAS

This analysis is used to determine the direction and magnitude of the influence of independent variables (X1, X2, X3) on the dependent variable (Y). Based on the results of the Coefficients test, the regression equation formed is:

$$Y = 0,020 + 0,01X1 + 0,01X2 + 0,01X3 + \epsilon \tag{3}$$

These results indicate a positive relationship between ESG disclosure and volatility. In the context of capital markets, this suggests that the more transparent manufacturing companies are in disclosing environmental, social, and governance issues, the more their stock prices tend to experience slightly higher fluctuations (volatility). This can occur if the market responds to ESG information as sentiment that increases trading activity.

Table 7. T-Test

Model		Unstandardized		Coefficients ^a		t	Sig.	Collinearity Statistics	
		Coefficients		Standardized				Tolerance	VIF
		B	Std. Error	Coefficients					
1	(Constant)	,020	,008			2,410	,017		
	X1 E	,001	,000	,245		3,263	,001	,703	1,422
	X2 S	,001	,000	,257		3,380	,001	,682	1,466
	X3 G	,001	,000	,217		3,000	,003	,757	1,320

a. Dependent Variable: Y1 VOLATILITAS

Based on the t-test results, variable X1 (environmental) has a regression coefficient value of 0.001 with a t-value of 3.263 and a significance level of $0.001 < 0.05$. These results indicate that environmental factors have a positive and significant effect on the dependent variable, namely stock price volatility. A positive coefficient indicates that an increase in environmental value will be followed by an increase in stock price volatility. Thus, the hypothesis stating that there is an effect of x1 (environmental) on y (stock price volatility) is also accepted.

Variable X2 (social) has a regression coefficient value of 0.001 with a t-value of 3.380 and a significance level of $0.001 < 0.05$. This result shows that social has a positive and significant effect on stock price volatility. A positive coefficient indicates that an increase in social value will be followed by an increase in stock price volatility. Thus, the hypothesis stating that there is an effect of x2 (social) on y (stock price volatility) is also accepted.

Furthermore, variable X3 (governance) has a regression coefficient value of 0.001 with a t-value of 3.000 and a significance level of $0.003 < 0.05$. These results indicate that governance has a positive and significant effect on stock price volatility. The positive coefficient indicates that an increase in governance will be followed by an increase in stock price volatility. Compared to variables x1 and x2, x3 has a stronger influence, as reflected in the larger standardized beta coefficient value ($\beta = 0.257$). Thus, the hypothesis stating that x3 (governance) has an effect on y (stock price volatility) is also accepted.

3.1 Discussion

This section describes the interpretation of the results of hypothesis testing that has been carried out by mapping the empirical findings of the study with theory and relevant previous research results. The analysis focuses on how each independent variable plays a role in influencing the dependent variable based on the statistical test results obtained. Hypothesis testing in this study uses the t-statistic test to see the effect of each independent variable on the dependent variable partially, which is determined by the significance value obtained from each independent variable.

The results of hypothesis testing show that the environmental variable (X1) has a positive and significant effect on stock price volatility (Y), as indicated by a significance value of $0.001 < 0.05$ and a positive regression coefficient. Thus, the hypothesis that the environment has a positive effect on stock price volatility is accepted. Based on signal theory, this environmental information triggers differences in perception among market participants, which then increases uncertainty and the intensity of trading on the exchange. This phenomenon is also related to stakeholder theory, in which transparency regarding the environmental impact of large manufacturing industries triggers sudden

corrections by the market to cash flow projections and risk profiles. The results of this study are in line with the findings (Castro, Tascon, et al., 2021) which show that environmental disclosure has a positive effect on stock price volatility.

The results of testing the social variable (X2) proved to have a positive and significant effect on stock price volatility with a significance value of $0.001 < 0.05$ and a positive regression coefficient with a value of 0.257. This means that the higher the transparency of social aspects, the higher the stock price fluctuations of manufacturing companies. This finding is related to Signal Theory, in which comprehensive social information triggers heterogeneous market reactions from various investor groups, thereby encouraging more intensive buying and selling activities. In addition, based on Stakeholder Theory, these results indicate that broad social involvement can increase market sensitivity to the risk profile of manufacturing companies in meeting the expectations of various stakeholders. The results of this study are in line with the findings (Hasanah et al., 2024) which show that social performance has a positive effect on stock price volatility.

The X3 test shows that governance has a positive and significant effect on stock price volatility with a significance value of $0.001 < 0.05$ and a positive regression coefficient of 0.217. Based on signal theory, transparent governance disclosure attracts speculative investors to react intensively to the information, thereby triggering higher stock price fluctuations in the market. This indicates that disclosure of information regarding board and audit committee mechanisms increases market sensitivity to developments in the governance of manufacturing companies. The results of this study are in line with the findings (Wang, 2025) which show that governance performance has a positive effect on stock price volatility.

4. CONCLUSION

This study aims to analyze the effect of Environmental, Social, Governance on stock price volatility in manufacturing companies listed on the Indonesia Stock Exchange. From the results of the analysis and testing conducted, it can be concluded that environmental disclosure has a positive and significant effect on stock price volatility, reflecting that this environmental information triggers differences in perception among market participants, which then increases uncertainty and the intensity of trading on the exchange. The social variable has a positive and significant effect on stock price volatility, which means that comprehensive social information triggers heterogeneous market reactions from various investor groups, thereby encouraging more intensive buying and selling activities. The results of governance have a positive and significant effect on stock price volatility, which means that transparent governance disclosure attracts speculative investors to react intensively to this information, thereby triggering higher stock price fluctuations in the market. However, this study has several limitations, including limitations in the scope of the sample, which only focuses on 58 companies in the manufacturing sector listed on the Indonesia Stock Exchange, and the data used is limited to a relatively short period of time, covering only the observation years 2021 to 2023. This study only uses secondary data in the form of index scores from one source, namely the BGK Foundation, to measure the Environmental, Social, and Governance variables. Thus, the results of this study are expected to contribute to the development of literature and serve as consideration for management, investors, and stakeholders in decision-making. In practical terms, these findings have important implications for regulators to immediately standardize ESG reporting formats in order to reduce the 'information noise' that triggers market volatility. On the other hand, investors are advised to be more cautious about short-term fluctuations in issuers with high ESG disclosures, while company management needs to ensure consistency of information to reduce excessive market speculation.

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