*Quantitative Economics and Management Studies (QEMS)* *ISSN: 2722-6247 (online)*
*Vol. 5 No. 1 (2024)*
https://doi.org/10.35877/454RI.qems2390

# The Influence of Environmental, Social, Governance, and Corporates Scandals on the Stock Volatility

Muhammad Brilian Wahyudyatmika & Christina Dwi Astuti*

*Faculty of Economics and Business, Universitas Trisakti, Jakarta, Indonesia*

**Abstract**

The volatility of stocks is influenced by various factors, both internal andexternal to the company. This research aims to determine whether there is a relationship between Environmental, Social, Governance (ESG) performance and corporate controversies on stock volatility. The sample used in this study consists of companies listed on the Indonesia Stock Exchange for the period 2018—2022 and have an ESG rating from The London Stock Exchange Group (LSEG). Based on the analysis conducted, it is concluded that environmental performance negatively affects stock volatility, while social performance, governance performance, and corporate controversies do not have an impact on stock volatility.

*Keywords*: ESG, Corporate Controversies, Stock Volatility

Received: 4 May 2023 Revised: 13 December 2023 Accepted: 21 January 2024

## 1. Introduction

Volatility is a pivotal metric for comprehending the complexity of financial markets. In the context of stocks, it presents the level of variability in the stock prices over time and has the functions as an indicator of risk and return uncertainty in investments (Duttilo et al., 2021). High volatility stocks are considered riskier as they have the potential to experience significant price fluctuations in a short period, while low volatility stocks tend to have more stable price movements (Chaudhary et al., 2020). Volatility stocks metrics are not only important for individual stocks but also for the broader market because they can reflect current economic and socio-political conditions (Huang & Tang, 2022). Therefore, understanding the factors contributing to stock volatility becomes the important thing in the investment decision making and risk management process.

In recent years, the importance of Environmental, Social, Governance (ESG) factors in determining stock performance has received significant attention. Environmental factors attention includes several issues, such as the impact of climate change, carbon footprint, and sustainable use of resources. Meanwhile, social factors include company labor practices, community relations, as well as inclusion and diversity policies. In the governance factor, there are attentions to the quality of management, board composition, shareholder rights, and business ethics. ESG criteria have become an integral part of evaluating corporate performance and sustainability, influencing investor decisions and market perceptions (Kim & Li, 2021). This affects the performance of the company's shares, including its volatility.

Research conducted by Rodionova et al. (2022) on logistics companies in the United States shows that companies that implement ESG in practice (green logistics companies) have lower stock volatility than logistics companies that do not implement ESG (non-green logistics companies). The same results were found by Shakil (2022) in textile and clothing companies. Zhou & Zhou (2021) further explored the influence of ESG implementation during the COVID-19 pandemic and found that good ESG performance can reduce volatility and stabilize stock prices during the crisis period. This is in line with other research conducted by Chen et al. (2022), Engelhardt et al. (2021), and Yoo et al. (2021). This shows that ESG implementation can function as a mechanism to protect the value of company shares, especially during crisis periods. However, this is not in line with the results of research by Sandu (2023), which found that ESG had a

* Corresponding author.
*E-mail address* : cdwi_astuti@trisakti.ac.id

significant positive influence on stock volatility, which means that increasing ESG performance had an effect on increasing stock volatility. Laokulrach (2022) also found that companies that implement ESG in 7 out of 8 industries have higher stock volatility than the industry average. Several other studies also attempted to examine further the influence of ESG on stock volatility based on each of its components, namely E, S, G and found that there was a positive, negative, or insignificant influences of each component on stock volatility (Assous, 2022; Meher et al., 2020; Yoo et al., 2021).

In the Indonesian context, ESG is a relatively new concept, and efforts are still being made to implement it. In order to encourage companies to implement ESG in 2017, the Financial Services Authority (OJK) issued the OJK Regulation Number 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies, which requires the implementation of sustainable finance by companies. OJK also issued Technical Guidelines for the Implementation of Sustainable Finance for the Banking Sector in 2018 and OJK Circular Letter Number 16/SEOJK.04/2021 concerning the Form and Content of Annual Reports of Issuers or Public Companies. The Indonesian Stock Exchange (BEI) is also making efforts to become part of the Sustainable Stock Exchanges (SSE) in 2019 and released the ESG Leaders stock index on December 14, 2020. The development of ESG implementation in Indonesia has triggered various research, especially regarding the impact of ESG on company financial performance, as shown in the study conducted by Ihsani et al. (2023), Kartika et al. (2023), Lubis & Rokhim (2021), Tanjung (2023), Wahyuningtyas et al. (2022), and Zahroh & Hersugondo (2021). However, research on the influence of ESG on stock market performance is still limited, suggesting an area that has potential for deeper exploration. For example, research by Aditya & Nainggolan (2022) reveals that companies stock that implement ESG show lower volatility than shares of non-ESG companies, indicating a significant difference in market stability.

With the growing awareness of ESG principles, the market is also increasingly considering companies' involvement in various controversies. These controversies often stem from violations of ESG norms, such as environmental destruction, workplace discrimination, and governance scandals, such as fraud or corruption. A company's involvement in an incident of this nature can result in a loss of investor confidence, invite lawsuits, and incur significant financial penalties. This ultimately contributes to an increase in the volatility of a company's shares, which reflects the risk level of the shares in the market. This is evidenced by research by Sandu (2023) and Zanatto et al. (2023) who found that ESG controversy and ESG news with negative sentiment had an influence on increasing stock volatility. However, further research is required, especially on the Indonesian stock market, which is still in its developing stage (*emerging market*) to deeply understand this phenomenon.

This research seeks to obtain empirical evidence on the existing research gap by testing the influence of ESG and stock controversy on stock volatility in Indonesia. The hypothesis underlying this research is that good ESG practices can be a means of mitigating a company's risk so that it can reduce the volatility of its shares. On the other hand, controversy, especially those related to ESG issues, will lead to business uncertainty, thereby increasing the volatility of company shares.

The samples that used in this research are companies listed on the Indonesia Stock Exchange (BEI) from 2018 to 2022 and have ESG performance assessment results on the London Stock Exchange Group on Companies (LSEG) Data & Analytics (formerly Refinitiv). Quantitative testing in the form of regression analysis was then carried out using the SPSS application to determine the correlation and influence between stock volatility as the dependent variable and ESG scores as the independent variable in this research. In order to increase the accuracy of test results, control variables in the form of profitability, return on assets (ROA), company size, company age, industry type, and economic conditions were included in the model.

This research combines research conducted by Sandu (2023) and Zhou & Zhou (2021) with the difference that this research examines the influence of ESG on stock volatility based on each ESG component, namely environmental performance, social performance, and governance performance. This research was conducted in Indonesia, where the stock market is still developing (emerging market) and related exploration of the influence of limited ESG on stock volatility. Based on this literature, the aim of this research is to determine the influence of environmental, social, governance, and corporate scandal on stock volatility.

## 2. Research Methods and Materials

This type of research is quantitative causal analysis, which examined the correlation between four independent variables and one dependent variable. The four independent variables employed ESG in the form of environmental performance, social performance, governance performance, and corporate scandals, while the dependent variable is stock volatility.

The data used in this research was secondary data, including ESG data and corporate scandals, financial performance data, stock data, and economic condition data. ESG data and corporate controversies obtained from The London Stock Exchange Group (LSEG) ESG Scores (formerly Refinitiv). Data related to shares and their financial performance was obtained by the Indonesian Stock Exchange (BEI) from Yahoo! Finance. Meanwhile, data on economic conditions was obtained from the Central Statistics Agency (BPS). The population in this study involved companies listed on the Indonesia Stock Exchange (BEI) in the period 2018 to 2022. Data analysis in this study was carried out through multiple linear regression using SPSS software to test the influence of the independent variable on the dependent variable. The population in this study were companies listed on the Indonesia Stock Exchange (BEI) from 2018 to 2022. The sample was from part of the number and characteristics of this population (Sugiyono, 2022, p.131). Sampling in this research was carried out using a non-probability sampling technique in the form of purposive sampling, which determined the sample based on certain considerations (Sugiyono, 2022, p.138). The criteria for determining the sample in this research were companies listed on the Indonesia Stock Exchange (BEI) from 2018 to 2022 and have ESG assessment results on the LSEG ESG score. The data analysis technique was carried out using multiple linear regression analysis with the help of SPSS (Statistics Product and Service Solutions) software.

## 3. Results and Discussion

The population in this study employed companies listed on the Indonesia Stock Exchange (BEI) in the period 2018 to 2022. Sampling was carried out using a purposive sampling technique according to predetermined criteria. Based on these criteria, the sample used in this research can be seen in Table 1.

**Table 1.** Number of Research Samples

| Criteria | 2018 | 2019 | 2020 | 2021 | 2022 | Total |
|---|---|---|---|---|---|---|
| Companies with ESG assessment results on the LSEG ESG score | 43 | 46 | 51 | 83 | 73 | 296 |
| Companies whose share trading has been suspended | (1) | (1) | (1) | (1) | (1) | (5) |
| Outlier data | 0 | 0 | (1) | (5) | (2) | (8) |
| **Total of data** | **42** | **45** | **49** | **77** | **70** | **283** |

### *3.1. Data analysis*

#### *3.1.1. Descriptive statistics*

The descriptive statistics aims to gain an understanding of the data being analyzed. This included the sample size (N), minimum and maximum values, average (*mean*), and standard deviation. The statistical test results for each variable are as shown on Table 2.

**Table 1.** Descriptive statistics

| Variable | N | Min | Max | Mean | Std. Dev. |
|---|---|---|---|---|---|
| Volatility (Y) | 283 | 0,11 | 1,01 | 0,4205 | 0,14166 |
| Environmental performance ($X_1$) | 283 | 0,00 | 87,75 | 39,7115 | 23,96702 |
| Social performance ($X_2$) | 283 | 5,61 | 96,02 | 55,3310 | 21,96903 |
| Governance performance ($X_3$) | 283 | 2,98 | 94,01 | 51,5763 | 22,77260 |
| Corporate controversy ($X_4$) | 283 | 40,99 | 100,00 | 98,4950 | 8,32126 |
| Profitability (C1) | 283 | -3,38 | 0,73 | 0,1226 | 0,29366 |
| Return on Assets (C2) | 283 | -0,28 | 0,58 | 0,0685 | 0,09408 |
| Company size (C3) | 283 | 20,65 | 35,23 | 29,8045 | 3,90129 |
| Company age (C4) | 283 | 0,91 | 40,97 | 21,8819 | 9,20219 |
| Industry type (C5) | 283 | 1,00 | 11,00 | 6,1519 | 3,14906 |
| Economic conditions (C6) | 283 | -0,02 | 0,05 | 0,0353 | 0,02645 |

Table 2 presents information about the data applied in this research. The data included eleven variables, with a total of 283 observation data (company years) over the five-year research period. In the Stock Volatility (Y) variable, it is known that the minimum value is 0,11 at PT Adira Dinamika Multifinance, while the maximum value is 1,01 at PT Bank Aladin Syariah. The average stock volatility was recorded at 0,4205 with a standard deviation of 0,14166.

Furthermore, the environmental performance aspect ($X_1$) has a minimum value of 0,00 which is found in four companies, namely PT Panin Finansial, PT Media Nusantara Citra, PT Summarecon Agung, and PT Global Mediacom. Meanwhile, the highest score was 87,75 at PT Unilever Indonesia. The environmental performance variable ($X_1$) has an average value of 39,7115 with a standard deviation of 23,9672.

For the social performance variable ($X_2$), it is known that there is a minimum value of 5,61 at PT Link Net and a maximum value of 96,02 at PT Bukit Asam. The average value and standard deviation of Social Performance ($X_2$) is 55,3310 and 21,96903. Meanwhile, governance performance ($X_3$) shows a minimum value of 2,98 at PT Charoen Pokphand Indonesia and a maximum value of 94,01 at PT Bumi Resources. In governance performance ($X_3$), the average value is 51,5763 with a standard deviation of 22,77260.

Furthermore, regarding corporate scandal ($X_4$), it is known that there are companies that tend to be involved in controversial issues so that they get a minimum score of 40,99, namely PT Bank Rakyat Indonesia. Furthermore, there are 273 companies that tend not to be involved in controversial issues so they get a maximum score of 100. The average value of the corporate scandal variable ($X_4$) is 98,4950, with a standard deviation of 8,32126.

In the Profitability variable (C1), it is known that the minimum value is -3,38 at PT Bank Aladin Syariah, while the maximum value reaches 0,73 at PT Panin Financial Tbk. For the profitability variable, it is known that the average value is 0,1226 and the standard deviation is 0,29366. Meanwhile, for the Return on Assets (C2) variable, it is known that the range of values ranges from -0,28 at PT Acset Indonusa up to 0,58 at PT Bayan Resources, with an average of 0,0685 and a standard deviation of 0,09408. Then, a standard deviation value that is higher than the average value indicates that there is very wide variation in data between companies in this model.

For the Company Size variable (C3), the minimum value is 20,65 at PT Merdeka Copper Gold and the maximum value is 35,23 at PT Bank Mandiri (Persero) Tbk. The average Company Size (C3) is 29,8045 with a standard deviation of 3,90129, indicating that the variation in Company Size (C3) data tends to be moderate or less variable. Furthermore, regarding Company Age (C4), it is known that the youngest company is PT Bank Aladin Syariah with an age of 0,91 years and the oldest is PT Unilever Indonesia with an age of 40,97 years. The average company age (C4) is 21,8819 years with a standard deviation of 9,20219.

In this research, industry type (C5) is a variable with a fixed nominal scale. Details of the number of industries in this study can be seen in Table 3.

**Table 2.** Details of Company Industry Type

| Industry Type | Number | Number of Companies | Number of Companies Year |
|---|---|---|---|
| Healthcare | 1 | 1 | 5 |
| Basic Materials | 2 | 10 | 40 |
| Financials | 3 | 22 | 57 |
| Transportation & Logistics | 4 | 1 | 3 |
| Technology | 5 | 3 | 7 |
| Consumer Non-Cyclicals | 6 | 11 | 42 |
| Industrials | 7 | 2 | 10 |
| Energy | 8 | 8 | 34 |
| Consumer Cyclicals | 9 | 7 | 27 |
| Infrastructure | 10 | 10 | 37 |
| Properties & Real Estate | 11 | 5 | 21 |
| **Total** | | **80** | **283** |

For the Economic Conditions variable (C6), which is proxied by economic growth, in 2018 to 2022, the values are respectively 5,17%, 5,02%, -2,07%, 3,7% and 5,31%.

*3.1.2. Classic Assumption Test*

*a. Normality Test*

The normality test carried out in this study used the Kolmogorov-Smirnov statistical test with the test results shown in Table 4.

**Table** *Error! No text of specified style in document.***.** Normality test

| Information | Sig 2-tailed | Conclusion |
|---|---|---|
| Kolmogorov Smirnov Test (1-Sample KS) | 0.069 | Normally distributed |

In the Kolmogorov-Smirnov normality test, data is considered normally distributed if the significance value exceeds 0,05. In this normality test, outlier data was eliminated with a total of 8 outlier data so that the amount of data used in this study was reduced from 291 to 283. This elimination of outlier data was because the data had an extreme distribution of data so that it could influence the results of hypothesis testing. This elimination was carried out by casewise diagnostics method. As a result, the model has a sig (2- tailed) value of 0,069, higher than 0,05. Therefore, it can be concluded that the data in this study is normally distributed.

*b. Multicollinearity Test*

Multicollinearity test was carried out with the aim of checking the existence of correlation between independent variables in the regression model. The method used for this test is Variance Inflation Factor (VIF). A VIF value of more than 10 indicates the presence of multicollinearity between the independent variables, while a value below 10 indicates the absence of multicollinearity. The results of this multicollinearity test can be seen in Table 5.

**Table 3.** Multicollinearity Test

| Variable | VIF | Conclusion |
|---|---|---|
| Environmental performance ($X_1$) | 2,062 | No Multicollinearity |
| Social performance ($X_2$) | 2,265 | No Multicollinearity |
| Governance performance ($X_3$) | 1,538 | No Multicollinearity |
| Corporate controversy ($X_4$) | 1,030 | No Multicollinearity |
| Profitability (C1) | 1,166 | No Multicollinearity |
| Return on Assets (C2) | 1,234 | No Multicollinearity |
| Company size (C3) | 1,110 | No Multicollinearity |
| Company age (C4) | 1,091 | No Multicollinearity |
| Industry type (C5) | 1,074 | No Multicollinearity |
| Economic conditions (C6) | 1,027 | No Multicollinearity |

Test results using Variance Inflation Factor (VIF) analysis show that there are no multicollinearity problems between the independent variables. This is shown by the VIF value of each variable, all of which are below 10.

*c. Autocorrelation Test*

Autocorrelation test was carried out to check whether there is a relationship between errors in the current period (t) and the previous period in the regression model. The autocorrelation test in this research was carried out using the Durbin-Watson Test (DW) method, which can be seen in Table 6.

**Table 4.** Autocorrelation Test

| K | N | dU | d | 4-dU | Conclusion |
|---|---|---|---|---|---|
| 10 | 283 | 1,880 | 2,012 | 2,120 | There is no autocorrelation |

Autocorrelation test , it is known that the Durbin-Watson (d) value is 2.012 using 10 independent variables and 283 research samples. From the tests carried out, there was no autocorrelation in the model because the Durbin-Watson (d) value of 2.012 was between the dU values of 1,880 and 4-dU of 2,120.

*d. Heteroscedasticity Test*

Heteroscedasticity test was carried out to test whether the residual variance from each observation is non-uniform. An ideal regression model should not have heteroscedasticity. In this study, the heteroscedasticity test was carried out using the Rho Spearman method, the results of which are presented in Table 7.

**Table 5.** Heteroscedasticity Test

| Variable | Sig (2-tailed) | Conclusion |
|---|---|---|
| Environmental performance ($X_1$) | 0,821 | No heteroscedasticity |
| Social performance ($X_2$) | 0,741 | No heteroscedasticity |
| Governance performance ($X_3$) | 0,584 | No heteroscedasticity |
| Corporate scandal ($X_4$) | 0,417 | No heteroscedasticity |
| Profitability (C1) | 0,998 | No heteroscedasticity |
| Return on Assets (C2) | 0,777 | No heteroscedasticity |
| Company size (C3) | 0,334 | No heteroscedasticity |
| Company age (C4) | 0,588 | No heteroscedasticity |
| Industry type (C5) | 0,814 | No heteroscedasticity |
| Economic conditions (C6) | 0,645 | No heteroscedasticity |

According to heteroscedasticity test, all independent variables have a significant value of more than 0,05. Thus, it can be concluded that heteroscedasticity does not occur in the research model.

*3.1.3. Hypothesis Testing*

The hypothesis tests used in this research are the Coefficient of Determination Test, F-Test, and T-Test, which are shown in Table 8.

**Table 6.** Hypothesis testing

| Variable | Direction Prediction | Regression Coefficient (B) | Sig. (One-tailed) | Decision |
|---|---|---|---|---|
| Constant | | 0,723 | 0,000 | |
| Environmental performance ($X_1$) | - | -0,002 | 0,000 | $H_1$ is accepted |
| Social performance ($X_2$) | - | 0,002 | 0,001 | $H_2$ is rejected |
| Governance performance ($X_3$) | - | 0,000 | 0,226 | $H_3$ is rejected |
| Corporate controversy ($X_4$) | - | 0,000 | 0,457 | $H_4$ is rejected |
| Profitability (C1) | | -0,137 | 0,000 | |
| Return on Assets (C2) | | 0,095 | 0,114 | |
| Company size (C3) | | -0,013 | 0,000 | |
| Company age (C4) | | 0,001 | 0,242 | |
| Industry type (C5) | | 0,001 | 0,372 | |
| Economic conditions (C6) | | -2,382 | 0,000 | |
| **Adjusted $R^2$** | | **0,461** | | |
| **F Test (Sig)** | | **<0,001** | | |

Based on Table 8, the regression equation formed is:

$$VOL = 0{,}723 - 0{,}002ENV + 0{,}002SOC + 0{,}000\beta_3 GOV + 0{,}000CONT - 0{,}137PROF + 0{,}095ROA - 0{,}013SIZE + 0{,}001AGE + 0{,}001IND - 2{,}382ECON$$

*3.1.4. Coefficient of Determination Test ($R^2$)*

The coefficient of determination test was carried out to determine the extent to which the regression model could explain variations in the independent variable on the dependent variable. The coefficient of determination value, indicated by $R^2$, shows the amount of variability in the dependent variable explained by the independent variable. As shown in Table

8 above, the $R^2$ value of 0,461 means that the variation of the dependent variable in the form of stock volatility, explained by the independent variables environmental performance, social performance, governance performance and corporate scandal, as well as six other control variables is 46,1%, while the other 54,9% is explained by other factors not included in the model.

*3.1.5. F-test*

The F-test was carried out to determine whether all independent variables used in the regression model have a simultaneous influence on the dependent variable. Based on Table 8 above, the F-Test results have a significant value of <0,001 or smaller than 0,05. These results indicate that the research model is fit.

*3.1.6. T-test*

The T-test was carried out with the aim of finding out whether each independent variable is able to influence the independent variable. Based on Table 8, the T-test results are as follows:

1) The Influence of Environmental Performance on Stock Volatility
According to the T-test results on the regression model, it is known that the significance value of the Environmental Performance variable is 0,000<0,01 ($\alpha$=1%) and the beta value ($\beta$) is 0,002 in the negative direction. From these results, it can be concluded that Environmental Performance has a significant negative influence on stock volatility so that $H_1$ is accepted.
2) The Influence of Social Performance on Stock Volatility
According to the results of the T-Test on the regression model, it is known that the significance value of the Social Performance variable is 0,001<0,01 ($\alpha$=1%) and the beta value ($\beta$) is 0,002 in a positive direction. From these results, it can be concluded that Social Performance does not have a significant negative influence on stock volatility so that $H_2$ is rejected.
3) The Influence of Governance Performance on Stock Volatility
According to the results of the T-test on the regression model, it is known that the significance value of the Governance Performance variable is 0,226>0,1 ($\alpha$=10%) and the beta ($\beta$) value is 0,000 in a positive direction. From these results, it can be concluded that there is no influence of Governance Performance on stock volatility so that $H_3$ is rejected.
4) The Influence of Corporate Scandal on Stock Volatility
According to the results of the T-test on the regression model, it is known that the significance value of the Corporate Scandal variable is 0,457>0,1 ($\alpha$=10%) and the beta ($\beta$) value is 0,000 in a positive direction. From these results, it can be concluded that there is no influence of Corporate Scandal on stock volatility so that $H_4$ is rejected.

*3.2. Discussion*

*3.2.1. The Influence of Environmental Performance on Stock Volatility*

Legitimacy theory and stakeholder theory state that companies must carry out their business processes responsibly to gain legitimacy and be able to run a business sustainably. One manifestation of this responsibility is to proactively manage the environmental impact of its business operations. Good environmental performance will be a positive signal for stakeholders and will be immediately responded to by the market according to the Efficient Market Hypothesis theory. This improvement in environmental performance will increase investor confidence in the company as the sustainable environmental practices can increase the effectiveness of risk management and contribute to more efficient operations, as well as resulting in more stable long-term growth. Therefore, superior environmental performance can have an impact on reducing stock volatility.

The results of the research conducted show that there is a negative influence of environmental performance on company value. This research supports the theories of legitimacy, stakeholder, signal, and efficient market hypothesis, as well as supporting research conducted by Yoo et al. (2021), Bermejo Climent et al. (2021), and Xue et al. (2020), which states that there is a negative influence of environmental performance on stock volatility.

*3.2.2. The Influence of Social Performance on Stock Volatility*

Stakeholder theory states that companies must be able to contribute to all stakeholders, not just limited to shareholders. One form of company contribution to the social aspect is by providing Corporate Social Responsibility (CSR). Good social performance will increase the company's reputation and value in the eyes of stakeholders, including investors. This trust has the potential to attract long-term investors who are not easily affected by short-term share price fluctuations. This will increase the stability of the company's shares. However, the results of this research are not in line with stakeholder theory and do not support Assous' research (2022), Engelhardt et al. (2021), Yang (2020), and Hunjra et al. (2020), which explains that social performance has a negative effect on stock volatility.

### *3.2.3. The Influence of Governance Performance on Stock Volatility*

Legitimacy theory states that to be able to operate sustainably, companies must demonstrate ethical business practices so that they can gain legitimacy from their environment. Ethical business practices can be realized through the implementation of good corporate governance (GCG) in all aspects of the company. The implementation of GCG will increase the company's reputation and investor confidence as the company is considered to run its business transparently, accountably, and responsibly. This can lead to increased stock price stability. However, this research finds that governance performance has no influence on share price volatility. The results of this study do not support legitimacy theory and research conducted by Yoo et al. (2021), Bermejo Climent et al. (2021), and Lee et al. (2019), which states that governance performance has a negative influence on stock volatility.

### *3.2.4. The Influence of Corporate Scandal on Stock Volatility*

Signal theory states that a company's good or bad performance becomes a signal that the market will receive and respond. This market response, according to the Efficient Market Hypothesis theory, will then be reflected in the company's share price because it reflects various information available on the market. If the company is involved in controversy, the market will receive this as a negative signal, which will usually result in increased share price fluctuations. However, the results of this study explain that corporate scandal has no influence on stock price volatility. This does not support signal theory and the efficient market hypothesis theory, and is not in line with research by Sandu (2023), Zanatto et al. (2023), Cui & Docherty (2020), and Glasserman & Mamaysky (2019), which states that corporate scandal has an influence on increasing share price volatility.

## 4. Conclusion

Environmental performance has a significant negative effect on stock volatility. Social performance does not have a significant effect on stock volatility. Governance performance does not have a significant effect on stock volatility. Corporate scandal does not have a significant effect on stock volatility.

This research has limitations, namely the use of an unbalanced sample because not all companies have ESG assessment results from The London Stock Exchange Group (LSEG) every year during the 2018-2022 period.

It is hoped that the results of this research will encourage companies to be more serious about integrating Environmental, Social, Governance (ESG) practices into their business strategies. Through the adoption of effective ESG practices, companies are expected to reduce stock volatility and build a positive reputation. It is important for companies to proactively manage potential controversies and ensure transparent and effective communication with stakeholders, in order to maintain market trust and stability. Researchers can further expand the time span of the study to include years after 2022. This will help in understanding the trends and changes that may occur after the time period of this study.

## References

Aditya, SM, & Nainggolan, YA (2022). Stock Volatility and Liquidity During Covid-19 Pandemic: Comparison of ESG Leader and Non ESG Leader Companies in Indonesia. *Asian Journal of Accounting and Finance*. https://doi.org/10.55057/ajafin.2022.4.3.1

Assous , H.F. (2022). Saudi Green Banks and Stock Return Volatility: GLE Algorithm and Neural Network Models. *Economies*, *10* (10), 242. https://doi.org/10.3390/economies10100242

Bermejo Climent, R., Garrigues, IF-F., Paraskevopoulos, I., & Santos, A. (2021). ESG Disclosure and Portfolio Performance. *Risks*, *9* (10), 172. https://doi.org/10.3390/risks9100172

Bridoux, F.M., & Vishwanathan, P. (2020). When Do Powerful Stakeholders Give Managers the Latitude to Balance All Stakeholders' Interests? *Business & Society*, *59* (2), 232–262. https://doi.org/10.1177/0007650318775077

Capital Group. (2022). *ESG Global Study 2022*. https://corpgov.law.harvard.edu/2022/06/17/esg-global-study-2022/

Chaudhary, R., Bakhshi, P., & Gupta, H. (2020). Volatility in International Stock Markets: An Empirical Study during COVID-19. *Journal of Risk and Financial Management*, *13* (9), 208. https://doi.org/10.3390/jrfm13090208

Chen, C.-D., Su, C.-H. (Joan), & Chen, M.-H. (2022). Understanding how ESG-focused airlines reduce the impact of the COVID-19 pandemic on stock returns. *Journal of Air Transport Management*, *102*, 102229. https://doi.org/10.1016/j.jairtraman.2022.102229

Cui, B., & Docherty, P. (2020). Stock Price Overreaction to ESG Controversies. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3559915

Donaldson, T., & Preston, L. E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *The Academy of Management Review*, *20* (1), 65. https://doi.org/10.2307/258887

Donaldson, T., & Preston, L. E. (1998). The Stakeholder Theory of the Corporation: Concepts, Evidence and Implications. In M. Clarkson (Ed.), *The Corporation and Its Stakeholders* (pp. 173–204). University of Toronto Press. https://doi.org/10.3138/9781442673496-011

Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *The Pacific Sociological Review*, *18* (1), 122–136. https://doi.org/10.2307/1388226

Duttilo, P., Gattone, S. A., & Battista, T. (2021). *Volatility Modeling: An Overview of Equity Markets in the Euro Area During the COVID-19 Pandemic.* https://doi.org/10.20944/preprints202103.0628.v1

Engelhardt, N., Ekkenga, J., & Posch, P. (2021). ESG Ratings and Stock Performance during the COVID-19 Crisis. *Sustainability*, *13* (13), Article 13. https://doi.org/10.3390/su13137133

Fama, E.F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, *25* (2), 383. https://doi.org/10.2307/2325486

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman.

Freeman, R. E. (1998). A Stakeholder Theory of the Modern Corporation. In M. Clarkson (Ed.), *The Corporation and Its Stakeholders* ( pp. 125–138). University of Toronto Press. https://doi.org/10.3138/9781442673496-009

Ghozali, I. (2020). *Quantitative & Qualitative Research Design for Accounting, Business, and Other Social Sciences*. Primary Yoga.

Glasserman, P., & Mamaysky, H. (2019). Does Unusual News Forecast Market Stress? *Journal of Financial and Quantitative Analysis* , *54* (5), 1937–1974. https://doi.org/10.1017/S0022109019000127

Hargrave, M. (2022, June 14). *Return on Assets (ROA): Formula and "Good" ROA Defined*. https://www.investopedia.com/terms/r/returnonassets.asp

Hayes, A. (2023, May 23). *Profitability Ratios: What They Are, Common Types, and How Businesses Use Them*. https://www.investopedia.com/terms/p/profitabilityratios.asp

Huang, X., & Tang, H. (2022). Measuring multi-volatility states of financial markets based on multifractal clustering model. *Journal of Forecasting* , *41* (3), 422–434. https://doi.org/10.1002/for.2820

Hunjra, A.I., Mehmood, R., & Tayachi, T. (2020). How Does Corporate Social Responsibility and Corporate Governance Affect Stock Price Crash Risk? *Journal of Risk and Financial Management*, *13* (2), 30. https://doi.org/10.3390/jrfm13020030

Ihsani, AN, Nidar, SR, & Kurniawan, M. (2023). Does ESG Performance Affect Financial Performance? Evidence from Indonesia. *Wiga: Journal of Economic Research*, *13* (1), 46–61. https://doi.org/10.30741/wiga.v13i1.968

Kartika, F., Dermawan, A., & Hudaya, F. (2023). Environmental, social, governance (ESG) disclosure in increasing the value of public companies on the Indonesian Stock Exchange. *SOCIOHUMANIOR: Scientific Journal of Social Sciences and Humanities, 9* (1), 29–39. https://doi.org/10.30738/sosio.v9i1.14014

Kim, S., & Li, Z. (Frank). (2021). Understanding the Impact of ESG Practices in Corporate Finance. *Sustainability*, *13* (7), 3746. https://doi.org/10.3390/su13073746

KPMG. (2022). *Big Shifts, Small Steps: Survey of Sustainability Reporting 2022*. https://assets.kpmg.com/content/dam/kpmg/pk/pdf/2022/10/Survey-of-Sustainability-Reporting-2022.pdf

Laokulrach, M. (2022). The Influence of Sustainable Development on Stock Risk and Volatility in Thailand's Stock Exchange during the COVID-19 Pandemic. *Asian Economic and Financial Review*, *12* (9), 751–765. https://doi.org/10.55493/5002.v12i9.4592

Lee, S.-N., Hooy, C.-W., & Taib, F. M. (2019). The Effect of Corporate Governance on Firm Stock Volatility in Asia. *Journal of Asia-Pacific Business* , *20* (1), 25–47. https://doi.org/10.1080/10599231.2019.1572421

LSEG. (2022). *Environmental, Social, and Governance Scores from LSEG*. LSEG. https://www.lseg.com/content/dam/data-analytics/en_us/documents/methodology/lseg-esg-scores-methodology.pdf

Lubis, MFF, & Rokhim , R. (2021). The Effect of Environmental, Social, and Governance (ESG) Disclosure and Competitive Advantage on Companies Performance as An Implementation of Sustainable Economic Growth in Indonesia for the Period of 2015-2019. *IOP Conference Series: Earth and Environmental Science*, *940* (1), 012059. https://doi.org/10.1088/1755-1315/940/1/012059

Meher, B.K., Hawaldar , I.T., Mohapatra, L., Spulbar , C., & Birau, R. (2020). The Effects of Environment, Society and Governance Scores on Investment Returns and Stock Market Volatility. *International Journal of Energy Economics and Policy* , *10* (4), 234–239. https://doi.org/10.32479/ijeep.9311

Nadya, K. (2023, July 12). *Annualized Standard Deviation is: Definition, Uses and How to Calculate It*. https://www.idxchannel.com/market-news/annualized-standard-deviation-dapat-ini-detik-kegunaan-dan-cara-hitungnya

Nurhaliza, S. (2021, March 14). *Don't misunderstand, let's get to know stock volatility on the stock exchange floor*. https://www.idxchannel.com/milenomic/jangan-lahan-paham-yuk-kenali-volatilitas-saham-di-lantai-bursa

Reber, B., Gold, A., & Gold, S. (2022). ESG Disclosure and Idiosyncratic Risk in Initial Public Offerings. *Journal of Business Ethics*, *179* (3), 867–886. https://doi.org/10.1007/s10551-021-04847-8

Rodionova, M., Skhvediani , A., & Kudryavtseva, T. (2022). ESG as a Booster for Logistics Stock Returns—Evidence from the US Stock Market. *Sustainability*, *14* (19), 12356. https://doi.org/10.3390/su141912356

Sabbaghi, O. (2022). The impact of news on the volatility of ESG firms. *Global Finance Journal*, *51*, 100570. https://doi.org/10.1016/j.gfj.2020.100570

Sandu, D.-M. (2023, May 11). *The Impact of ESG Controversies and ESG Performance on Stock Return Volatility*. 13th International Scientific Conference „Business and Management 2023", Vilnius Gediminas Technical University, Lithuania. https://doi.org/10.3846/bm.2023.1032

Shakil, M. H. (2021). Environmental, social and governance performance and financial risk: Moderating role of ESG controversies and board gender diversity. *Resources Policy*, *72*, 102144. https://doi.org/10.1016/j.resourpol.2021.102144

Shakil, M. H. (2022). Environmental, social and governance performance and stock price volatility: A moderating role of firm size. *Journal of Public Affairs*, *22* (3), e2574. https://doi.org/10.1002/pa.2574

Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, *87* (3), 355. https://doi.org/10.2307/1882010

Sugiyono. (2022). *Quantitative Research Methods*. Alphabet.

Tanjung, M. (2023). Cost of capital and firm performance of ESG companies: What can we infer from the COVID-19 pandemic? *Sustainability Accounting, Management and Policy Journal*, *14* (6), 1242–1267. https://doi.org/10.1108/SAMPJ-07-2022-0396

Tasnia, M., Syed Jaafar AlHabshi, S.M., & Rosman, R. (2021). The impact of corporate social responsibility on stock price volatility of the US banks: A moderating role of tax. *Journal of Financial Reporting and Accounting, 19* (1), 77–91. https://doi.org/10.1108/JFRA-01-2020-0020

Valls Martínez, M.D.C., Soriano Román, R., & Mart´ín -Cervantes, P.A. (2022). Should risk-averse investors target the portfolios of socially responsible companies? *Economia Copernicana*, *13* (2), 439–474. https://doi.org/10.24136/oc.2022.014

Wahyuningtyas, ET, Susesti , DA, & Murtadho , M. (2022). *Does sustainability reporting improve financial and non-financial performance in Indonesian Companies?:* International Conference on Sustainable Innovation Track Accounting and Management Sciences (ICOSIAMS 2021), Bantul, Indonesia. https://doi.org/10.2991/aebmr.k.211225.034

Xue, B., Zhang, Z., & Li, P. (2020). Corporate environmental performance, environmental management and firm risk. *Business Strategy and the Environment*, *29* (3), 1074–1096. https://doi.org/10.1002/bse.2418

Yang, X. (2020). CSR Disclosure and Stock Return Volatility in China: An Empirical Study Based on Panel Data Models. *2020 Management Science Informatization and Economic Innovation Development Conference (MSIEID)* , 55–58. https://doi.org/10.1109/MSIEID52046.2020.00018

Yoo, S., Keeley, A. R., & Managi, S. (2021). Does sustainability activities performance matter during financial crises? Investigating the case of COVID-19. *Energy Policy*, *155*, 112330. https://doi.org/10.1016/j.enpol.2021.112330

Zahroh, B.M., & Hersugondo, H. (2021). The Effect of ESG Performance on the Financial Performance of Manufacturing Companies Listed in The Indonesian. *AFEBI Management and Business Review*, *6* (2), 129. https://doi.org/10.47312/ambr.v6i2.475

Zanatto, C., Catalão -Lopes, M., Pina, J. P., & Carrilho-Nunes, I. (2023). The impact of ESG news on the volatility of the Portuguese stock market—Does it change during recessions? *Business Strategy and the Environment*, *32* (8), 5821–5832. https://doi.org/10.1002/bse.3450

Zhou, D., & Zhou, R. (2021). ESG Performance and Stock Price Volatility in Public Health Crisis: Evidence from COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, *19* (1), 202. https://doi.org/10.3390/ijerph19010202