DIPONEGORO JOURNAL OF ACCOUNTING *Volume 12, Nomor 3, Tahun 2023, Halaman 1-11*
http://ejournal-s1.undip.ac.id/index.php/accounting *ISSN (Online): 2337-3806*

THE EFFECT OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) DISCLOSURE AND ENVIRONMENTAL PERFORMANCE ON STOCK RETURN

Farhan Aziz, Anis Chariri[1]

Accounting Department Faculty of Economic and Business Diponegoro University
Jl. Prof Soedharto SH, Tembalang, Semarang 50239, Phone+6224786851

ABSTRACT

This study examines the effect of environmental, social, and governance (ESG) disclosure and environmental performance on stock returns. Environmental, social, and governance (ESG) disclosure independent variables are projected through the ESG Disclosure Score, while environmental performance is assessed through the PROPER Rating. The dependent variable uses stock returns. The population comprises non-financial companies listed on the Indonesia Stock Exchange (IDX) during 2017-2021. The sampling technique used in this study was a purposive sampling method with specific criteria, resulting in 75 samples of non-financial companies being examined. Data analysis was performed using multiple linear regression. The analysis results show that environmental performance significantly positively affects stock returns, and environmental, social, and governance (ESG) disclosure has no significant adverse effect.

Keywords: Environmental, Social, and Governance (ESG) Disclosure, ESG Disclosure Score Environmental Performance, PROPER Rating, Stock Return.

INTRODUCTION

Return on investment is probably one of the most well-known and important ways to measure a business's performance. This metric is key for investors to measure how well a company performs and whether it is a good investment. One may evaluate companies relative to their peers concerning their financial performance concerning the amount of money invested (Subramanyam and Wild, 2009). A stock market is beneficial for investors because it provides opportunities for financial gain. A healthy stock market may be very helpful in attracting capital, facilitating investments, and coordinating the production of products and services that support employment. This promotes the overall economic growth of the nation.

Investigating the stock returns of Indonesian markets could prove to be a fascinating area of study. The country has a growing economy and a growing stock market, which makes it an attractive place for investors looking for opportunities (Kung et al., 2010). Stock returns in Indonesia may give investors and analysts information about how certain companies and parts of the Indonesian economy are doing, which may be helpful. Studying Indonesian stock returns may also help economists and policymakers determine how healthy and stable the Indonesian economy is. Researching stock returns in Indonesia may also help investors and analysts decide where to put their money in the Indonesian market (Sharma et al., 2019). Capital market investors in Indonesia have gained 33.53% from 7,489,337 at the end of 2021 to 10,000,628 on November 3, 2022. This trend began in 2019 with 2,484,354 investors. From 2019 to 2021, Indonesia's stock market had the biggest investment rise ever (Kustodian Sentral Efek Indonesia, 2022).

[1] *Corresponding author*

The significance of Indonesia's environmental problems should not be overlooked, particularly in light of the increasing impacts resulting from inadequate responsibility for the environment. For a considerable duration, various calamities such as air and water pollution, noise pollution, traffic congestion, chemical exposure, acid rain, nuclear waste radiation, and other stress-inducing factors have been prevalent in our daily existence (Handoyo, 2018).

Law no. 23 of 1997 concerning Environmental Management applies to everyone in the Republic of Indonesia. Despite the implementation, the results obtained have been well below expectations. Because of this, the Limited Liability Company Law, the Capital Market Law, and the Financial Accounting Standards put out by the Indonesian Institute of Accountants, it is necessary to implement strict rules concerning the protection of the environment, particularly for public companies, to ensure accurate disclosure of environmental, social and also governance.

According to Chang and Lee (2022), Environmental, social, and corporate governance (ESG), challenges cover a broad spectrum and may affect a company's ability to execute its business plan and generate long-term value. The general populace's knowledge of social and environmental concerns. Companies are constantly pushed to focus on more than just making a profit; they are also urged to consider their operational operations' effects on society and the environment.

Environmental performance may be viewed as an organization's or entity's ability to minimize its detrimental effects on the environment and to promote the cause of sustainable development. Indonesia's rich and varied natural environment, combined with its environmental difficulties as a nation in the rapid development process, necessitates comprehensive research into Indonesia's environmental performance. In addition, businesses and organizations must strive to maintain a sustainable approach to meet the heightened demands of current consumers and investors for sustainability (Handoyo, 2018).

In June 1995, the Indonesian Ministry of Environment and Forestry Initiated a new initiative to inform the public about how much polluters stick to environmental preservation. This project is called the Program for Pollution Control, Evaluation, and Rating (PROPER) rating. The intent is to assist in the mitigation of pollution. Suggest that companies comply with present regulations and distribute incentives to those who exceed the prescribed benchmarks (Makarim et al., 1995).

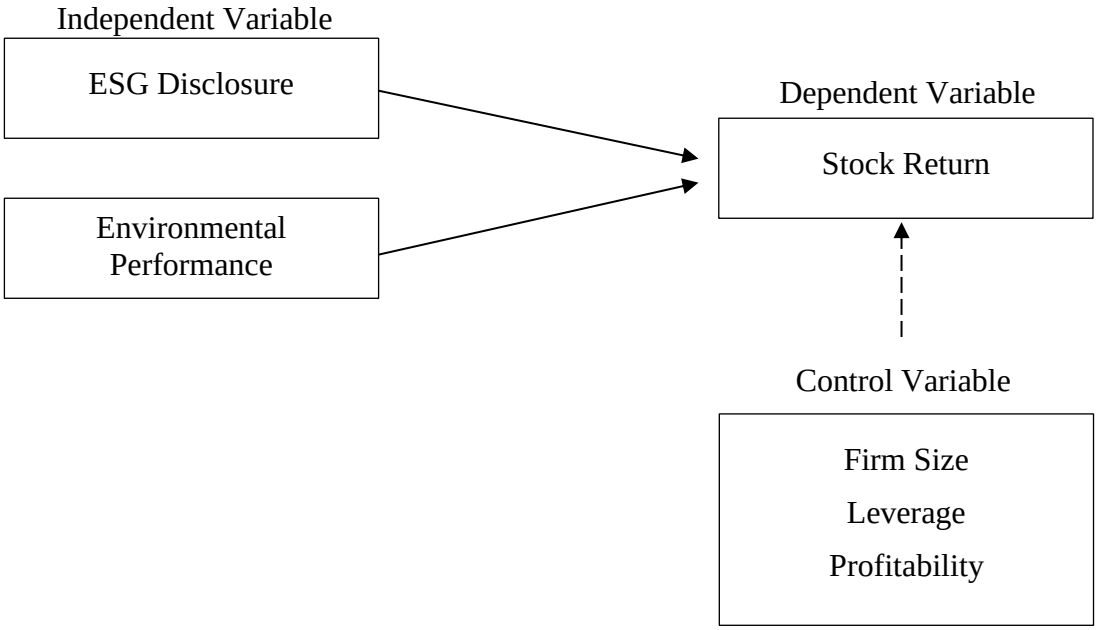
The PROPER Rating gives companies a score based on how well the rules are being followed, with gold (excellent), green (good), blue (adequate), red (poor), and black (very poor). The colors used to show the PROPER Rating make it easier for the public to determine if the company follows environmental management rules. The evaluation of a company's commitment to environmental sustainability standards and its PROPER Rating may be effect by various factors, including but not limited to environmental permits, water and air pollution control, waste management, hazardous and toxic materials (B3), and potential land damage (Makarim et al., 1995).

THEORITICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The logical connections between variables may be better understood with the assistance of this study approach. This research will explore whether or not the independent variable influences the variable that will be evaluated. The connection between these variables may be shown in Figure 2.1.

Figure 1

Research Framework



Effect of Environmental, Social, and Governance (ESG) Disclosure on Stock Return

A problem concerning a company's environmental, social, and governance practices is referred to as ESG ("environmental, social, and governance"). ESG Disclosure Score is a score that is given to a company in terms of environmental problems around the company that are created when the company operates, social problems around the company that are created when the company operates, and corporate governance that has an impact, either positive or negative, on the environment (Aditya, 2022).

Disclosure of environmental, social, and governance (ESG) factors may be seen by investors as a signal or piece of information that might impact their impression of a can affect the stock price. However, the influence of the ESG signal on stock returns might vary depending on the unique context and circumstances of the company as well as the market. The ESG signal does not always have a good effect on stock returns. On the other hand, ESG disclosure can show a company's flaws or weaknesses, such as not following environmental rules or having problems with corporate governance. In this case, the ESG signal can make investors worried, which can cause the stock price to go down (Meng-tao et al., 2023).

This aligns with the signaling theory, in which companies may tell their stakeholders about their company value through annual reports. Signaling theory is crucial for comprehending how ESG disclosure affects stock returns since it clarifies how ESG activities

may change investor perception and, in turn, influence share prices. ESG disclosure has decreased the company value due to the relatively low level of investor confidence in the given signals. Investors often do not react favorably to these signs. Investors think the ESG report's listed actions are excessively expensive and harmful to their interests. As a result, they have little interest in investing. This led to a decline in market demand, which in turn caused a decline in corporate value, represented in a decline in stock prices (Martha, 2023).

H1: Environmental, Social, and Governance (ESG) Disclosure negatively impacts Stock Return.

Effect of Environmental Performance on Stock Return

Companies that protect the environment will also have positive news to report to their investors and prospective investors on their financial success. Companies with excellent news prefer to enhance their environmental performance, which may take the shape of management and sound environmental management to accurately represent it in the PROPER rating evaluation. Once complete, an image will be produced from the PROPER rating evaluation. Investors will assume that the firm has strong environmental and financial performance if the company has a solid reputation in the market (Anggraini, 2018).

Signal theory suggests that the effectiveness of this signal in influencing stock returns depends on several factors, including the quality of the signal, the receiver's perception of the signal, and the receiver's willingness to act on the signal. It can be used to explain how environmental performance affects stock returns by considering environmental performance as a signal that is transmitted to investors (Anggraini, 2018).

Investors will react favorably and be more interested in purchasing company shares if the company has a high environmental performance rating. Suppose the level of a business's environmental performance reflects the level of the company's success in terms of its financial performance. In that case, the company with the more dependable environmental performance will have higher stock returns (Purwaningsih, 2017).

H2: Environmental Performance positively impacts Stock Return.

RESEARCH METHODOLOGY

Operational Variable

This research uses three variables: one dependent variable, the rate of return on stocks, and two independent variables, environmental, social, and governance (ESG) and environmental performance. As Suhadak et al. (2019) described, stock returns are investment returns investors may enjoy for the money put in the stock. The following is the formula for determining return stock, as outlined by Jogiyanto (2017):

$$Stock\ Return = Capital\ Gain\ (Loss) + Yield$$

The ESG disclosure variable is proximally measured through the ESG disclosure score obtained through Bloomberg Terminals. According to Bloomberg Terminal, each assessment component will be weighed based on importance. For example, statistics like greenhouse gas emissions would be given more weight than the other evaluation components. The score

ranges from 0 to 100 and is weighted based on relevance.

The company's environmental performance is evaluated based on the company's achievements in participating in PROPER Rating. PROPER Rating is one of the efforts made by the Ministry of Environment and Forestry to encourage company management in environmental management through information instruments. The results of the company's participation in the PROPER Rating are used to evaluate the company's environmental performance (Sarumpaet et al., 2017).

Control Variable

Company size may be measured by the number of assets (wealth) owned by the company and converted into natural logarithm (LN) form (Chu et al., 2013). A comparison that indicates the amount of debt used for financing by businesses during their operational activities, the leverage ratio, is referred to as the debt-to-equity ratio (Wang and Sarkis, 2017). The Return on Assets (ROA) formula is used throughout this study. Return on Assets, often known as ROA, is a method of calculating profitability that eliminates data bias (Chu et al., 2013). ROA provides a more accurate depiction of the effectiveness with which a business may generate profits (Prado-Lorenzo et al., 2009).

Population and Sample

The population in this research is business entities in Indonesia listed on stock exchanges in Indonesia. Purposive sampling is the method used for sampling. The following criteria were used to choose this research:

1. Non-financial company that registered for the 2017–2021 trading period on the Indonesia Stock Exchange (IDX).
2. Companies accessible on Bloomberg Terminal have ESG Disclosure Score in the governance, environmental, and social categories between 2017-2021.
3. Companies that will participate in PROPER Rating by the Ministry of Environment and Forestry from 2017-2021.
4. Publishing a yearly report from 2017-2021 sequentially.

Data Analysis Method

The link between each independent and dependent variable was examined using multiple linear regression analysis. This was done by looking at whether each independent variable was related to the dependent variable positively or negatively. Then, it is used to predict the value of the dependent variable based on whether or not the value of the independent variable has gone up or down.

According to Ghozali (2018) said, this study's regression model, which takes into account both independent variables and dependent variables, is as follows:

$$SR_t = \alpha + \beta_1 ESG_t + \beta_2 EP_t + \beta_3 FSIZE_t + \beta_4 LEV_t + \beta_5 PROFIT_t + \varepsilon$$

Explanation :

SR : Stock Return
t : Year
α : Constant

ε	: Error
β_{1-5}	: Regression Coefficient
ESG	: ESG Disclosure
EP	: Environmental Performance
FSIZE	: Firm Size
LEV	: Leverage
PROFIT	: Profitability

RESULT AND DISCUSSION

Description and Research Object

The population in this study are non-financial companies listed on the Indonesia Stock Exchange (IDX). The sample used is a non-financial company listed on the Indonesia Stock Exchange (IDX), which has data on ESG Disclosure Score and PROPER Rating during the observation period, namely from 2017 to 2021, respectively. After the purposive sampling selection process, 20 companies that met the criteria were obtained, with 100 samples. Identification of the sample is explained in the table below.

Table 1

Population and Sample

Criteria and Requirements	Amount
Non-financial companies that have been listed (go public) on the Indonesia Stock Exchange (IDX) consecutively during the 2017-2021 period	457
Non-financial companies that have not published ESG Disclosure Scores and PROPER Ratings consecutively during the 2017-2021 period	(437)
Companies that fit the criteria	20
Total samples before outliers	**100**
Outliers:	
a. 2017 data outliers	(8)
b. 2018 data outliers	(8)
c. 2019 data outliers	(3)
d. 2020 data outliers	(4)
e. 2021 data outliers	(2)
Total samples after outliers	**75**

Source: Secondary data, processed in 2023

Descriptive Statistical Analysis

Table 2

Statistical Analysis

	N	Min	Max	Mean	Std. Deviation
ESG Disclosure	75	25.56	63.20	45.95773	9.287913
Firm Size	75	29.29027	32.48183	31.18901	0.8394612
Leverage	75	0.126421	0.773382	0.372089	0.1619219
Profitability	75	-0.03679	0.301971	0.074865	0.0646519
Stock Return	75	-0.4301	0.80	-0.05099	0.2166975
Valid N (listwise)	75				

Source: SPSS 25 output, secondary data for the year 2023

A numerical measure was used to determine this study's PROPER Rating for the environmental performance variable, which indicates the variable's value. This research focuses primarily on the numerical scale in ordinal with the frequency distribution (Ghozali, 2016).

Table 3

PROPER Rating Frequency Distribution

	Color	Score	Rating	Frequency	Percent
Valid	Black	1.00	Very Poor	0	0%
	Red	2.00	Poor	0	0%
	Blue	3.00	Adequate	40	53.3%
	Green	4.00	Good	30	40%
	Gold	5.00	Excellence	5	6.7%
Total				75	100%

Source: SPSS 25 output, secondary data for the year 2023

Hypothesis Testing

Table 4

Coefficient of Determination

Model	R	R Square	Adjusted R^2	Std. Error of the Estimate
1	.470[a]	0.221	0.164	0.1981043488

a. Predictors: (Constant), Profitability, ESG Disclosure, Firm Size, Leverage, Environmental Performance

b. Dependent Variable: Stock Return

Source: SPSS 25 output, secondary data for the year 2023

The adjusted R^2 number is displayed as 0.164 in Table 4. This number illustrates how the independent variables, ESG disclosure and environmental performance, may account for 16.4 percent of the dependent variable, stock return.

Table 5

Statistical Test Results F

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.767	5	0.153	3.908	.004[b]
	Residual	2.708	69	0.039		
	Total	3.475	74			

a. Dependent Variable: Stock Return

b. Predictors: (Constant), Profitability, ESG Disclosure, Firm Size, Leverage, Environmental Performance

Source: SPSS 25 output, secondary data for the year 2023

The fact that the F statistic test has a significant probability value below (0.05), indicating that independent factors significantly impact the dependent variable. The results of the overall significance test of the sample regression or F test based on Table 4.9 shows that the Fcount value is 3.908, and the resulting significance is 0.004.

Table 4.10

Statistical Test Results T

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		β	Std. Error	Beta	t	Sig.
1	(Constant)	0.851	0.905		0.940	0.350
	ESG Disclosure	-0.004	0.003	-0.189	-1.717	0.091
	Environmental Performance	0.166	0.041	0.478	4.060	0.000
	Firm Size	-0.037	0.030	-0.144	-1.227	0.224
	Leverage	-0.197	0.151	-0.148	-1.307	0.195
	Profitability	-0.728	0.371	-0.217	-1.962	0.054

a Dependent Variable: Stock Return

Source: SPSS 25 output, secondary data for the year 2023

The research hypothesis is accepted if the significant value is less than (<0.05) because

the regression coefficient is significant and partially because the independent variables significantly impact the dependent variable, according to statistical testing criteria used in decision-making.

The following is a description of the regression model investigated in this research.

$Y = 0.851 – 0.004X_1 + 0.166X_2 – 0.037X_3 – 0{,}0197X_4 – 0.728X_5$

Effect of Environmental, Social, and Governance (ESG) Disclosure on Stock Return

This hypothesis may be accepted if the significant value is less than (<0.05). After testing, it was found that the ESG score as a projection of the environmental, social, and governance (ESG) variable has a negative regression coefficient (β) of -0.004 and a significant value above (> 0.05) of 0.091. It may be concluded that ESG has a negative and insignificant effect on stock return, so H1 is rejected.

Stock returns are negative and have a mediocre Environment, Social, and Governance (ESG) disclosure as measured by the ESG Disclosure Score. Therefore, the dependent variable, stock returns, is not impacted by Environment, Social, and Governance (ESG) disclosure. The fact that the average value of the ESG disclosure variable, which is 45.95773, is lower than the median value of 50 leads one to conclude that the company gives little attention to issues associated with the environment, social, and governance. This may be inferred from the maximum ESG disclosure score of 100.

These findings align with signaling theory, which emphasizes that the receiver of the information is the one who can interpret the message. Research results that prove that ESG has a negative influence may be influenced by the opinion put forward by Friedman (1962), which states that the main goal of a company is solely to increase the wealth of its stakeholders, and other non-financial goals will make companies less effective.

The results of this analysis do support earlier studies by Spirova et al. (2023) and Torre et al. (2020), which found a negative link between ESG disclosure and stock returns.

Effect of Environmental Performance on Stock Return

Following a series of tests, it was discovered that the PROPER Rating, when used as an indicator of the environmental performance variable, has a significant value above (> 0.05) of 0.000 and a positive regression coefficient (β) of 0.166. The positive regression coefficient indicates a correlation between the two variables. It is possible to conclude that environmental performance positively and significantly affects stock return, so H2 is accepted.

The PROPER rating frequency distribution's outcome, shown in Table 3, reveals that most sample companies have strong environmental performance in place. Marked by sample companies that have a blue rating of 40%. Likewise, 30% of the sample companies had a green rating. The sample businesses had a gold grade of 6.7%. The empirical results of this research suggest that Indonesian non-financial companies would perform better if given incentives to carry out their environmental performance properly.

This is in line with the Signaling Theory, which claims that when companies operate to reduce their negative environmental impact, they may also send signals to shareholders by promoting a positive social image, raising public awareness, and enhancing their reputation.

The signaling theory states that companies utilize a range of signals to inform investors about their fundamental values and prospects (Lee & Kim, 2021).

The findings of this analysis do back up previous research by Purwaningsih (2017) and Shafira (2022) that discovered a positive relationship between environmental performance and stock returns.

CONCLUSION

The first prediction of this research is proven to be rejected because environmental, social, and governance (ESG), as measured by the ESG Disclosure Score, has a negligible and unfavorable effect on stock returns. The investment the business makes in ESG disclosure will not affect the returns on the stock. It is impossible to guarantee an increase in stock returns even with a high ESG Disclosure Score.

According to the findings of this study, the environmental performance of a company as measured by its PROPER Rating has a significant and positive influence on the stock returns of that company; consequently, the second hypothesis of this research is accepted. When making investment decisions, confident investors might prioritize environmental performance more than others, and businesses with high environmental evaluations might seem more appealing to these investors.

REFERENCE

Aditya, M. (2022). *Implementation ESG Rating and Dividend Policy on Stock Return Implementasi Rating ESG dan Kebijakan Dividen terhadap Return Saham*. *3*(1), 184–192. http://jurnal.unda.ac.id/index.php/KEIZAI/index

Anggraini, D. (2018). *PENGARUH KINERJA KEUANGAN DAN KINERJA LINGKUNGAN TERHADAP RETURN SAHAM*.

Chang, Y. J., & Lee, B. H. (2022). The Impact of ESG Activities on Firm Value: Multi-Level Analysis of Industrial Characteristics. *Sustainability (Switzerland)*, *14*(21). https://doi.org/10.3390/su142114444

Chu, C. I., Chatterjee, B., & Brown, A. (2013). The current status of greenhouse gas reporting by Chinese companies: A test of legitimacy theory. *Managerial Auditing Journal*, *28*(2), 114–139. https://doi.org/10.1108/02686901311284531

Friedman, M. (1962). *Capitalism and Freedom*.

Ghozali, I. (2016). *Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23 (Edisi 8)*. Badan Penerbit Universitas Diponegoro.

Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Pogram IBM SPSS (Edisi 25)*. Badan Penerbit Universitas Diponegoro.

Handoyo, S. (2018). The Development of Indonesia Environmental Performance and Environmental Compliance. *Journal of Accounting Auditing and Business*, *1*(1), 74. https://doi.org/10.24198/jaab.v1i1.15656

Jogiyanto, H. (2017). *Teori Portofolio dan Analisis Investasi* (Ed. 11). Yogyakarta : BPFE.

Kung, J. J., Carverhill, A. P., & Mcleod, R. H. (2010). Indonesia's stock market: Evolving role, growing efficiency. *Bulletin of Indonesian Economic Studies*, *46*(3), 329–346. https://doi.org/10.1080/00074918.2010.522503

Kustodian Sentral Efek Indonesia. (2022). *Investor Pasar Modal Tembus 10 Juta*.

Lee, J., & Kim, S. (2021). Does a pro-environmental firm attract future cash flow? With an impact of sustainable advertisement on firms' financial performance. *Sustainability (Switzerland)*, *13*(3), 1–14. https://doi.org/10.3390/su13031348

Makarim, N., Sarjanto, A., Salim, A., Setiawan, M. A., Ratunanda, D., Wawointana, F., Ratunanda, D., Dahlan, R., & Ridho, R. (1995). *WHAT IS PROPER? REPUTATIONAL INCENTIVES FOR POLLUTION CONTROL IN INDONESIA*. http://www.worldbank.org/nipr/work_paper/propwhat/index.htm

Martha, H. (2023). *THE EFFECTS OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) ON CORPORATE PERFORMANCE*. https://doi.org/10.32812/jibeka.v17i1.1380

Meng-tao, C., Da-peng, Y., Wei-qi, Z., & Qi-jun, W. (2023). How does ESG disclosure improve stock liquidity for enterprises — Empirical evidence from China. *Environmental Impact Assessment Review*, *98*. https://doi.org/10.1016/j.eiar.2022.106926

Prado-Lorenzo, J. M., Rodríguez-Domínguez, L., Gallego-Álvarez, I., & García-Sánchez, I. M. (2009). Factors influencing the disclosure of greenhouse gas emissions in companies world-wide. *Management Decision*, *47*(7), 1133–1157. https://doi.org/10.1108/00251740910978340

Purwaningsih, E. (2017). PENGARUH IMPLEMENTASI KINERJA LINGKUNGAN TERHADAP RETURN SAHAM YANG DIMODERASI CORPORATE GOVERNANCE. *Jurnal Wahana Akuntansi*, *12*(2), 171–189. https://doi.org/10.21009/wahana.12.025

Sarumpaet, S., Nelwan, M. L., & Dewi, D. N. (2017). The value relevance of environmental performance: Evidence from Indonesia. *Social Responsibility Journal*, *13*(4), 817–827. https://doi.org/10.1108/SRJ-01-2017-0003

Shafira, M. (2022). *PENGARUH KINERJA LINGKUNGAN, PENGUNGKAPAN SUSTAINABILITY REPORTING, EARNINGS MANAGEMENT, DAN SENTIMEN INVESTOR TERHADAP RETURN SAHAM*. https://doi.org/10.25105/jet.v2i2.14490

Sharma, S. S., Narayan, P. K., Thuraisamy, K., & Laila, N. (2019). Is Indonesia's stock market different when it comes to predictability? *Emerging Markets Review*, *40*. https://doi.org/10.1016/j.ememar.2019.100623

Spirova, T., Spierdijk, L., & Svetlova, E. (2023). *ESG scores and stock price returns: How do ESG scores impact stock price returns in the Netherlands Examiners*.

Subramanyam, K. R., & Wild, J. J. (2009). *Financial Statement Analysis, 11th Edition*. McGraw-Hill Irwin.

Suhadak, Kurniaty, Handayani, S. R., & Rahayu, S. M. (2019). Stock return and financial performance as moderation variable in influence of good corporate governance towards corporate value. *Asian Journal of Accounting Research*, *4*(1), 18–34. https://doi.org/10.1108/AJAR-07-2018-0021

Torre, M. La, Mango, F., Cafaro, A., & Leo, S. (2020). Does the ESG index affect stock return? Evidence from the Eurostoxx50. *Sustainability (Switzerland)*, *12*(16). https://doi.org/10.3390/SU12166387

Wang, Z., & Sarkis, J. (2017). Corporate social responsibility governance, outcomes, and financial performance. *Journal of Cleaner Production*, *162*, 1607–1616. https://doi.org/10.1016/j.jclepro.2017.06.142