Research Article

The Effect of Environmental, Social, and Governance Disclosure on Stock Returns with Firm Value as an Intervening Variable: Study on Companies Listed in the SRI-KEHATI Index

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Abstract.
The concept of environmental, social, and governance (ESG) has significantly become a trend in the world economy and capital markets. More and more companies, globally, are encouraged to adopt ESG as an effort toward business sustainability. However, the situation or implementation of ESG in Indonesia is challenging, and it is currently in the development stage for regulators, companies, and potential investors. By using sustainable reporting standards, which the Otoritas Jasa Keuangan launched through POJK No. 51 of 2017, this research will contribute to future research with similar topics on sustainable finance. It can also be considered for companies in Indonesia to apply ESG principles as a non-financial indicator regarding transparency and accountability to stakeholders in making investment decisions. This study aims to analyze the effect of ESG disclosure on stock returns with firm value as an intervening variable, especially for companies listed in the SRI-KEHATI stock index. The analysis used the panel data regression and path analysis method with EViews 9 software. The sample selection used a purposive sampling technique totaling 41 samples from 5 years of observation. The results found that ESG disclosure has no effect on stock returns but affects negatively on firm value. Firm value proxied by Tobin's Q can negatively mediate the effects of ESG disclosure on stock returns.

Keywords: ESG disclosure, SRI-KEHATI index, stock return, firm value, tobin's Q

1. Introduction

Environmental, social, and governance issues, such as greenhouse gas emissions due to climate change, raw material supply constraints due to the Russia-Ukraine conflict, and increased layoffs due to the COVID-19 pandemic, have become an important topic in the global economy. According to the Coordinating Ministry for Economic Affairs of the Republic of Indonesia [1], the negative impact of these issues has encouraged various business sectors to implement sustainability with an ESG approach. Investors working based on ESG factors are generally more active in influencing company policies and practices [2], where ESG investing considers more than just assessing financial performances; it also considers the broader perspective of how a company safeguards the environment and benefits stakeholders in its business activities.

Based on the Global Sustainable Investment Alliance report in 2021 [3], total ESG asset funds have increased by 15 percent to US$35.5 trillion in the world's five largest markets (United States, Canada, Japan, Australia, and Europe) during 2018-2020. ESG aspects are also growing rapidly in the Asian continent, as shown through Accenture's Asia Affluent Investor Survey in Q1 2022 [4], that as many as 70 percent of respondents have invested or plan to invest in ESG in the next 12 months, including Malaysia, India, China, Singapore, Hong Kong, Thailand, and Indonesia. Demographically, millennial investors view ESG principles as a strategy for managing long-term risk in a company that can potentially generate high returns [5].

The Indonesia Stock Exchange, as part of the regulator in the Indonesian capital market, has committed to achieving the United Nations Sustainable Development Goals. According to Handoko and Michaela [6], the SRI-KEHATI stock index outperforms the Jakarta Composite and LQ45 indexes. However, since its inception 14 years ago, this stock index has historically shown a fluctuating performance that tends to decline over the last five years until it recorded a more significant negative return than the Jakarta Composite Index in 2022 (Figure 1).

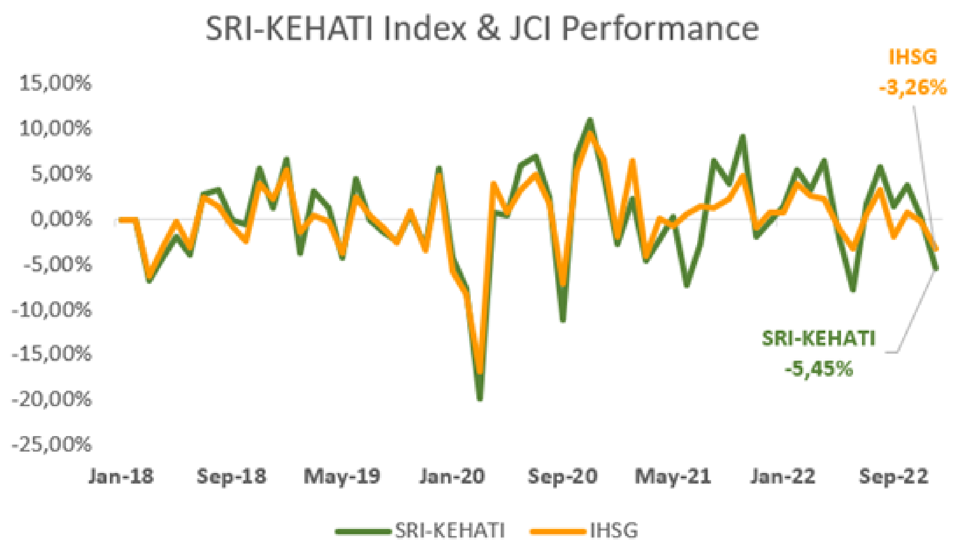

Figure 1: Performance chart of SRI-KEHATI index and JCI.

Following this, based on a survey by the Indonesia Business Council for Sustainable Development in 2021 states that 40 percent of companies in Indonesia have not yet realized the importance of ESG adoption. Companies listed in the ESG-based index have

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better value than companies from other indices [7]. This statement supports Melinda and Wardhani's [8], research, which discovered that ESG score positively affects firm value in Asia. Both findings indicate that disclosing ESG information can lead to operational efficiency and reputation within the company. Hence, the better the firm value, the greater the investor's confidence to invest, which will determine the stock return [9]. In addition, Gunawan and Priska [10], also stated that reviewing the company's ESG performance will involve transactions in the capital market, which can positively affect stock returns if applied simultaneously.

The development of ESG in Indonesia may be an attractive prospect for businesses that rely heavily on stakeholder support to help access new markets, while investors are increasingly looking for sustainable investment opportunities. Among green investment indices, the SRI-KEHATI stock index ranks first in ASEAN and second in Asia, emphasizing ESG aspects. Meanwhile, according to Aditama and Anggraen's [11] research, the Social and Governance score does not affect stock returns, whereas the Environmental score is negatively related. Based on these findings show that stock markets value ESG performances differently. The aim of this study is to find out how a company's disclosure of ESG activities can, directly and indirectly, influence stock returns through firm value listed on the SRI-KEHATI index. Therefore, a rationale framework is formed in Figure 2.

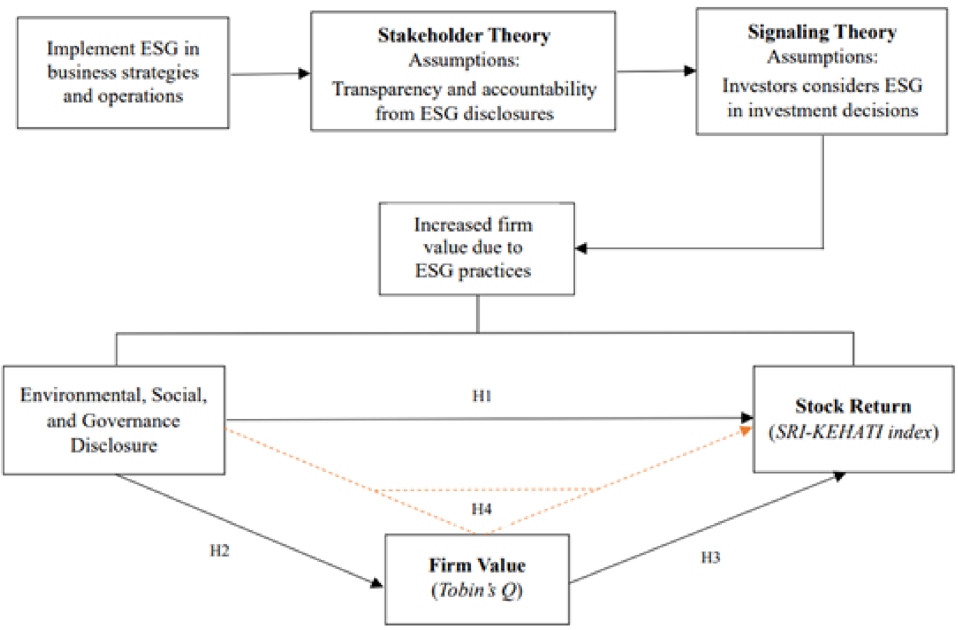

Figure 2: Rationale framework.

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2. Methods

The quantitative research used an associative method based on data obtained through literature studies and secondary data from official sites such as Yahoo Finance and the Indonesia Stock Exchange. The population of this study is non-financial companies listed in the SRI-KEHATI stock index using a purposive sampling technique. The sampling criteria determined were: 1) consistently listed in the stock index from 2018-2022, 2) have published financial statements, annual reports, and sustainability reports in the 2018-2022 period. There are 41 research samples consisting of manufacturing industries, property, and infrastructure from five years of observation. The following is a list of companies included in the research sample in Table 1.

Table 1: List of company samples.

No.	Stock Code	Name of Company
1	ASII	Astra International Tbk
2	JPFA	Japfa Comfeed Indonesia Tbk
3	JSMR	Jasa Marga Tbk
4	PGAS	Perusahaan Gas Negara Tbk
5	BSDE	Bumi Serpong Damai Tbk
6	SMGR	Semen Indonesia (Persero) Tbk
7	UNTR	United Tractors Tbk
8	INDF	Indofood Sukses Makmur Tbk
9	WIKA	Wijaya Karya (Persero) Tbk

Research focuses on ESG disclosure as an inseparable entity in the independent variable proxied by the GRI (Global Reporting Initiative) standard. Firm value as an intervening variable was calculated using Tobin's Q ratio, which involves asset management to evaluate the company's growth potential from an investor's perspective; meanwhile, stock returns were measured by changes in stock prices as the dependent variable. The data collected in this study were analysed using the panel data regression analysis and path analysis with Eviews 9 statistical software.

3. Results

The analysis applied to test the research hypothesis is developed in two model equations as follows:

Model I

$$TSQ_{it} = \alpha + \beta_1 ESGD_{it} + e_{it}$$

$$RTS_{it} = \alpha + \beta_1 ESGD_{it} + \beta_2 TSQ_{it} + e_{it}$$

Description: RTS_{it} = Stock Return; TSQ_{it} = Firm Value; $ESGD_{it}$ = ESG Disclosure; α = constant; β = coefficient; e_{it} = standard error

The best estimation models based on the results of panel data regression testing that will be used in this study, including REM (Random Effect Model) for model I on TSQ (Tobin's Q) as an intervening variable and CEM (Common Effect Model) for model II on RTS (stock return) as the dependent variable.

Based on the hypothesis testing results with T-test (partial test) shown in Table 2, the coefficient value of ESGD in model II is 0,1852 with a probability of 0,3663 (sig level > 0,05). These results indicate that hypothesis one is rejected, where ESG disclosure does not affect the stock return. While the coefficient value of ESGD in model I is -0,6441 with a probability of 0,0002 (sig level < 0,05). These results also indicate that hypothesis two is rejected, where ESG disclosure negatively affects firm value. On the other hand, the coefficient value of TSQ in model II is 0,4312 with a probability of 0,0143 (sig level < 0,05). These results indicate that hypothesis three is accepted, where firm value positively affects stock return.

Table 2: T-test results.

	Coefficient	Std Dev.	t-Statistic	Prob.
ESGD RTS	0,185271	0,202632	0,914326	**0,3663**
ESGD TSQ	-0,644162	0,154771	-4,162022	**0,0002**
TSQ RTS	0,431219	0,168023	2,566423	**0,0143**

The Sobel test was conducted on the regression model to determine the indirect effect (mediation) between the independent and dependent variables through firm value proxied by Tobin's Q as an intervening variable, using the calculation formula below.

$$z = \frac{ab}{\sqrt{b^2SEa^2 + a^2SEb^2}}$$

Calculation results show that the Z score > the confidence level of 95% (1,96) but has a negative relationship direction. Thus, hypothesis four is accepted, where firm value can mediate the effect of ESG disclosure on stock return.

$$z = \frac{-0{,}64 \ x \ 0{,}43}{\sqrt{(0{,}43^2 \ x \ 0{,}15^2) + (-0{,}64^2 x \ 0{,}17^2)}}$$

$$z = \mathbf{-2,175}$$

When comparing the hypotheses based on the path coefficients shown in Table 3, the indirect effect contained a value of 0,277775 but with a negative influence. This result means the relationship between ESG disclosure and stock return through firm value mediates significantly more than the direct effect.

TABLE 3: Path analysis.

	Path Coefficients
ESGD RTS	0,185271
ESGD TSQ	-0,644162
TSQ RTS	0,431219
ESGD TSQ RTS	**-0,277775**

4. Discussion

In light of the findings, this research proposed that if firm value is enhanced, it can mediate the relationship between ESG disclosure and stock return. With the assumptions in stakeholder theory, financial performance and corporate innovation ability are inherent in the non-linear relationship between ESG and stock returns [12]. Melinda and Wardhani [8], supported the idea that implementing ESG in a company will have high market expectations, thus increasing the stock price as an element of stock return. However, previous research indicates gaps in results, which consist of companies that disclose ESG activities.

Based on the analysis, it shows no significant influence of ESG disclosure on stock return. This finding supports Yawika and Handayani's [13] research, where stakeholders focus on conditions directly related to earnings and sales rather than non-financial factors. Furthermore, the average value of ESG disclosure obtained from the research sample reached only 39.3%. This value indicates that ESG disclosure in Indonesian companies is still low because it is below 50% if compared to global companies [14]. Therefore, this finding suggests that ESG disclosure only represent as an additional information in the company, not a determinant in generating profit.

The analysis results also show that ESG disclosure negatively affects firm value, as proxied by Tobin's Q. This finding aligns with Prabawati and Rahmawati [15], who discovered the negative influence of ESG score simultaneously on Tobin's Q. This is because investors tend to look at the accounting information available to achieve profit [16]. Moreover, Friedman's research in Ningwati et al. [17], stated that the non-financial objectives of a company, according to investors, will only reduce performance efficiency. In this case, investors in Indonesia have not yet assessed the importance of environmental, social, and governance aspects in making investment decisions, as they are more focused on using financial factors in assessing a company's performance. Other results reveal that firm value positively affects stock return, supporting Latifah's [18] research, which discovered similar findings using price-to-book value. This finding indicates that firm value in terms of business management, financials, and fundamentals can signal investors to determine which company is the right one to invest their funds in.

Further analysis of this study provides evidence that ESG disclosure has a significant but negative affect on stock return when mediated with firm value. This finding supports Safriani and Utomo's [19] research, where investors consider ESG activities disclosed in corporate sustainability reports too expensive and unprofitable because companies pursue their interests at the expense of shareholders when engaging in ESG practices. Growing demand for sustainability requires businesses to face higher costs and manage variety of risks that are mainly environmental-driven. This can lead to a decline in stock prices, potentially reflecting poor firm value, which will reduce stock returns [12], given that ESG aspects in Asia are still in the development stage [20]. Therefore, ESG aspects are a challenge for Indonesian companies "International Association for Public Participation" [21], because they still do not have sufficient resources or expertise to adopt the approach, and the need for digital transformation and specialized financing to unlock ESG's full potential [22].

5. Conclusion

This study examines the effect of ESG disclosure on stock returns through firm value in companies registered in the SRI-KEHATI stock index. The following results conclude that ESG disclosure does not influence stock return, which means companies obtained from the research sample do not rely on ESG performance in reflecting the level of stock returns. Meanwhile, ESG disclosure negatively affects firm value, meaning the higher a company implements ESG aspects, the lower the firm value. The firm value itself positively affects stock return, which means the higher the firm value, stock returns will also increase. Hence, this indicates that the companies listed in the SRI-KEHATI index are financially healthy or have good fundamentals without implementing ESG aspects.

Finally, firm value shows an indirect relationship, where it can mediate the effect of ESG disclosure negatively on stock returns. If the firm's value depends on its ESG practices, investors will lose interest, causing the stock return to decrease.

In practice, this research will be considered for companies to apply ESG principles in their business activities to not only focus on generating profits but also create a good impact on the sustainability environment and stakeholder welfare. Moreover, investors can add new perspectives when choosing investment decisions on other aspects besides the company's financial performance. A stock index was taken as a research object in this study. Future research can focus on the sector of companies listed on the Indonesia Stock Exchange, where each sector or industry has different characteristics in conducting business activities, causing a possibility of different views on ESG implementation for investors. Additionally, future researchers should add control variables such as company size and financial leverage to prevent the research variables from being influenced by external factors that were not studied.

This study implies that various investors have varying definitions of ESG, and many factors are difficult to measure because ESG is a new and complex understanding that still needs to be discovered in society and the world economy. Therefore, their preferences and perceptions about the relative costs and advantages of ESG are expected to change over time. Firm management also needs to hone their competence, manage risks, and allocate their financial resources appropriately when adopting sustainable concepts to support the creation of economic development and sustainable finance in Indonesian companies in line with government regulations.

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