

## Environmental, Social, and Governance Disclosure on Market Performance in Indonesia

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— *Review of* —  
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### ABSTRACT

This study aims to empirically test whether Environmental, Social, and Governance Disclosure (ESGD) influences market performance (price and volume) in the Indonesian Stock Exchange. Abnormal returns measure market performance. This study uses three models to estimate returns: the mean-adjusted model, the market model, and the market market-adjusted model. For volume, this study uses trading volume activity. For ESG disclosure, this study conducted content analysis as the sustainable disclosure guidelines issued by the Amman Stock Exchange contain 28 indicators (Amosh & Khatib, 2021). The World Federation of Exchange guidelines have adapted the measurement to align with the GRI Standard. This study uses purposive sampling to collect data from companies in the financial industry listed on the Indonesia Stock Exchange during 2019-2021. The results of this study show that of the three models for abnormal returns, ESGD and ESG elements have a significant adverse effect on market performance. This indicates that ESGD is lousy news because additional costs will arise from implementing ESG practices. This result contributes to behavioral economic theory. Meanwhile, ESDG has a positive impact on trading volume activity. These results suggest that the investor as an individual (volume) assesses ESGD as good news, and the market as aggregate (price) evaluates ESGD as bad news. This result contributes to the stakeholder theory.

Keywords: Environmental Social Governance Disclosure, Market Performance, Share Market Price, Volume Trading Activity.

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## 1. INTRODUCTION

This study focuses on the Indonesian market and aims to provide empirical evidence on whether environmental, social, and governance (ESG) disclosures influence market performance (price and volume). Beaver (1968) suggests an important distinction between the price and volume tests: the price reflects changes in the market's expectations, while the volume reflects changes in the expectations of individual investors. The specific context of the Indonesian market is what led to this study, where there is an increasing trend in sustainable investment and a change in consumer behavior toward sustainable products. This trend reflects the increasing public interest in environmental, social, and governance (ESG) aspects. Stakeholders in Indonesia, when making decisions for investment and daily consumption, consider sustainability. The sustainable aspect is seen as an opportunity and strategy for companies to implement ESG in their business to improve their image as a competitive advantage.

Sustainability reporting reports ESG information. The report is information for investors to find out various information related to ESG practices carried out by companies. Investors will use ESG information to make investment decisions. The form of share price movements from the capital market indicates investment decisions by investors (Suttipun & Yordudom, 2021).

At the end of 2021, the Indonesian Stock Exchange (IDX) and the *Keanekaragaman Hayati* Foundation (KEHATI) launched two new stock indexes with an ESG theme such as ESG Sector Leaders IDX KEHATI and ESG Quality 45 IDX KEHATI. The launch of two ESGs is to encourage sustainable finance in the Indonesian capital market (CNN Indonesia, 2021). IDX launched this index to measure the performance of the existing ESG-based stock index, namely SRI-KEHATI. Since it was first launched from 2009 to 2021, the ESG-based stock index (SRI-Kehati Index) has performed better than other indices such as IDX30 and LQ45. The movement of the SRI-KEHATI index continues to increase by 224.19% during 2009-2021. Meanwhile, IDX30 increased 153.14% in the same period, followed by LQ45 of 137.42% (SRI-KEHATI, 2023). The positive performance shows an increase of 12 times compared to companies that do not implement ESG.

On the other hand, there is a change in consumer behavior. A survey conducted by the Katadata Insight Center (KIC) shows that consumers in Indonesia want to buy sustainable products sold by companies that have an environmentally friendly image. Consumers assume that every time they purchase a sustainable product, consumers have indirectly contributed to preserving the environment (Alika, 2021). Based on several phenomena, there is an opportunity for companies to apply ESG principles in their operational activities because investors and the public pay great attention to sustainable aspects in daily decision-making.

Increasing ESG investment trends and changes in consumer behavior towards sustainable products have yet to fully encourage companies to implement ESG principles in their business activities. It demonstrated the low level of ESG disclosure by companies in Indonesia. Compared with the stock exchanges in neighboring countries, the ESG index in Indonesia is 36th out of 47 capital markets in the world. This position is far below that of neighboring countries such as the Philippines, Singapore, Malaysia, Thailand, and India (Alfaruq, 2021).

To catch up, the Financial Services Authority (OJK) and the Indonesian Stock Exchange (IDX) have carried out various initiatives to encourage the implementation of sustainable finance in the capital market. In 2017, OJK also issued regulations regarding implementing sustainable finance for financial service institutions, issuers, and public companies in POJK. POJK Regulation No. 51 of 2017 emphasizes that financial service institutions, issuers, and public companies must implement sustainable finance and prepare sustainability reports. This regulation encourages companies to incorporate ESG criteria into their business models to report ESG practices in sustainability reports. The IDX also shows its commitment to sustainable development by joining the Sustainable Stock Exchanges (SSE) and Task Force on Climate-related Financial Disclosure (TCFD) Supporters (Hutauruk, 2021).

Sustainable trends require companies not only to maximize profits but also to pay attention to stakeholder needs. Sustainable provides all information related to the company's ESG implementation. ESG disclosure will positively impact building the company's image to

attract more customers and become a competitive advantage (Xia, 2022). ESG disclosure can also reduce information asymmetry between managers and investors. Managers with more information send signals to the public through ESG implementation information. Investors who catch this signal will assess whether this is good news or bad news. The results of this signal interpretation will influence investment decisions reflected in share price movements (Suttipun & Yordudom, 2021).

There is previous research on market performance on ESG information; the results still need to be consistent. Some have found that the market reacts positively and significantly to ESG disclosures (Klassen & McLaughlin, 1996; Krueger, 2015; Hestiani (2019); Suttipun & Yordudom, 2021; Landau *et al.*, 2020; Choi *et al.*, 2024). Some find that ESG disclosures are responded to negatively and significantly by the capital market (Grewal *et al.*, 2018; Yoon *et al.*, 2018; Capelle-Blancard & Petit, 2019; Li *et al.*, 2019; Cui & Docherty, 2020; Wang *et al.*, 2023). Some researchers do not find the market reacting to ESG disclosures (Mitsuyama & Shimizutani, 2015; Atan *et al.*, 2018).

Several researchers have previously published research results related to ESG. Deevaly and Wicaksono (2023) find that ROA positively and significantly influences the ESG Score, and ROE does not significantly influence the ESG Score. Liang *et al.* (2023) find that ESG ratings negatively impact stock liquidity risk for Chinese companies. Albitar *et al.* (2020) find a positive and significant relationship between ESGD scores and company performance. Alsayegh *et al.* (2020) document a significant positive relationship between ESG and sustainability performance.

The phenomenon of sustainable investment trends and changes in consumer behavior and the low level of research on ESG prompted this study to research ESG disclosure on market performance. The research subjects were financial sector companies listed on the Indonesia Stock Exchange (IDX) during 2019-2021. The reason for choosing the financial sector is that companies should implement sustainable finance and publish sustainability reports by POJK regulation number 51 of 2017. The research period was chosen from 2019 to 2021 because there was a high increase in the number of investors and growth of the largest investor in the history of the Indonesian Capital Market (KSEI, 2021).

The results of this study provide several contributions. For theoretical contributions, the results of this study can be a reference for academics and researchers regarding the impact of ESG disclosure in emerging markets. For practical contributions, the results of this study show the significance of ESG practices in supporting the sustainability of nature, humans, and companies. For policy contributions, the government, as the regulator, needs to inform policies to maintain sustainability for the public. Generally, the results of this study contribute to existing theories such as behavioral economics or stakeholder theories.

## **2. REVIEW OF LITERATURE AND DEVELOPMENT OF HYPOTHESIS**

### **2.1. Stakeholder Theory**

Rankin *et al.* (2023) emphasize that the company's primary goal is not only to maximize profits. Companies also need to consider stakeholders' needs, demands, or expectations. Based on this theory, each stakeholder has an essential role in the company's survival. Therefore, companies are responsible for managing their business by paying attention to stakeholders' needs and expectations to align with the company's vision, mission, and goals.

One way to meet stakeholder needs and expectations is to provide information about company activities and performance. The rise in sustainability issues has made stakeholders change their perspective from only focusing on company performance to financial performance alone. Stakeholders also focus on non-financial performance, such as environmental, social, and governance factors. Stakeholder theory relates to the company's non-financial performance. ESG disclosure in the sustainability report shows that the company has fulfilled stakeholders' rights to obtain information on sustainable aspects of the company's operations. Increasing information transparency benefits stakeholders by helping them understand ESG implementation more comprehensively and accurately. ESG information can increase public trust in a company and a positive image and create a company's competitive advantage (Xia, 2022). The increase in public trust in companies also impacts increasing company value and market performance (Suttipun & Yordudom, 2021).

## 2.2. Signaling Theory

Asymmetry information is caused by an imbalance of information between managers as internal parties have more information about the company than external parties such as investors and other stakeholders (Rankin *et al.*, 2023). Information inequality can reduce the giving signals. In this study, signal theory shows how the market responds to signals regarding the publication of information, namely ESG disclosure. When information exists, the recipient will interpret the information and assess whether the information is good or bad news. The company sends a positive signal if this information is good news. The company sends a negative signal if this information is bad news. Positive or negative signals influence investor decision-making. The share price reflects investor decision movements, which are market performance based on the information received (Hartono, 2017).

## 2.3. Efficient Market Theory

An efficient market occurs when the prices of traded securities reflect all available information. In a competitive market, the equilibrium price is the midpoint investors' supply and demand process reach. The information available in the market will drive the process of adjusting security prices toward a new equilibrium price. Adjusting security prices towards a new equilibrium is a market response to the information received. The relationship between information and security prices is emphasized as the primary key to market efficiency (Hartono, 2017). According to Hartono (2017), assessing whether the market is efficient can be seen from two points of view, namely informational market efficiency and decisional market efficiency. The availability of information in the market causes informational market efficiency. In contrast, decisional market efficiency suggests the sophistication of investors in managing the information available for making investment decisions.

Hartono (2017) suggests that the availability of information and comprehensive information in the market specifies information market efficiency. This information can be historical data, published data, or private data. Decisional market efficiency is a decision taken by investors based on information that investors have further processed. The investors who process information are called sophisticated market players. Sophisticated investors consider that more than the availability of information alone is needed to decide. Investors

interpret the information by analyzing and determining whether the information is good or bad news before deciding (Hartono, 2017).

#### **2.4. Behavioral Economic Theory**

Beerbaum and Puauschunder (2019) emphasize that behavioral economic theory shows investors make decisions based on their heuristics. (Witynski, 2022) also explains that behavioral economic theory asks whether investors make decisions rationally and tend to pursue short-term profits rather than long-term ones. Returning to the context of ESG disclosure, this disclosure could negatively impact market players because ESG practices are long-term oriented.

#### **2.4. Environmental, Social, and Governance (ESG)**

ESG is a set of considerations related to environmental, social, and governance criteria that can influence a company in carrying out its business strategy and creating value in the long term (Nasdaq, 2019). Stakeholders such as investors will use ESG information as a basis for making investment decisions. ESG factors, namely environmental, social, and governance, are also known as non-financial information. Initially, companies published non-financial information in the form of social responsibility reports or what is commonly known as Corporate Social Responsibility (CSR). There is a difference between ESG and CSR, where ESG focuses on how companies and investors (external parties) integrate environmental, social, and governance criteria into the company's business model. In contrast, CSR (internal parties) traditionally focuses on company activities related to responsibility. Social to become a better company (Gillan *et al.*, 2021). ESG considers past and present conditions and looks at the future so that every decision and policy is sustainable.

#### **2.5. Environmental, Social, and Governance (ESG) Disclosures**

The disclosure provides additional information about the company (Suwardjono, 2014). Providing additional information is a form of company openness to the public when conducting company activities by providing various information related to company performance. ESG disclosure is an effort to disclose information by a company by providing additional information related to implementing environmental, social, and governance principles or criteria in the company's business strategy and creating long-term value. ESG disclosure aims to provide a clear picture to all stakeholders that the company has behaved ethically (Alareeni & Hamdan, 2020). Companies can integrate ESG information and financial reports into one annual report or decide to publish separate sustainability reports.

For investors, the level of information disclosure from a company can influence investors' assessments. A high level of disclosure can increase investor confidence in the company because investors can find out how the company operates. Conversely, a low level of disclosure will depict a company that is not transparent and raise suspicions that the company is contributing to unethical behavior, which can reduce integrity and trust in the company (OECD, 2004).

#### **2.6. Market performance**

Abnormal returns measure the market performance of an event. Abnormal return is the difference between actual return and expected return. Abnormal returns will show positive and negative directions based on an event that occurs. An actual return is a return that has occurred. Actual return is the difference between the current and previous prices, while expected return is the return investors expect (Hartono, 2017). According to Brown & Warner (1985), three estimation models are used to calculate expected returns.

1. Mean-adjusted model.

This model assumes that the expected return has a constant value equal to the previous average actual return during the estimation period.

2. Market models.

This model uses two stages to calculate the expected return: forming an expectation model using realized data and an expectation model to predict the expected return in the estimation period. This model uses the OLS regression technique.

3. Market-adjusted model.

This model assumes that market index returns are the best estimator for estimating security returns. An estimation period is unnecessary because the estimated security return is the same as the market index return.

## 2.7 Previous Research

Several previous research results show that ESG disclosure positively affects market reactions. Klassen & McLaughlin (1996) examine the impact of ESG news on firm value in companies listed on the NYSE or AMEX during the period 1985–1991 and examine 22 adverse environmental events such as oil spills, gas leaks, explosions, and other incidental pollution and 140 positive ones such as awards from the NEXIS database. Adverse events produce a significant abnormal return of -1.5% (\$0.70 per share), while positive events produce a significant abnormal return of 0.82% (\$0.37 per share). Krueger (2015) examines market reactions to positive and negative news about ESG. Krueger (2015) considers 2,116 negative and positive ESG events regarding 745 different companies between 2001 and 2007. Data is from the KLD database. The results show that a decrease follows negative news in share prices. In contrast, positive events will increase share prices for companies with poor stakeholder relationships.

Hestiani (2019) investigates the influence of disclosure on environmental, social, and corporate governance performance. The object of this research is non-financial companies on the Indonesia Stock Exchange for the 2014–2018 period. This study finds that social and governance influence abnormal returns, while the environment does not influence abnormal returns. Landau *et al.* (2020) examine the relationship between market value and ESG reports in 50 European STOXX companies during 2010–2016. The results of this study show a positive and significant relationship between market value and ESG. Suttipun and Yordudom (2021) test the effect of ESG disclosure on market reactions. The object of this research is the Top 50 companies on the Thailand Stock Exchange in 2015–2019. The results of this research show that environmental and social disclosures have a positive effect on market reactions, while governance disclosures do not affect market reactions. Xia (2022) examines the effect of ESG disclosure on stock market reactions in companies listed on the Shenzhen Stock Exchange and Shanghai Stock Exchange from 2008 to 2020. This study finds that ESG disclosure positively affects companies' stock market reactions.

Choi *et al.* (2024) empirically test the effect of ESG disclosure on firm value in companies in South Korea during the 2019–2020 period. The results of this study show that ESG

disclosure has a positive and significant effect on company value. Several previous research results also show that ESG disclosure harms market reactions. Grewal *et al.* (2018) research market performance regarding the non-financial disclosure (ESG) mandate in the European Union, namely (EU) 2014/95/EU. The author investigates the stock market reaction to three aggregate events during 2013-2014. Grewal *et al.* (2018) find that the average adverse market reaction to this mandatory disclosure was 0.79% of market value (or \$79 million).

Yoon *et al.* (2018) empirically tested the influence of ESG on firm value in South Korean companies using the WISEfn database. This research shows that when ESG interacts with environmentally sensitive industries, it harms company value. Capelle-Blancard and Petit (2019) examine market reactions to negative and positive ESG based on information from companies, mass media, and NGOs. This study uses a database obtained from Covalence Ethical Quote. The results of this study show that the market reacts negatively and significantly to ESG when this negative ESG information is from the mass media. Meanwhile, the capital market needs to respond to ESG information from companies and NGOs. Li *et al.* (2019) examine corporate environmental responsibility on the value of a sample of 496 A-share listed companies in China from 2008-2016. When companies begin to adopt environmental regulations, CER will hurt firms' value. Cui & Docherty (2020) empirically test market reactions to ESG announcements on the NYSE, AMEX, and NASDAQ during 2000-2018. This study finds adverse and significant market reactions to ESG announcements. Wang *et al.* (2023) examine the market reaction to the mandatory disclosure of non-financial information of US-listed companies. The study finds that the market reacted negatively around the passage of mandatory disclosure regulations for non-financial information.

Previous research results also show that ESG disclosure does not affect market reactions. Mitsuyama & Shimizutani (2015) examine the stock market's reaction to ESG announcements in 2012. This research conducts an event study analysis to explore the stock market's performance on the announcement of an ESG Brand consisting of companies serious about their efforts to support ESG aspects in business among companies listed on the Tokyo Stock Exchange. The study finds little evidence of positive and significant market reactions to ESG announcements around events. However, the results do not change in cumulative abnormal returns in the long term. Mitsuyama & Shimizutani (2015) conclude that the stock market does not respond to ESG announcements. Atan *et al.* (2018) examine the influence of ESG on profitability, firm value, and cost of capital in 54 public companies in Malaysia based on the ESG Bloomberg database. ESG does not affect profitability and company value but positively and significantly affects capital costs. This result suggests that ESG increases the cost of capital.

Previous research focuses on ESG, as follows. Albitar *et al.* (2020) aim to examine the effect of ESGD disclosure on company performance. Data is from the FTSE 350 between 2009-2018. The research results show a positive and significant relationship between the ESGD score and company performance. Alsayegh *et al.* (2020) empirically test ESG on corporate sustainability performance in economic, environmental, and social terms in companies in 48 Asian countries during 2005-2017 based on the Thomas Reuters database. The results of this study show that there is a significant positive relationship between ESG and sustainability performance. This evidence shows that implementing ESG strategies can strengthen corporate sustainability. Deevaly & Wicaksono (2023) aim to provide a comparative analysis of ESG implementation among several companies in Indonesia. ROA positively and significantly affects the ESG Score, and ROE does not significantly affect the

ESG Score. Liang *et al.* (2023) examine the influence of ESG stock liquidity risk ratings for Chinese companies during 2015-2019. The results of this study show that the ESG rating negatively impacts stock liquidity risk for Chinese companies.

## 2.8. Hypothesis Development

The phenomenon of sustainable investment trends and changes in consumer behavior shows that stakeholders are currently considering sustainability issues in every decision-making, both for investment and living needs. This phenomenon also shows new stakeholder demands and expectations, encouraging companies to implement ESG principles into their business models and strategies. The implementation of ESG principles by a company will show that the company not only aims to maximize profits but also cares about the environment and social matters and implements good governance. Apart from that, implementing ESG can have a positive impact, namely building a positive image and making this image a competitive advantage compared to other companies (Xia, 2022). ESG implementation is in annual reports or sustainability reports. ESG disclosure is a form of corporate responsibility to stakeholders by stakeholder theory. Information openness through ESG disclosure can also reduce the occurrence of information asymmetry in companies so that there is no longer a gap in information between managers and investors. Information shared by companies can be a signal for investors in the capital market. When information is published, the market will determine whether the information is good or bad news. Good and bad news is a signal to which the market will respond.

Market performance on newly published information or events can be measured using abnormal returns (Hartono, 2017). Abnormal returns will show positive and negative directions based on an event that occurs. If the information is positive, it will reflect increased share prices. On the other hand, if the information is a negative signal, it will reflect a decline in share prices. However, a group of researchers shows that ESG disclosure has a positive influence. Researchers also find the opposite result: ESG disclosure hurts market reality. Researchers also find that ESG disclosure does not affect market performance. Based on inconsistent research results, the research hypothesis formulated in this study is directionless. The hypothesis formulated is as follows.

Ha<sub>1</sub>: Environmental, Social, and Governance disclosure influence market performance.

Ha<sub>2</sub>: Environmental disclosure influences market performance.

Ha<sub>3</sub>: Social disclosure influences market performance.

Ha<sub>4</sub>: Governance disclosure influences market performance.

Trading volume activity measures the number of trading investors who buy or sell the stock. Trading volume activity also indicates whether investors assess an announcement as a positive or negative signal. ESGD can be important information for investors. Investors may view ESG information as necessary because the company must be the environment and society for sustainability. For investors, this information may be good or bad news. Therefore, the study does not only examine the market in aggregate but also examines individual investor responses.

Ha<sub>5</sub>. Environmental, Social, and Governance disclosure influences investor reaction.

## 3. RESEARCH METHOD

### 3.1. Sample



The sample for this study is financial sector companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021 using a purposive sampling technique. There are 302 firm years. The data used in this study is archival data. Secondary data is from annual and sustainability reports of financial sector companies listed on the IDX during 2019-2021. Data is from the official IDX website at [www.idx.co.id](http://www.idx.co.id) and the company's official website. This study also uses stock price data from Yahoo Finance at [yahoo.finance.com](http://yahoo.finance.com).

### 3.2. Research Variables

The dependent variable in this research is market performance. Researchers use Cumulative Abnormal Return (CAR) to measure market performance from an event. CAR is the total abnormal return during the observation period for an event for each security in the capital market (Hartono, 2017). CAR is measured using the following formula:

$$CAR_{it} = \sum_{a=t}^t AR_{ia}$$

Where:

$CAR_{it}$ : The accumulated abnormal return of the security  $i$  on the  $t$  day, which is an accumulation from the abnormal return of the  $i$ th security from the beginning of the event period until today  $t$ .

$AR_{it}$ : Abnormal return for the security  $i$  on day  $t$ .

Abnormal return is the difference between actual and expected returns (Hartono, 2017).

Measurement of abnormal returns uses the following formula.

$$AR_{it} = R_{it} - E(R_{it})$$

Where:

$AR_{it}$ : Abnormal return of company  $i$  in event period  $t$ .

$R_{it}$ : Actual return of the company  $i$  in the event period  $t$ .

$E(R_{it})$ : Expected return of the stock  $i$  in period  $t$ . This study uses three models, namely the mean-adjusted model ( $\sum R_{it}/\sum n$ ), the market model ( $R_{it} = \alpha + \beta R_{mt} + e_{it}$ ), and the market-adjusted model ( $R_{mt}$ ).

The actual return is the return obtained on stock investment in a certain period (Hartono, 2017). The actual return is the following formula.

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Where:

$R_{it}$ : Return of stock  $i$  on day  $t$

$P_{it}$ : Price of share  $i$  on day  $t$

$P_{it-1}$ : Price of share  $i$  on day  $t-1$

The expected return estimates the return investors expect (Hartono, 2017). Three models can be used to calculate expected returns: the mean-adjusted estimation, market, and market-adjusted models. The market return is the following formula:

$$R_{mt} = \frac{IHS G_t - IHS G_{t-1}}{IHS G_{t-1}}$$

Where:

$R_m$ : Market return on day  $t$

$IHS G_t$ : Composite Stock Price Index on day  $t$

$IHS G_{t-1}$ : Composite Stock Price Index on day  $t-1$

In this study, researchers' window period to calculate cumulative abnormal returns is five days before and after the company publishes its annual and sustainability reports.

The other dependent variable of this study is Trading Volume Activity (TVA). The measurement of TVA is as follows:

$$TVA_{it} = \frac{\text{Number of stock } i \text{ traded on day } t}{\text{Number of stock } i \text{ outstanding on day } t}$$

The independent variable used in this research is ESG disclosure. ESG disclosure is measured using content analysis using the sustainable disclosure guidelines issued by the Amman Stock Exchange as a reference, which consists of 28 indicators (Amosh & Khatib, 2021). This guidance is adapted from the World Federation of Exchanges guidance and aligns with the GRI Standard. This study divides the number of disclosures made by the company with the total expected disclosures. A value of 0 means there is no disclosure regarding the item. A value of 1 is disclosure regarding the item.

$$ESGD_{it} = \frac{\text{Total Scor of ESG Disclosures}_{it}}{\text{Total All Itemp of ESG Disclosures}_{it}}$$

$$ED_{it} = \frac{\text{Total Scor of E Disclosures}_{it}}{\text{Total All Itemp of E Disclosures}_{it}}$$

$$SD_{it} = \frac{\text{Total Scor of S Disclosures}_{it}}{\text{Total All Itemp of S Disclosures}_{it}}$$

$$GD_{it} = \frac{\text{Total Scor of G Disclosures}_{it}}{\text{Total All Itemp of G Disclosures}_{it}}$$

Where:

ESGD<sub>it</sub>: Environmental, Social, and Governance Disclosure company i period t.

ED<sub>it</sub>: Environmental Disclosure company i period t.

SD<sub>it</sub>: Social Disclosure company i period t.

GD<sub>it</sub>: Governance Disclosure company i period t.

The control variables used in this study are leverage, size, DAR, ROA, and ROE. Companies with a high level of leverage have a high risk of defaulting to creditors, but the opportunity to generate profits is also higher (Hery, 2016). The high risk of default will affect investors' judgment, which is one of the company's funding sources. Therefore, the size of a company's leverage level will be a signal for investors in making investment decisions. Referring to previous research by Suttipun and Yordudom (2021), leverage is as follows:

$$LEV_{it} = \frac{\text{Total Liability}_{it}}{\text{Total Equity}_{it}}$$

$$ASSETS_{it} = \ln \text{Total Assets}_{it}$$

$$DAR_{it} = \frac{\text{Total Liability}_{it}}{\text{Total Assets}_{it}}$$

$$ROA_{it} = \frac{\text{Net Income}_{it}}{\text{Total Assets}_{it}}$$

$$ROE_{it} = \frac{Net\ Income_{it}}{Total\ Equity_{it}}$$

### 3.3. Empirical Model

This study uses multiple regression to test hypotheses as follows.

$$CAR_{it} = \alpha + \beta_1 ESGD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_3 ROE_{it} + \varepsilon_{it} \quad (1)$$

$$CAR_{it} = \alpha + \beta_1 ED_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_3 ROE_{it} + \varepsilon_{it} \quad (2)$$

$$CAR_{it} = \alpha + \beta_1 SD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_3 ROE_{it} + \varepsilon_{it} \quad (3)$$

$$CAR_{it} = \alpha + \beta_1 GD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_3 ROE_{it} + \varepsilon_{it} \quad (4)$$

$$TVA_{it} = \alpha + \beta_1 ESGD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_3 ROE_{it} + \varepsilon_{it} \quad (5)$$

## 4. RESULT AND DISCUSSION

### 4.1. Descriptive Statistics

Descriptive statistics describe the data's characteristics with a total observation 302 in the following table.

Table 1. Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. deviation
ESGD	0.04	0.86	0.4110	0.18340
CAR-MRAM	-0.40	1.26	0.0102	0.13097
CAR-MEAM	-0.49	1.17	0.0070	0.14260
CAR-MRM	-0.42	1.32	0.0293	0.13769
LEV	-3.72	16.08	2.9671	2.99975
ASSETS	20.21	35.06	29.5597	2.41773
DAR	0.001	8.80	0.6345	0.55893
ROA	-4.22	0.69	-0.0145	0.27806
ROE	-1.86	0.69	0.0087	0.21580

Where:

CAR-MRAM: Cumulative Abnormal Return-based Market-Adjusted Model.

CAR-MEAM: Cumulative Abnormal Return-based Mean-Adjusted Model.

CAR-MRM: Cumulative Abnormal Return-based Market Model.

### 4.2. Correlation

Table 2. Correlation Results

Variable	ESGD	CAR-MRAM	CAR-MEAM	CAR-MRM	LEV	ASSETS	DAR	ROA	ROE
ESGD	1	-0.112*	-0.149***	-0.159***	0.487***	0.688***	0.210***	0.105	0.075
CAR-MRAM	-0.112*	1	0.858***	0.939***	0.079	-0.006	-0.007	0.024	0.075
CAR-MEAM	-0.149***	0.858***	1	0.936***	0.057	-0.038	-0.011	0.001	0.010
CAR-MRM	-0.159***	0.939***	0.939***	1	0.069	-0.048	-0.012	0.015	0.049
LEV	0.487***	0.079	0.057	0.069	1	0.642***	0.265***	0.118**	0.048
ASSETS	0.688***	-0.006	-0.038	-0.048	0.642***	1		0.306***	0.199***
DAR	0.210***	-0.007	-0.011	-0.012	0.265***	0.079	1	0.778***	0.049
ROA	0.105*	0.024	0.001	0.015	0.118**	0.306***	0.0778***	1	0.340***
ROE	0.075	0.075	0.010	0.049	0.048	0.199***	0.049	0.340***	1

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

### 4.3. Results of Impact of ESGD on Market Reaction

Table 3. CAR-MEAM<sub>it</sub>=

$$\alpha + \beta_1 \text{ESGD}_{it} + \beta_2 \text{LEV}_{it} + \beta_3 \text{ASSETS}_{it} + \beta_4 \text{DAR}_{it} + \beta_5 \text{ROA}_{it} + \beta_6 \text{ROE}_{it} + e_{it}$$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.055***	0.057***	-0.134	0.053**	0.055***	0.055***	0.011	
ESGD	-0.116***	-0.181***	-0.182***	-0.120***	-0.118***	-0.117***	-0.189***	Ha1 supported
LEV		0.008***					0.008**	
ASSETS			0.007				0.002	
DAR				0.006			-0.009	
ROA					0.009		-0.021	
ROE						0.014	0.017	
F-test	6.846***	6.936***	4.681***	3.482**	3.455**	3.481**	2.332**	
Adj.R <sup>2</sup>	0.019	0.038	0.024	0.016	0.016	0.016	0.026	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 4. CAR-MRM<sub>it</sub>=  $\alpha + \beta_1 \text{ESGD}_{it} + \beta_2 \text{LEV}_{it} + \beta_3 \text{ASSETS}_{it} + \beta_4 \text{DAR}_{it} + \beta_5 \text{ROA}_{it} + \beta_6 \text{ROE}_{it} + e_{it}$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.078***	0.081***	-0.093	0.076***	0.080***	0.079***	0.106	
ESGD	-0.119***	-0.190***	-0.180***	-0.123***	-0.122***	-0.123***	-0.184***	Ha1 supported
LEV		0.009***					0.010**	
ASSETS			0.007				0.001	
DAR				0.005			-0.009	
ROA					0.016		-0.016	
ROE						0.039	0.044	
F-test	7.794***	8.466***	5.022***	3.956**	4.039**	4.480**	2.998***	
Adj.R <sup>2</sup>	0.022	0.047	0.026	0.019	0.020	0.023	0.038	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 5. CAR-MRAM<sub>it</sub>=  $\alpha + \beta_1 \text{ESGD}_{it} + \beta_2 \text{LEV}_{it} + \beta_3 \text{ASSETS}_{it} + \beta_4 \text{DAR}_{it} + \beta_5 \text{ROA}_{it} + \beta_6 \text{ROE}_{it} + e_{it}$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.043**	0.045**	-0.146	0.042**	0.044**	0.044**	0.020	
ESGD	-0.080*	-0.141***	-0.146***	-0.082**	-0.083**	-0.084**	-0.147**	Ha1 supported
LEV		0.008***					0.008**	
ASSETS			0.007				0.001	
DAR				0.004			-0.012	
ROA					0.017		-0.026	
ROE						0.051	0.057	
F-test	3.803*	5.586***	3.386**	1.938	2.089	2.965*	2.225**	
Adj.R <sup>2</sup>	0.009	0.030	0.016	0.006	0.007	0.013	0.024	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

The results in Tables 3, 4, and 5 show that all term ESGD adversely influences market reactions in both mean-adjusted, market, and market-adjusted models. Therefore, Ha1 is supported.

### 4.4. Results of Impact of Environmental Disclosure on Market Reaction

Table 6.  $CAR-MEAM_{it} = \alpha + \beta_1 ED_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.031***	0.020	-0.136	0.029**	0.031***	0.031***	0.001	
ED	-0.089***	-0.130***	-0.126***	-0.090***	-0.089***	-0.090***	-0.131***	Ha2 Supported
LEV		0.008**					0.009**	
ASSETS			0.006				0.001	
DAR				0.004			-0.024	
ROA					0.008		-0.047	
ROE						0.015	0.029	
F-test	7.342***	6.874***	4.631***	3.692**	3.694**	3.741**	2.380**	
Adj.R <sup>2</sup>	0.021	0.038	0.024	0.018	0.018	0.018	0.027	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 7.  $CAR-MRM_{it} = \alpha + \beta_1 ED_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.031***	0.020	-0.136	0.051***	0.054***	0.053***	0.103	
ED	-0.089***	-0.130***	-0.126***	-0.089***	-0.089***	-0.091***	-0.122***	Ha2 Supported
LEV		0.008**					0.010***	
ASSETS			0.006				-0.122	
DAR				0.003			-0.023	
ROA					0.014		-0.041	
ROE						0.040	0.056	
F-test	7.342***	6.874***	4.631***	3.870**	3.974**	4.465**	2.927***	
Adj.R <sup>2</sup>	0.021	0.038	0.024	0.019	0.019	0.023	0.037	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 8.  $CAR-MRAM_{it} = \alpha + \beta_1 ED_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.024**	0.014	-0.120	0.023*	0.025**	0.025**	0.037	
ED	-0.052*	-0.089***	-0.084**	-0.053*	-0.053*	-0.055*	-0.086**	Ha2 Supported
LEV		0.007**					0.008**	
ASSETS			0.005				0.001	
DAR				0.002			-0.024	
ROA					0.015		-0.046	
ROE						0.051	0.066	
F-test	2.928**	4.441**	2.287	1.471	1.621	2.521*	1.933*	
Adj.R <sup>2</sup>	0.006	0.022	0.008	0.003	0.004	0.010	0.018	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

The results in Tables 6, 7, and 8 confirm that only environmental disclosure as part of ESGD negatively influences market reactions, both the mean-adjusted model, the market model, and the market-adjusted model. Therefore, Ha2 is supported.

#### 4.5. Results of Impact of Social Disclosure on Market Reaction

Table 9.  $CAR-MEAM_{it} = \alpha + \beta_1 SD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$ 

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.051**	0.050**	-0.027	0.049**	0.051**	0.051**	0.127	
SD	-0.087**	-0.122***	-0.106**	-0.089**	-0.088**	-0.087**	-0.107**	Ha3 Supported
LEV		0.006**					0.008**	
ASSETS			0.003				-0.003	
DAR				0.004			-0.010	
ROA					0.007		-0.014	
ROE						0.013	0.020	
F-test	4.959**	4.653***	2.738*	2.506*	2.502*	2.527*	1.617	
Adj.R <sup>2</sup>	0.013	0.024	0.011	0.010	0.010	0.010	0.012	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 10.  $CAR-MRM_{it} = \alpha + \beta_1 SD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$ 

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.051**	0.050**	-0.027	0.074***	0.076***	0.076***	0.215	
SD	-0.087**	-0.122***	-0.106**	-0.093**	-0.093**	-0.094**	-0.108**	Ha3 Supported
LEV		0.006**					0.009**	
ASSETS			0.003				-0.005	
DAR				0.004			-0.009	
ROA					0.014		-0.008	
ROE						0.038	0.047	
F-test	4.959**	4.653***	2.738*	2.971*	3.064**	3.485**	2.322**	
Adj.R <sup>2</sup>	0.013	0.024	0.011	0.013	0.014	0.016	0.026	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 11. Results:  $CAR-MRAM_{it} = \alpha + \beta_1 SD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$ 

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.045**	0.045**	-0.073	0.074***	0.076***	0.076***	0.098	
SD	-0.069*	-0.106***	-0.098**	-0.093**	-0.093**	-0.094**	-0.097**	Ha3 Supported
LEV		0.006**					0.008**	
ASSETS			0.005				-0.002	
DAR				0.004			-0.010	
ROA					0.014		-0.017	
ROE						0.038	0.057	
F-test	3.713*	4.702***	2.575*	2.971*	3.064**	3.485**	1.936*	
Adj.R <sup>2</sup>	0.009	0.024	0.010	0.013	0.014	0.016	0.018	

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Tables 9, 10, and 11 states that only social disclosure as part of ESGD reduces market reaction in both mean-adjusted, market, and market-adjusted models. Therefore, Ha3 is supported.

#### 4.6. Results of Impact of Governance Disclosure on Market Reaction

Table 12.  $CAR-MEAM_{it} = \alpha + \beta_1 GD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$ 

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	
Constant	0.045**	0.048**	-0.069	0.044**	0.046**	0.045**	0.066	
GD	-0.101**	-0.161***	-0.146**	-0.103**	-0.101**	-0.101**	-0.150**	Ha4 Supported

LEV		0.007**					0.008**
ASSETS			0.004				0.001
DAR				0.003			-0.021
ROA					0.005		-0.041
ROE						0.009	0.021
F-test	4.022**	4.522**	2.477*	2.025	2.019	2.033	1.571
Adj.R <sup>2</sup>	0.010	0.023	0.010	0.007	0.007	0.007	0.011

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 13. CAR-MRM<sub>it</sub>=

$$\alpha + \beta_1 GD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Constant	0.045**	0.048**	-0.069	0.068***	0.070***	0.070***	0.162
GD	-0.101**	-0.161***	-0.146**	-0.108**	-0.107**	-0.107**	-0.143**
LEV		0.007**					0.010***
ASSETS			0.004				-0.003
DAR				0.003			-0.020
ROA					0.012		-0.035
ROE						0.034	0.048
F-test	4.022**	4.522**	2.477*	2.394*	2.464*	2.815*	2.174**
Adj.R <sup>2</sup>	0.010	0.023	0.010	0.009	0.010	0.012	0.023

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 14. CAR-MRAM<sub>it</sub>=

$$\alpha + \beta_1 GD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_{it}$$

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Constant	0.034*	0.037*	-0.088	0.033*	0.035*	0.034*	0.074
GD	-0.063	-0.121**	-0.111	-0.064	-0.065	-0.065	-0.105
LEV		0.007**					0.008**
ASSETS			0.005				-0.001
DAR				0.002			-0.022
ROA					0.014		-0.041
ROE						0.047	0.061
F-test	1.832	3.617**	1.544	0.922	1.046	1.821	1.575
Adj.R <sup>2</sup>	0.003	0.017	0.004	0.001	0.001	0.005	0.011

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

The results in Tables 12, 13, and 14 explain that only the governance disclosure as part of ESGD adversely influences market reaction in mean-adjusted, market, and market-adjusted models. Therefore, Ha4 is supported.

#### 4.7. Results of Impact of ESGD on Investor Reaction

Descriptive statistics describe the data's characteristics with a total observation of 274 for testing ESGD on investor reactions to some variables in natural logarithms such ESGD, TVA, LEV, and ASSETS in the following table.

Table 15. Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. deviation
ESGD	-0.090	0.700	0.326	0.163
TVA	-13.96	0.86	-7.133	2.820

LEV	-4.740	13.480	2.415	2.601
ASSETS	17.580	27.920	22.941	1.965
DAR	0.001	1.370	0.609	0.287
ROA	-0.670	0.690	0.015	0.084
ROE	-1.860	0.690	0.016	0.205

Table 16. Correlation Results

Variable	ESGD	TVA	LEV	ASSETS	DAR	ROA	ROE
ESGD	1	0.279***	0.405***	0.664***	0.465***	-0.020	0.048
TVA	0.279***	1	0.127**	0.189***	0.131**	0.051	0.040
LEV	0.405***	0.127**	1	0.579***	0.649***	-0.054	0.041
ASSETS	0.664***	0.189***	0.579***	1	0.584***	0.058	0.191***
DAR	0.465***	0.131**	0.649***	0.584***	1	-0.302***	-0.178***
ROA	-0.020	0.051	-0.054	0.058	-0.302***	1	0.789***
ROE	0.048	0.040	0.041	0.191***	-0.178***	0.789***	1

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

Table 17.  $TVA_{it} = \alpha + \beta_1 ESGD_{it} + \beta_2 LEV_{it} + \beta_3 ASSETS_{it} + \beta_4 DAR_{it} + \beta_5 ROA_{it} + \beta_6 ROE_{it} + e_i$ 

Variable	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Constant	-8.710***	-8.716***	-8.940***	-8.718***	-8.744***	-8.709***	-8.529***
ESGD	4.822***	4.701***	4.732***	4.805***	4.842***	4.801***	4.732***
LEV		0.019					0.017
ASSETS			0.011				-0.016
DAR				0.022			0.225
ROA					1.877		3.452
ROE						0.363	-0.675
F-test	22.920***	11.458***	11.423***	11.418***	11.921***	11.529***	3.998***
Adj. R	0.074	0.071	0.071	0.071	0.074	0.072	0.062

Note: \*\*\* significant at alpha 0.01, \*\* significant at alpha 0.05, and \* significant at alpha 0.1.

The results in Table 17 show that investors in the capital market react positively to ESGD. These results are the difference between ESGD and market reaction. This result explains an aggregate investor valuation compared to the individual investor valuation reflected in volume. Based on these results, Ha5 is supported.

#### 4.8. Discussion

The results of the regression test in Table 3-14, both univariate and multivariate, show that all terms of ESGD and ESGD have a negative and significant effect on market reaction. Market reaction is measured using a mean-adjusted, market, and market-adjusted model. These results indicate that the market responds negatively to ESGD and every term of ESGD. Thus, the hypotheses Ha1, Ha2, Ha3, and Ha4 are supported, which states that ESG disclosure and every term of ESGD, such as environmental disclosure, social disclosure, and governance disclosure, influences market performance. The results of this study are in line with Grewal *et al.* (2018), Yoon *et al.* (2018), Capelle-Blancard & Petit (2019), Li *et al.* (2019), Cui & Docherty (2020) and Wang *et al.* (2023) who find that ESG disclosure has a significant negative impact on market performance. The results of this study are not in line with the findings of Klassen & McLaughlin (1996), Krueger (2015), Hestiani (2019), Suttipun & Yordudom (2021), Landau *et al.* (2020), and Choi *et al.* (2024) who find that ESG disclosure has a positive and significant effect on market performance.



ESG-oriented companies will strive to demonstrate their commitment to implementing ESG aspects into their business model and strategy. However, there are several views on the impact of ESG disclosures. Some have a favorable view, and some have a negative view. Stakeholder theory emphasizes that companies are committed to safeguarding stakeholders' interests through implementing ESG. This commitment is vital for stakeholders for the company's seriousness in maintaining sustainability. Companies implement ESG because of needs and requests from stakeholders. This result is different from CSR, where the implementation of CSR within a company is an initiative from within the company to implement CSR to maintain sustainability. The company's commitment to meeting the needs of information users (the market) related to ESG will influence users' assessment of the company. ESG information positively impacts company value because the company has a good reputation. Thus, ESG disclosure can influence market performance. ESG implementation can also be explained by the value-enhancing theory (Yoon *et al.*, 2018), which confirms that ESG can increase company value. However, the results of this study are different from the optimistic view of ESG implementation.

The study results find that the use of ESG hurts market performance. The disclosure of ESG is something new, encouraging several government policies that may cause direct costs, as stated by Friedman (1970), and indirect costs, as stated by Healy & Palepu (2001), the company must bear the costs. Direct costs are a burden for companies, including (1) additional costs for preparing ESG activity reports, (2) costs for disseminating or disclosing ESG activities to the public, and (3) additional costs for ensuring information on ESG implementation by regulations. Maharani (2022) states that implementing ESG practices will incur significant costs. Based on a report from Knight Frank Indonesia, in 2021, the average rental price per square meter for office space that meets ESG criteria in the Sudirman Central Business District (SCBD) Jakarta is IDR 304,361/m<sup>2</sup>, while for offices that do not implement ESG, it is IDR 240,106/m<sup>2</sup>. Building and building maintenance costs for companies with ESG criteria are also 25% greater than for companies that do not implement ESG.

Indirect costs of ESG disclosures include dissemination of information to external stakeholders accepted by a company's competitors, political costs, and litigation and reputational risks. Friedman (1970) also emphasizes that disclosing CSR information produces less than optimal results because this disclosure requires relatively large amounts of time and costs for the company. ESG disclosure is a cash outflow that the company must carry out. These disclosures could reduce the availability of cash in the form of dividends. Disclosure of ESG information will provide added value when the benefits or incentives obtained by the company are more significant than the costs. ESG information will influence how investors view the trade-off between long-term benefits and short-term costs resulting from ESG disclosure.

The market reacts negatively to ESG disclosure because investors place greater weight on the costs and resources to fulfill disclosure requirements. In addition, there are concerns that companies with weak ESG disclosure and performance mechanisms are vulnerable to the costs and uncertainties associated with ESG disclosure and will bear the brunt of reputation risk. The absence of standard standards for comprehensive and consistent disclosure and a regulatory and supervisory body for ESG disclosures also burdens companies and investors, so empirical evidence shows that ESG disclosures increase the cost of capital (Atan *et al.*, 2018).

These findings also highlight the critical role that ESG ratings play in investors' decision-making processes. This rating provides valuable and practical insights for corporate managers, investors, and industry practitioners coming to terms with rapidly evolving disclosure standards and uncertainty regarding climate financial risks. Our findings also highlight market stability from the perspective of policymakers in designing similar regulations related to mandatory disclosure. Mandatory disclosures can pose costs and benefits from an equity investor's perspective. Conversely, investors may expect a significant source of costs.

According to Grewal *et al.* (2018), two other significant costs exist. The first is the cost of ownership, which confirms whether the regulation requires disclosing information expected to harm the company's competitiveness. Second, political costs determine whether ESG disclosure allows governments, regulators, and non-government interest groups to pressure companies to invest in projects with negative shareholder value. ESG disclosure is new for investors in Indonesia, causing them to renew their beliefs about the importance of ESG issues. As a country part of an emerging market, investors in this capital market need to be more sophisticated. Less sophisticated investors may view ESG implementation as a cost to the company. These costs will cause cash outflow from the company. This cash outflow causes the company's cash holdings to decrease. It could cause dividends not being paid or if the amount paid is lower than in the previous period. It is a cost for investors.

The significant difference in costs is one of investors' concerns; when a company implements ESG, various costs will arise that are greater than when it does not implement ESG. Therefore, investors view ESG implementation as a good use of money rather than an investment in the future. It is in line with the results of research by Wang *et al.* (2023), which looked at how stakeholders responded when the government issued regulations regarding obligations in ESG reporting. As a result, the market reacted negatively to the announcement because investors anticipated that additional costs would arise in implementing and reporting ESG practices greater than the increase in transparency.

However, investors view ESGD as necessary, as shown by the positive influence of ESGD on trading volume activity. The increasing trading volume activity shows that investors consider the information good. Why can the results of this study differ between market performance measured by market and volume? One reason is that the public still needs to receive information about ESG policies.

Kompas Newspaper reported on August 25, 2023, titled "Challenges of Carbon Emission Reduction Policy". Kompas newspaper conducted an opinion poll showing that 65.7% needed to know if the Indonesian government is intensively transitioning from fossil to environmentally friendly energy (Sidik A, 2023).

## 5. CONCLUSION

This study concludes that ESG disclosure hurts market performance for the three models in calculating abnormal returns. This negative result could be due to a lack of literacy and socialization, reflected in a Kompas survey published in the Kompas Newspaper on Friday, August 25, 2023. This disclosure may be related to competitors' political and direct costs. This view is from the market as aggregate. Nevertheless, the investor as an individual reacts positively to ESGD. For individual investors, ESGD is good news. Generally, these results contribute to grand theories such as behavioral economic theory for ESGD to market performance and

stakeholder theory for ESGD to individual investors. The limitation of this study is that there is an element of subjectivity on the part of researchers when conducting content analysis to measure ESG. The suggestion for the following researchers is to use the ESG Score, where the ESG Score data on the IDX is minimal, and the number of companies is less than 10% of the total companies listed on the Indonesia Stock Exchange.

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### REFERENCES

- [1] Alareeni, B. A., Hamdan, A. (2020), “ESG impact on the performance of US S&P 500-listed firms”, *Corporate Governance: The International Journal of Business in Society*, 20, 1409-1428.
- [2] Albitar, K., Hussainey, K., Kolade, N., Gerged, A. M. (2020), “ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms”, *International Journal of Accounting & Information Management*, 28, 429-444.
- [3] Alfaruq, N. (2021), “Indonesia Tertinggal di Bidang ESG”, Retrieved from <https://investor.id/market-and-corporate/242891/indonesia-tertinggal-di-bidang-esg>.
- [4] Alike, R. (2021), “Survei KIC: Konsumen Bersedia Bayar Mahal untuk Produk Berkelanjutan”, Retrieved from <https://katadata.co.id/yuliawati/ekonomi-hijau/612499e309ba9/survei-kic-konsumen-bersedia-bayar-mahal-untuk-produk-berkelanjutan>.
- [5] Alsayegh, M.F., Rahman, R.A., Homayoun, S. (2020), “Corporate Economic, Environmental, and Social Sustainability Performance Transformation through ESG Disclosure”, *Sustainability*, 12, 1-20.
- [6] Amosh, H. A., Khatib, S. F. A. (2021), “Corporate Governance and Voluntary Disclosure of Sustainability Performance: The Case of Jordan”, *SN Business and Economics*, 12, 165-187.
- [7] Atan, R., Alam, M. M., Said, J., & Zamri, M. (2018), “The impacts of environmental, social, and governance factors on firm performance: Panel study of Malaysian companies”, *Management of Environmental Quality: An International Journal*, 29, 182-194.
- [8] Beaver, W.H. (1968), “The Information Content of Annual Earnings Announcements”, *Journal of Accounting Research*, 6, 67-92.
- [9] Beerbaum, D., Puaschunder, J.M. (2019), “A Behavioral Economics Approach to Sustainability Reporting”, *SSRN Electronic*, 1-18.
- [10] Brown, S. J., Warner, J. B. (1985), “Using Daily Stock Returns: The Case of Event Studies”, *Journal of Financial Economics*, 14, 3-31.
- [11] Capelle-Blancard, G., Petit, A. (2019), “Every Little Helps? ESG News and Stock Market Reaction”, *J Bus Ethics*, 157, 543–565.
- [12] Choi, J.H., Hwang, S.J., Chiu, J.L. (2024), “The Moderating Role of Governance Mechanisms on the Relationship Between ESG Disclosure and Firm Value”, *Review of Integrative Business and Economics Research*, 13, 59-72.

- [13] CNN Indonesia. (2021), “BEI dan KEHATI Rilis 2 Indeks Baru, ESG Sector Leaders dan Quality 45”, Retrieved from <https://www.cnnindonesia.com/ekonomi/20211220115000-92-736151/bei-dan-kehati-rilis-2-indeks-baru-esg-sector-leaders-dan-quality-45>.
- [14] Cui, B., Docherty, P. (2020), “Stock Price Overreaction to ESG Controversies”, *Working paper*, Monash Centre for Financial Studies, Monash Business School, Monash University.
- [15] Deevaly, M.R., Wicaksono, A. (2023), “Benchmarking Analysis: A Comparative Study of ESG Implementation Using MSCI Rating Standard on State and Regional Owned Enterprises in Indonesia”, *Review of Integrative Business and Economics Research*, 12, 266-282.
- [16] Friedman, M. (1970), “The Social Responsibility of Business Is to Increase Its Profits”, *New York Times Magazine*, 13 September 1970, 122-126.
- [17] Gillan, S. L., Koch, A., Starks, L. T. (2021), “Firms and social responsibility: A review of ESG and CSR research in corporate finance”, *Journal of Corporate Finance*, 66: 1-16.
- [18] Grewal, J., Riedl, E. J., Serafeim, G. (2018), “Market Reaction to Mandatory Nonfinancial Disclosure”, *Management Science, Articles in Advance*, 1–24,
- [19] Hartono, J. (2017), “*Teori Portofolio dan Analisis Investasi*”, Edisi 11, Yogyakarta: BPFE UGM.
- [20] Healy, P.M., Palepu, K.G. (2001), “Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature”, *Journal of Accounting and Economics*, 31, 405-440.
- [21] Hery. (2016), “*Analisis Laporan Keuangan: Integrated and Comprehensive*”, Jakarta: Grasindo.
- [22] Hestiani, H. (2019), “Pengungkapan Kinerja Lingkungan Social dan Tata Kelola Terhadap Abnormal Return (Studi Pada Perusahaan Non keuangan Yang Terdaftar Di Bursa Efek Indonesia Periode 2014-2018)”, Doctoral Dissertation, Universitas Gajah Mada, Yogyakarta.
- [23] Hutauruk, D. M. (2021), “BEI Berkomitmen Kembangkan Investasi Hijau Di Pasar Modal”, Retrieved from: <https://investasi.kontan.co.id/news/bei-berkomitmen-kembangkan-investasi-hijau-di-pasar-modal>.
- [24] Klassen, R. D., McLaughlin, C. (1996), “The impact of environmental management on firm performance”, *Management Science*, 42, 1199–1214.
- [25] Krueger, P. (2015), “Corporate goodness and shareholder wealth”, *Journal of Financial Economics*, 115, 304–329.
- [26] KSEI. (2021), “Investor Pasar Modal Tembus 10 Juta”, Retrieved from: [https://www.ksei.co.id/files/uploads/press\\_releases/press\\_file/id-id/212\\_berita\\_pers\\_investor\\_pasar\\_modal\\_tembus\\_10\\_juta\\_20221202065619.pdf](https://www.ksei.co.id/files/uploads/press_releases/press_file/id-id/212_berita_pers_investor_pasar_modal_tembus_10_juta_20221202065619.pdf)
- [27] Landau, A., Rochell, J., Klein, C., Zwergel, B. (2020), “Integrated reporting of environmental, social, and governance and financial data: Does the market value integrated reports?”, *Bus Strat Env*, 29, 1750–1763.
- [28] Liang, Y., Xue, C., Zhang, J. (2023), “The Impact of ESG Ratings on Stock Liquidity Risk: Evidence from the Chinese Market”, *Review of Integrative Business and Economics Research*, 12, 1-16.
- [29] Li, Z., Liao, G., Albitar, K. (2019), “Does corporate environmental responsibility engagement affect firm value? The mediating role of corporate innovation”, *Bus Strat Env*, 1–11.
- [30] Maharani, A. S. A. (2022), “Jakarta Krisis Gedung Perkantoran Ramah Lingkungan, Hanya 18 Bersertifikat Hijau”, Retrieved from <https://www.kompas.com/properti/read>

- /2022/07/07/143000621/jakarta-krisis-gedung-perkantoran-ramah-lingkungan-hanya-18?page=all
- [31] Mitsuyama, N., Shimizutani, S. (2015), "Stock market reaction to ESG-oriented management: an event study analysis on a disclosing policy in Japan", *Economics Bulletin*, 35, 1098-1108.
- [32] Nasdaq. (2019), "ESG Reporting Guide 2.0: A Support Resource for Companies. Retrieved from <https://www.nasdaq.com/docs/2019/11/26/2019-ESG-Reporting-Guide.pdf>.
- [33] OECD. (2004), "OECD Principles of Corporate Governance. Retrieved from <https://www.oecd.org/corporate/ca/corporategovernanceprinciples/31557724.pdf>
- [34] Rankin, M., Ferlauto, K., McGowan, S., Stanton, P. (2023), "*Contemporary Issues in Accounting*", (3rd edition), Australia: John Wiley and Sons Australia.
- [35] Sidik A, B. (2023). "Tantangan Kebijakan Reduksi Emisi Karbon", Kompas, 25 Agustus 2023.
- [36] SRI-KEHATI. (2023), "Indeks SRI-KEHATI", Retrieved from: <https://kehati.or.id/indeks-sri-kehati/>
- [37] Suttipun, M., Yordudom, T. (2021), "Impact of environmental, social and governance disclosures on market reaction: evidence of Top50 companies listed from Thailand", *Journal of Financial Reporting and Accounting*, 20, 753-767.
- [38] Suwardjono. (2014), "*Teori Akuntansi: Perekayasaan Pelaporan Keuangan*", Edisi 3, Yogyakarta: BPFE-Yogyakarta.
- [39] Wang, J., Hu, X., Zhong, A. (2023), "Stock Market Reaction to Mandatory ESG Disclosure", *Finance Research Letters*, 53, 1-18.
- [40] Witynski, M. (2022), "What Is Behavioral Economics?", Behavioral Economics, Chicago.
- [41] Xia, D. (2022), "Does ESG Disclosure Matter in China Stock Market?", Doctoral Dissertation. Budapesti Corvinus Egyetem.
- [42] Yoon, B., Lee, J.H., Byun, R. (2018), "Does ESG Performance Enhance Firm Value? Evidence from Korea", *Sustainability*, 10, 1-18.