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MARKET REACTION TO EARNINGS ANNOUNCEMENT: THE ROLE OF NON-FINANCIAL INFORMATION DISCLOSURE

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Abstract. This study aims to analyze market reactions to earnings announcements by examining the role of non-financial information disclosure, namely Carbon Emission Disclosure (CED) and Good Corporate Governance (GCG), in oil, gas, and coal subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. Market reaction is proxied by abnormal return as a response to information published during earnings announcements. This study employs signalling theory and the efficient market hypothesis, which suggest that the market reacts to information considered relevant, whether financial or non-financial. Carbon emission disclosure reflects a company's transparency regarding environmental issues, while GCG represents the quality of corporate governance. The research method used is an event study with a quantitative approach. Data were obtained from the annual reports and sustainability reports of oil, gas, and coal subsector companies listed on the IDX. The results are expected to demonstrate the influence of carbon emission disclosure and GCG in strengthening or weakening market reactions to earnings announcements. This study is expected to contribute to the capital market accounting literature regarding the role of non-financial information in investor decision-making.

Keywords: Market Reaction; Carbon Emission Disclosure; Good Corporate Governance; Event Study.

I. INTRODUCTION

The development of the capital market cannot be separated from the role of information as a basis for investor decision-making. In increasingly efficient market conditions, any information disclosed by companies may influence market participants' perceptions and be reflected in stock price movements. One of the most closely observed types of information by investors is earnings announcements, as they are considered capable of reflecting a company's actual performance within a particular period. Ugras & Ritter (2025) found that earnings announcements significantly affect stock market volatility and market reactions because investors tend to adjust their expectations based on newly available corporate information.

Within the framework of the Efficient Market Hypothesis, stock prices are expected to adjust rapidly to newly available and relevant information in the market. Under these conditions, earnings announcements become one of the most important corporate events because they contain information regarding a company's financial performance and future prospects. As a result, investors often respond quickly to such announcements by revising their expectations and investment decisions, which are then reflected in stock price movements. This market response is commonly measured using abnormal return, as it can capture the extent to which the market reacts to newly disclosed information. Nainggolan (2024) found significant abnormal returns around earnings announcement periods, indicating that the market responds to earnings information in a relatively rapid and efficient manner. These findings further support the view that earnings announcements possess important information content capable of influencing investor behavior in the capital market.

However, market reactions to earnings announcements are not solely influenced by financial information, but also by non-financial information that has increasingly attracted investors' attention in recent years. Non-financial information such as carbon emission disclosure and good corporate governance is often viewed as an additional signal reflecting a company's quality, risk management, sustainability commitment, and long-term business prospects. Investors are becoming more concerned with how companies manage environmental and governance-related issues because such information may affect corporate reputation and future performance. Liu et al. (2025) stated that the combination of financial and non-financial information can strengthen the formation of investor expectations toward a company and influence investment decision-making in the capital market.

In the oil, gas, and coal subsector, attention to non-financial information has become increasingly important due to the sector's significant contribution to greenhouse gas emissions and environmental issues. Companies operating in this sector are often exposed to higher environmental risks, stricter regulations, and greater public scrutiny regarding sustainability practices. Consequently, investors may pay closer attention to environmental disclosures as part of their evaluation of corporate responsibility and future sustainability.

Ramdani (2024) found that carbon emission disclosure affects market responses because it enhances investor perceptions regarding a company's environmental responsibility and transparency. Similary, Sari et al. (2025) demonstrated that broader carbon emission disclosure is capable of increasing market reactions in energy sector companies, particularly when investors perceive such disclosures as a positive commitment to sustainability and environmental accountability.

In addition, good corporate governance also plays an important role in shaping market reactions to corporate information. Good corporate governance reflects the quality of corporate management and oversight mechanisms that may improve the credibility, accountability, and transparency of the information disclosed by companies. Strong governance practices can increase investor confidence because they indicate that the company is managed responsibly and in accordance with stakeholder interests. Adelia (2024) stated that the implementation of good corporate governance enhances corporate credibility in the eyes of investors, thereby influencing market responses to publicly announced information. Therefore, governance quality may serve as an important consideration for investors when evaluating company performance and making investment decisions.

From the perspective of Signalling Theory, companies send signals to the market through the disclosure of both financial and non-financial information. Earnings announcements function as signals of financial performance, while carbon emission disclosure and good corporate governance serve as signals of corporate quality, transparency, and sustainability. The credibility and clarity of these signals may determine how investors interpret and respond to corporate information in the capital market. Liu et al. (2025) emphasized that signal credibility strongly influences investor reactions to information received in the market environment. Meanwhile, based on the Efficient Market Hypothesis, all relevant information is expected to be reflected in stock prices as investors rapidly incorporate new information into their investment decisions. However, Susilawati & Dharma (2026) found that carbon emission disclosure does not always generate significant market reactions, indicating inconsistencies in previous research regarding the influence of non-financial information on capital market behavior.

These inconsistent findings indicate the existence of a research gap, particularly in integrating non-financial information disclosure, namely carbon emission disclosure and good corporate governance, in explaining market reactions to earnings announcements. Most previous studies have primarily focused on the direct effect of non-financial information on stock returns or firm value, rather than specifically examining market reactions within the context of earnings announcement event studies. In addition, limited studies have used abnormal return as a proxy for market reaction in the oil, gas, and coal subsector in Indonesia, despite the sector's high sensitivity to environmental and governance-related issues. Therefore, this study attempts to fill the gap by examining the role of carbon emission disclosure and good corporate governance in influencing market reactions to earnings announcements in companies operating within the Indonesian oil, gas, and coal subsector.

A. Efficient Market Hypothesis

The Efficient Market Hypothesis introduced by Eugene Fama in 1970 states that stock prices reflect all available information in the market, causing the market to respond rapidly to newly disclosed information. This theory suggests that investors cannot consistently obtain abnormal returns because relevant information is quickly incorporated into stock prices through market mechanisms. In line with this view, Ghozali (2020:55) also emphasized that asset prices already reflect all available information, making it difficult for investors to earn abnormal profits consistently over time. Under the semi-strong form of market efficiency, the market responds to publicly available information through changes in stock prices and trading activities. Siahaan (2023) explained that such market reactions can be used to evaluate whether particular information contains value and relevance for investors in making investment decisions. Therefore, market reaction reflects how quickly and accurately information is interpreted and responded to by market participants within the capital market environment.

In addition to financial information, the market also considers non-financial information such as carbon emission disclosure and good corporate governance when evaluating a company's prospects and performance. Non-financial disclosures have become increasingly important because investors are now more concerned with environmental responsibility, transparency, sustainability practices, and governance quality. Nyakurukwa & Seetharam (2023) stated that the market tends to respond to any information that contains economic value, either through stock price changes or trading activities in the market. However, Mukhsin et al. (2024) found that the Indonesian capital market has not yet fully achieved semi-strong form efficiency, indicating that not all publicly disclosed information is immediately reflected in stock prices. This condition suggests that investor responses to information may vary depending on market conditions, investor perceptions, and the nature of the information disclosed. Therefore, both financial and non-financial information published by companies continue to have the potential to influence market reactions, particularly in oil, gas, and coal subsector companies that are highly exposed to environmental and governance-related issues.

B. Signalling Theory

Signalling Theory introduced by Michael Spence in 1973 explains that companies communicate information to external parties as a signal regarding the company's condition and future prospects. These signals are conveyed by management to influence investor assessments and market responses toward the company. Through information disclosure, companies attempt to reduce information asymmetry between management and investors by providing signals related to corporate performance, sustainability, and future opportunities. According to Ghozali (2020:166), signalling theory explains how the signal sender communicates information in order to influence the decisions and perceptions of the signal receiver. In this context, investors interpret corporate disclosures as indicators that may reflect the quality and prospects of the company. Nguyen (2025) also stated that information published by companies may be perceived by investors as

either good news or bad news, thereby influencing market reactions and investment decisions in the capital market.

In line with this perspective, Sutanto (2024) emphasized that the disclosure of both financial and non-financial information represents a form of signal that reflects corporate quality and credibility. Information disclosed by companies may influence investor confidence because it provides insights into company performance, transparency, and sustainability practices. In this study, earnings announcements, carbon emission disclosure, and good corporate governance are considered important signals that may affect investor perceptions regarding corporate prospects and risk. Earnings announcements serve as indicators of financial performance, while carbon emission disclosure and good corporate governance reflect the company's environmental responsibility and governance quality. These signals are subsequently reflected in market reactions through stock price movements and abnormal returns, which indicate how investors respond to the information disclosed by companies.

C. Earnings Announcements

Earnings announcements are important financial information because they reflect a company's performance within a particular period and serve as a basis for investors in assessing the company's prospects and risks. Earnings information contains high informational value and is therefore frequently used in event study research. Ramadhani et al. (2024) found differences between actual returns and investor expectations, which subsequently triggered market reactions. This finding indicates that earnings information disclosed by companies can influence investor behavior and affect investment decision-making in the capital market.

In addition, earnings announcements may also be perceived as signals to the market. If the announced earnings exceed investor expectations, the market tends to respond positively, whereas earnings below expectations are generally responded to negatively. Consistent with this view, Ramadhani et al. (2024) stated that financial information, including earnings, remains one of the primary considerations for investors when making investment decisions. Therefore, in this study, earnings announcements are positioned as events capable of triggering market reactions, which are reflected through changes in stock prices or abnormal returns.

D. Market Reaction

Market reaction refers to investors' responses to information disclosed by companies, which are generally reflected in changes in stock prices or stock returns. In the capital market, market reaction indicates whether particular information contains value and relevance for investors, thereby influencing their investment decisions and expectations regarding company performance. Information released by companies may generate either positive or negative reactions depending on how investors interpret the information and assess its impact on future corporate prospects. One of the events most frequently used to examine market reaction is earnings announcements because such information is considered capable of reflecting a company's financial performance, operational condition, and future prospects within a certain period. According to Sushma (2022), earnings announcements containing elements of surprise may trigger significant stock price movements around the announcement date, as investors rapidly adjust their expectations based on newly available information. This condition is consistent with the Efficient Market Hypothesis, which states that stock prices will quickly adjust to new and relevant information available in the market.

Research conducted by Ugras & Ritter (2025) showed that market reactions to earnings announcements tend to be stronger during volatile market conditions, where uncertainty causes investors to become more sensitive to newly disclosed information. In addition, Ngwakwe (2024) found significant differences in stock prices before and after earnings announcements, indicating that the market genuinely responds to such information. These findings suggest that information disclosed by companies, particularly information related to financial performance, contains important information value capable of influencing investor behavior and market expectations. Investors often use earnings information as a basis for evaluating corporate performance and determining future investment strategies. Therefore, market reaction can be used to measure the extent to which investors respond to information disclosed by companies, including both financial and non-financial information, as reflected in stock price movements and abnormal returns in the capital market.

E. Carbon Emission Disclosure

Carbon emission disclosure refers to the disclosure of information related to carbon emissions generated by a company as a form of transparency regarding the environmental impact of its operational activities. This information generally includes the amount of carbon emissions produced, measurement methods, environmental policies, and corporate strategies for managing and reducing carbon emissions. Such disclosure has become increasingly important, particularly for companies operating in the oil, gas, and coal subsector, because these industries contribute significantly to greenhouse gas emissions and are often associated with environmental risks and sustainability issues. Therefore, carbon emission disclosure may reflect a company's commitment to environmental responsibility and sustainable business practices. Putikadea & Siregar (2023) stated that broader carbon emission disclosure demonstrates a company's concern for environmental sustainability and may improve investor perceptions regarding corporate accountability.

Based on the perspective of Signalling Theory, carbon emission disclosure is viewed as a signal provided by companies to investors regarding corporate quality, transparency, and environmental responsibility. Through such disclosures, companies attempt to reduce information asymmetry and provide additional information that may influence investor perceptions and market expectations. Halim & Yasa (2025) explained that companies disclosing carbon emission information more extensively tend to provide positive signals to the market, thereby increasing investor confidence in the company's future prospects and sustainability performance. In line with this perspective, the Efficient Market Hypothesis suggests that the market will respond to all relevant information, including non-financial information disclosed by companies. Dewi et al. (2024) emphasized that non-financial information such as carbon emission disclosure contains

information value capable of influencing investor decisions and being reflected in stock price movements within the capital market.

Previous studies have shown that carbon emission disclosure influences market reactions, although the findings remain inconsistent across different studies and sectors. Putikadea & Siregar (2023) found that carbon emission disclosure has a positive and significant effect on investor reactions measured using abnormal returns. This finding indicates that investors may perceive environmental transparency as a positive signal regarding corporate sustainability and long-term performance. Similarly, Halim & Yasa (2025) demonstrated that carbon emission disclosure positively affects stock returns in energy sector companies, suggesting that investors appreciate companies that disclose environmental information more transparently. However, other studies have produced inconsistent findings. Dewi et al. (2024) found that the effect of carbon emission disclosure on market reaction may be influenced by other factors such as media coverage, public perception, and market conditions, meaning that the relationship does not always show significant results. Therefore, in this study, carbon emission disclosure is positioned as non-financial information that potentially influences market reactions to earnings announcements, particularly in companies operating in environmentally sensitive industries.

Based on the theoretical perspectives and findings of previous studies, non-financial information such as carbon emission disclosure contains information value that may influence investor perceptions regarding corporate quality, sustainability, and future prospects. Investors may interpret broader environmental disclosure as a positive signal reflecting corporate responsibility and transparency, which can ultimately affect market reactions surrounding earnings announcements. Therefore, the following hypothesis is proposed

H1: Carbon emission disclosure has a positive effect on market reactions to earnings announcements.

F. Good Corporate Governance

Good corporate governance refers to a system and structure used to manage and control a company with the objective of increasing corporate value and protecting the interests of stakeholders. Good corporate governance encompasses several important principles, including transparency, accountability, responsibility, independence, and fairness in corporate management and decision-making processes. The implementation of good corporate governance is considered essential because it may improve managerial effectiveness, reduce agency conflicts, and strengthen investor confidence in the company. Maharani et al. (2022) stated that the implementation of good corporate governance is expected to create greater investor trust and improve the quality of managerial decision-making, thereby supporting the company's long-term sustainability and performance.

From the perspective of Signalling Theory, the implementation of good corporate governance can be viewed as a positive signal conveyed by companies to the market. Companies with strong governance practices tend to disclose information more transparently and credibly, which may be perceived by investors as an indication of good corporate prospects and lower business risk in the future. Better governance practices may also reduce information asymmetry between management and investors, allowing investors to make more accurate investment decisions. In line with the Efficient Market Hypothesis, particularly under the semi-strong form, stock prices reflect all publicly available information, including information related to corporate governance practices. Therefore, when information regarding effective governance is disclosed to the market, investors may respond through changes in stock prices and market reactions surrounding corporate events such as earnings announcements.

Empirically, several previous studies have shown that good corporate governance influences market reactions, although the magnitude and significance of the effect may vary across industries and research contexts. Research conducted by Ramadhani et al. (2024) found that good corporate governance has a significant effect on investor reactions, indicating that investors consider governance quality as an important factor in investment decision-making. In addition, Maharani et al. (2022) demonstrated that good corporate governance positively affects cumulative abnormal returns, although the effect was not statistically significant, suggesting that governance mechanisms still play a role in shaping investor perceptions regarding company quality and credibility. Similarly, Tamarisa et al. (2021) found that good corporate governance influences stock returns, indicating that governance-related information may contain value relevant to investors in the capital market.

However, previous studies have also produced inconsistent findings regarding the relationship between good corporate governance and market reactions. Yoda et al. (2025) found that several governance mechanisms, such as independent boards of commissioners, institutional ownership, and audit committees, did not significantly affect stock returns. These findings indicate that the influence of good corporate governance on market reactions may differ depending on industry characteristics, corporate conditions, investor perceptions, and market environments. In certain sectors, investors may focus more heavily on financial performance and external economic conditions rather than governance-related information. Therefore, this study reexamines the effect of good corporate governance on market reactions to earnings announcements, particularly within the oil, gas, and coal subsector, which is highly sensitive to governance and sustainability issues.

Based on theoretical perspectives and previous empirical findings, good corporate governance represents non-financial information that reflects the quality of corporate governance and may influence investor perceptions regarding corporate performance and future prospects. Strong governance practices may increase investor confidence and positively affect market responses to information disclosed by companies. Therefore, the following hypothesis is proposed

H2: Good corporate governance has a positive effect on market reactions to earnings announcements.

II. RESEARCH METHOD

This study uses a quantitative approach to examine the effect of non-financial information disclosure on market

reactions to earnings announcements. Non-financial information in this study is proxied by carbon emission disclosure (CED) and good corporate governance (GCG). The quantitative approach was chosen because this study focuses on testing the relationship between variables measured numerically and analyzed using statistical methods

Table 3. 1 Population and Sample

No.	Criteria	Excluded	Included
1.	Companies classified under the oil, gas, and coal subsector.	(0)	89
2.	Companies applying reporting standards based on GRI 305: Emissions.	(51)	38
3.	Companies consistently publishing annual reports and sustainability reports during the 2021–2024 period.	(9)	29
4.	Annual reports and sustainability reports accessible through the companies' official websites and data available.	(0)	29
Total Sample			**29**
Total Observations (29 Samples x 4 Years)			**116**

Source: Processed by the Author (2026).

The population of this study consists of all oil, gas, and coal subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The sample selection was conducted using a purposive sampling technique. The criteria used in selecting the sample include companies classified within the oil, gas, and coal subsector, companies explicitly applying the GRI 305: Emissions reporting standard in their sustainability reports, companies consistently publishing annual reports and sustainability reports throughout the research period, and companies whose reports are publicly accessible and contain the data required for analysis.

This study uses secondary data collected through the documentation method. The data analysis technique employed in this study is panel data regression analysis using Stata 17 software. Panel data analysis was selected because the data consist of a combination of cross-sectional data (several companies) and time-series data (2021–2024 period). The stages of analysis include descriptive statistical analysis, panel data regression model selection through the Chow test, Hausman test, and Lagrange Multiplier (LM) test, as well as hypothesis testing using the t-test to examine the partial effect of each independent variable on the dependent variable and the F-test to examine the simultaneous effect of the independent variables on the dependent variable.

Market reaction in this study is measured using abnormal return as an indicator of investor response to earnings announcements. This measurement refers to Nainggolan (2024), who stated that abnormal return can be used to capture market responses to information disclosure. Abnormal return is calculated as the difference between stock return and market return using the following formula:

$$AR_{it} = R_{it} - R_{mt}$$

Description:
AR_{it} = Abnormal return of company *i* in period *t*
R_{it} = Stock return of company *i* in period *t*
R_{mt} = Market return in period *t*

The abnormal return value reflects market reactions to publicly disclosed information. Therefore, in this study, abnormal return is used to measure market reactions to earnings announcements influenced by non-financial information disclosure, such as carbon emission disclosure and good corporate governance.

Carbon emission disclosure in this study is measured using the content analysis method through a carbon emission disclosure index. This measurement refers to Lestari et al. (2024) who used a carbon disclosure checklist in annual reports or sustainability reports. Each disclosed item is assigned a score of 1, while undisclosed items are assigned a score of 0. The carbon emission disclosure index is then calculated using the following formula:

$$CED = \frac{\text{Number of disclosed items}}{\text{Total disclosure items}}$$

The CED value ranges from 0 to 1, where a higher CED value indicates a broader level of corporate carbon emission disclosure (Lestari et al., 2024). The carbon disclosure index in this study is developed based on the Global Reporting Initiative (GRI) standards, particularly GRI 305: Emissions, which include several main aspects such as direct emissions, indirect emissions, emission intensity, and emission reduction efforts.

Table 3. 2 GRI 305: Emissions Indicators

GRI 305-1: Direct GHG Emissions (Scope 1)		
No.	**Code**	**Disclosure Items**
1	305-1a	Direct GHG emissions (Scope 1)
2	305-1b	Types of GHG gases
3	305-1c	Biogenic CO_2 emissions
4	305-1d	Base year information and changes
5	305-1e	Emission factors and GWP sources
6	305-1f	Consolidation approach
7	305-1g	Calculation methodology
GRI 305-2: Energy Indirect GHG Emissions (Scope 2)		
No.	**Code**	**Disclosure Items**
8	305-2a	Location-based Scope 2 emissions
9	305-2b	Market-based Scope 2 emissions
10	305-2c	Types of GHG gases
11	305-2d	Base year information and changes
12	305-2e	Sources of emission factors
13	305-2f	Consolidation approach
14	305-2g	Calculation methodology
GRI 305-3: Other Indirect GHG Emissions (Scope 3)		
No.	**Code**	**Disclosure Items**
15	305-3a	Scope 3 emissions
16	305-3b	Types of GHG gases
17	305-3c	Biogenic CO_2 emissions
18	305-3d	Scope 3 activity categories
19	305-3e	Base year information and changes
20	305-3f	Sources of emission factors
21	305-3g	Calculation methodology

GRI 305-4: Emission Intensity		
No.	**Code**	**Disclosure Items**
22	305-4a	Emission intensity ratio
23	305-4b	Dividing metric
24	305-4c	Type of emissions (Scope 1/2/3)
25	305-4d	Types of GHG gases
GRI 305-5: Emission Reduction		
No.	**Code**	**Disclosure Items**
26	305-5a	Amount of emission reduction
27	305-5b	Types of GHG gases
28	305-5c	Base year
29	305-5d	Scope of reduction
30	305-5e	Calculation methodology
GRI 305-6: ODS Emissions		
No.	**Code**	**Disclosure Items**
31	305-6a	ODS emissions
32	305-6b	Types of ODS substances
33	305-6c	Sources of emission factors
34	305-6d	Calculation methodology
GRI 305-7: Other Air Emissions		
No.	**Code**	**Disclosure Items**
35	305-7a	NOx, SOx, and other air emissions
36	305-7b	Sources of emission factors
37	305-7c	Calculation methodology

Source: Processed by the Author (2026).

Good corporate governance in this study is proxied by institutional ownership. Kiswanto et al. (2024) explained that institutional ownership reflects the proportion of company shares owned by institutional investors such as investment companies, banking institutions, insurance companies, and other financial institutions. The use of institutional ownership as a proxy for good corporate governance is based on its role in carrying out monitoring functions toward management, which may improve the quality of corporate governance and reduce agency conflicts within the company. Higher institutional ownership is generally associated with stronger supervision of managerial activities because institutional investors tend to have greater resources, experience, and incentives to monitor company performance and decision-making processes. The measurement of institutional ownership in this study refers to Kiswanto et al. (2024) using the following formula:

$$KI = \frac{\text{Number of shares owned by institusions}}{\text{Total outstanding shares}}$$

The value of institutional ownership ranges from 0 to 1. A higher proportion of institutional ownership indicates a stronger monitoring function over management, which is expected to improve the quality, transparency, and credibility of information disclosed by the company to investors. Consequently, stronger institutional ownership may increase investor confidence and influence market reactions to corporate information, particularly earnings announcements

III. RESULT AND DISCUSSION

A. Descriptive Statistical Analysis

Descriptive statistical analysis is used to provide a general overview of the characteristics of the research data, including the minimum value, maximum value, mean, median, and standard deviation of each research variable. According to Ghozali (2021), descriptive statistics are used to describe or summarize data in order to make the information easier to understand through measures such as the mean, standard deviation, minimum value, and maximum value. Through descriptive statistical analysis, researchers can obtain an initial understanding of the distribution and characteristics of the variables used in the study before conducting further analysis. The results of the descriptive statistical analysis are presented in the following table.

Table 4. 1 Results of Descriptive Statistical Analysis

Variable	N	Mean	Median	Std. Dev	Min	Max
Y	116	-1.454	-1.440	1.193	-4.835	2.039
Ced	116	0.000	0.019	1.000	-2.039	1.963
Ki	116	0.000	0.181	1.000	-2.576	1.399

Source: Processed by the Author (2026).

Based on Table 4.1, the total number of observations used in this study is 116 observations from oil, gas, and coal subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The market reaction variable (Y) has a mean value of -1.454 with a standard deviation of 1.193. The minimum value of -4.835 and the maximum value of 2.039 indicate that market reactions among oil, gas, and coal subsector companies vary considerably across companies. This variation suggests that investors may respond differently to information disclosed by each company depending on corporate conditions and market perceptions.

The carbon emission disclosure (CED) variable has a mean value close to zero because the data have been standardized prior to analysis. The standard deviation value of 1.000 indicates that the data distribution is relatively stable. In addition, the minimum value of -2.039 and the maximum value of 1.963 indicate differences in the level of carbon emission disclosure among companies included in the research sample. These differences suggest that companies have varying levels of transparency and commitment regarding environmental disclosure practices.

The Institutional Ownership (KI) variable has a mean value of 0.000 with a standard deviation of 1.000. The minimum value of -2.576 and the maximum value of 1.399 indicate that the KI data have sufficient variation and are therefore appropriate for use in panel data regression analysis. The variation in institutional ownership also reflects differences in the proportion of institutional investors across companies, which may influence monitoring effectiveness and corporate governance quality within the sampled firms.

B. Normality Test

The normality test is conducted to determine whether the residual data in the regression model are normally distributed. According to Ghozali (2021), a good regression model is one that has normally distributed residuals because normality is one of the classical assumptions required in regression analysis. In

this study, the normality test was carried out using the Shapiro-Wilk test.

Table 4. 2 Results of the Normality Test

Variable	Obs	W	z	Prob > z	Description
Residual	116	0.982	1.15	0.125	Normally distributed

Source: Processed by the Author (2026).

Based on Table 4.2, the test results show a probability value of 0.125, which is greater than 0.05. Therefore, it can be concluded that the residuals in this study are normally distributed, indicating that the regression model satisfies the normality assumption. This result suggests that the residual values are distributed symmetrically and do not significantly deviate from a normal distribution, making the model appropriate for further regression analysis.

C. Multicollinearity Test

The multicollinearity test is conducted to determine whether there is a high correlation among the independent variables in the research model. According to Ghozali (2021), a good regression model should not exhibit strong correlations among independent variables because multicollinearity may affect the stability and accuracy of regression estimates. In this study, multicollinearity testing was performed using the Variance Inflation Factor (VIF) value and tolerance value.

Table 4. 3 Results of the Multicollinearity Test

Variable	VIF	Tolerance
CED	1.01	0.993
KI	1.01	0.993

Source: Processed by the Author (2026).

Based on Table 4.3, the CED and KI variables have VIF values of 1.01, which are below the threshold value of 10, while the tolerance values are greater than 0.10. Therefore, it can be concluded that the research model does not experience multicollinearity. These results indicate that the independent variables do not have excessively high correlations with one another and are therefore suitable for inclusion in the panel regression model.

D. Heteroscedasticity Test

The heteroscedasticity test is conducted to determine whether there is inequality in the variance of residuals within the regression model. According to Ghozali (2021), a good regression model is one that does not experience heteroscedasticity because unequal residual variance may affect the reliability of regression results. In this study, heteroscedasticity testing was conducted using the Glejser method by regressing the absolute residual values against the independent variables.

Table 4. 4 Results of the Heteroscedasticity Test

Variable	Coefficient	t-Statistic	Probability	Description
CED	-0.007	-0.1	0.922	No heteroscedasticity
KI	-0.037	-0.52	0.607	No heteroscedasticity

Source: Processed by the Author (2026).

Based on Table 4.4, the carbon emission disclosure (CED) variable has a probability value of 0.922, while the KI variable has a probability value of 0.607. All independent variables have probability values greater than 0.05. Therefore, it can be concluded that the research model does not experience heteroscedasticity. These findings indicate that the residual variance remains relatively constant across observations, suggesting that the regression model provides reliable estimation results

E. Autocorrelation Test

The autocorrelation test is conducted to determine whether there is a correlation between residuals in a particular period and residuals from previous periods. According to Ghozali (2021) a good regression model is one that is free from autocorrelation because autocorrelation may reduce the efficiency of regression estimates. In this study, autocorrelation testing for panel data was conducted using the Wooldridge test.

Table 4. 5 Results of the Autocorrelation Test

Test Method	F-Statistic	Probability	Description
Wooldridge Test	0.785	0.383	No autocorrelation

Source: Processed by the Author (2026).

Based on Table 4.5, the Wooldridge test results show a probability value of 0.383, which is greater than 0.05. Therefore, it can be concluded that the research model does not experience autocorrelation. This result indicates that the residuals between observation periods are independent from one another, meaning that the panel regression model satisfies the autocorrelation assumption and is appropriate for further analysis

F. Panel Data Regression Model Selection

The selection of the panel data regression model is conducted to determine the most appropriate model used in the study. According to Ghozali (2021), panel data regression model selection can be performed through several testing stages, including the Chow test, Hausman test, and Lagrange Multiplier (LM) test, in order to determine the most suitable model among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).

Table 4. 6 Results of Panel Data Regression Model Selection

Test Type	Compared Models	Statistical Value	Probability	Decision
Chow Test	CEM vs FEM	1.28	0.191	CEM
LM Test	CEM vs REM	0.51	0.237	CEM

Source: Processed by the Author (2026).

Based on the Chow test results, the probability value obtained is 0.191, which is greater than 0.05. Therefore, the Common Effect Model (CEM) is considered more appropriate than the Fixed Effect Model (FEM). Furthermore, the Lagrange

Multiplier (LM) test result shows a probability value of 0.237, which is also greater than 0.05, indicating that the Common Effect Model (CEM) is more suitable than the Random Effect Model (REM). Thus, the panel data regression model used in this study is the Common Effect Model (CEM). The selection of CEM indicates that the characteristics across companies are considered relatively homogeneous and do not require specific individual effects within the regression model

G. **Panel Data Regression Results**

The panel data regression analysis in this study uses the Common Effect Model (CEM) based on the results of the model selection tests conducted previously. According to Ghozali (2021) regression analysis is used to determine the effect of independent variables on the dependent variable. The results of the panel data regression analysis are presented in the following table.

Table 4. 7 Results of Panel Data Regression Analysis (CEM)

Variable	Coefficient	Std. Error	t-Statistic	Probability	Description
CED	-0.218	0.110	-1.990	0.049	Significant
KI	-0.177	0.110	-1.620	0.109	Not Significant
cons	-1.454	0.109	-13.360	0.000	Constant

Model Description	Value
R-Squared	0.051
Adjusted R-Squared	0.034
F-Statistic	3.040
Prob (F-Statistic)	0.052
Jumlah Observasi	116

Source: Processed by the Author (2026).

Based on Table 4.7, the panel data regression analysis using the Common Effect Model (CEM) produces the following regression equation:

$$Y = -1.454 - 0.218CED - 0.177KI + \varepsilon$$

The constant value of -1.454 indicates that when all independent variables are assumed to be constant, the market reaction proxied by abnormal return is valued at -1.454. The carbon emission disclosure (CED) variable has a regression coefficient of -0.218 with a probability value of 0.049, which is smaller than 0.05. These results indicate that carbon emission disclosure has a significant negative effect on market reaction. This finding suggests that broader carbon emission disclosure may be perceived negatively by investors, possibly due to concerns regarding environmental risks, operational costs, or sustainability-related pressures faced by companies in the oil, gas, and coal subsector.

Meanwhile, the good corporate governance variable proxied by institutional ownership (KI) has a regression coefficient of -0.177 with a probability value of 0.109, which is greater than 0.05. These results indicate that institutional ownership does not have a significant effect on market reaction. This finding suggests that investors may not consider institutional ownership as a primary factor in responding to earnings announcements within the sampled companies.

The R-Squared value of 0.051 indicates that the carbon emission disclosure and institutional ownership variables are able to explain 5.1% of the variation in market reaction, while the remaining 94.9% is explained by other variables outside the research model. In addition, the Prob (F-Statistic) value of 0.052 indicates that the research model simultaneously approaches the 5% significance level, although it is not statistically significant at the conventional threshold

H. **Hypothesis Testing**

Hypothesis testing in this study aims to determine the effect of independent variables on the dependent variable, both partially and simultaneously. The tests are conducted using a significance level of 5% (0.05), where the acceptance or rejection of hypotheses is based on the probability value (p-value). According to Ghozali (2021) hypothesis testing in regression analysis is conducted based on significance values to determine the statistical effect of variables.

Table 4. 8 Results of Hypothesis Testing

t-Test Results				
Variable	Coefficient	t-Statistic	Probability	Decision
CED	-0.218	-1.99	0.049	H1 rejected (direction not consistent)
KI	-0.177	-1.62	0.109	H2 rejected

F-Test Results	
Statistic	Value
F-statistic	3.04
Prob > F	0.052

Source: Processed by the Author (2026).

Based on the hypothesis testing results, the carbon emission disclosure (CED) variable has a coefficient of -0.218 with a probability value of 0.049, which is smaller than 0.05. Therefore, carbon emission disclosure significantly affects market reaction. However, the coefficient direction is negative, which is inconsistent with the research hypothesis predicting a positive relationship. Thus, H1 is rejected. The KI variable has a coefficient of -0.177 with a probability value of 0.109, which is greater than 0.05, indicating that institutional ownership does not significantly affect market reaction. Therefore, H2 is rejected.

Based on the simultaneous test results (F-test), the F-statistic value obtained is 3.04 with a probability value of 0.052, which is greater than 0.05. This result indicates that carbon emission disclosure and institutional ownership simultaneously do not have a significant effect on market reaction. These findings suggest that although certain non-financial information may individually influence investor responses, the combined explanatory power of the variables in this study remains relatively limited in explaining market reactions to earnings announcements.

I. **The Effect of Carbon Emission Disclosure on Market Reaction**

Based on the regression test results, the carbon emission disclosure (CED) variable has a coefficient value of -0.218 with a significance value of 0.049 < 0.05. These results indicate that carbon emission disclosure has a significant effect on market reaction. However, the negative coefficient direction indicates that the broader the carbon emission disclosure made by the company, the lower the market reaction proxied by abnormal return tends to be. Therefore, the hypothesis stating that carbon emission disclosure has a positive effect on market reaction cannot be accepted.

The findings of this study indicate that investors in oil, gas, and coal subsector companies still perceive carbon

emission disclosure as information that may generate negative perceptions toward the company. Investors may consider broader carbon emission disclosure as an indication of higher environmental risk, potential emission management costs, and the possibility of stricter environmental regulations in the future. These conditions may cause the market to respond negatively to the non-financial information disclosed by companies. From the perspective of Signalling Theory, carbon emission disclosure serves as a signal provided by companies to investors. However, such signals are not always interpreted as good news by the market. In the oil, gas, and coal subsector, which is closely associated with high-emission activities, information related to carbon emissions may instead increase investor concerns regarding corporate sustainability and future business continuity.

The results of this study are inconsistent with the findings of Putikadea & Siregar (2023) who found that carbon emission disclosure positively affects investor reactions. Their study explained that carbon emission disclosure is perceived as a form of corporate environmental responsibility capable of increasing investor confidence and attracting market interest. In addition, Halim & Yasa (2025) also found that carbon emission disclosure positively influences stock returns in energy sector companies. These findings indicate that investors in previous studies tended to appreciate corporate transparency regarding sustainability and environmental issues.

However, the results of this study are consistent with the findings of Dewi et al. (2024), who stated that the effect of carbon emission disclosure on market reaction still shows inconsistent results. Dewi et al. (2024) explained that the capital market has not yet fully responded efficiently to non-financial information, causing investor decisions to be influenced by other factors such as market psychology, media coverage, and perceptions of corporate risk. In this study, investors may focus more heavily on environmental risks and potential costs arising from high carbon emissions in oil, gas, and coal subsector companies rather than the reputational benefits gained from disclosure activities.

Therefore, it can be concluded that carbon emission disclosure significantly affects market reaction, although the direction of the effect is negative. These findings indicate that carbon emission disclosure has not been fully perceived as a positive signal by investors, particularly in oil, gas, and coal subsector companies that have high sensitivity to environmental issues and sustainability concerns.

J. The Effect of Good Corporate Governance on Market Reaction

Based on the regression test results, the good corporate governance variable proxied by institutional ownership (KI) obtained a coefficient value of -0.177 with a significance value of 0.109. The significance value is greater than 0.05, indicating that institutional ownership does not have a significant effect on market reaction. Therefore, the hypothesis stating that good corporate governance affects market reaction is rejected.

The findings of this study indicate that the proportion of institutional ownership has not been able to influence investor reactions to earnings announcements in oil, gas, and coal subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. Investors tend to focus more on earnings information and the company's fundamental conditions rather than the institutional ownership structure. In addition, institutional ownership may not necessarily be perceived as a positive signal by the market because investors may consider that the presence of institutional investors does not always guarantee effective managerial monitoring or high-quality corporate decision-making.

The results of this study are consistent with the findings of Yoda et al. (2025) who found that institutional ownership has not been able to improve investor responses to corporate information. In addition, this study also supports the findings Maharani et al. (2022) which showed that good corporate governance has a positive but insignificant effect on cumulative abnormal return. These findings indicate that the market has not fully considered corporate governance practices as a primary factor in responding to publicly disclosed information.

However, the results of this study differ from the findings of Ramadhani et al. (2024) who stated that good corporate governance significantly affects investor reactions. The differences in findings may be caused by differences in research sectors, observation periods, and the proxy used to measure good corporate governance. Ramadhani et al. (2024) examined Sharia energy companies, where investors may place greater emphasis on governance aspects when making investment decisions.

Furthermore, this study is also inconsistent with the findings of Tamarisa et al. (2021) who found that good corporate governance affects stock returns. These differences suggest that the influence of corporate governance on market reaction may vary across industries and market conditions. In the oil, gas, and coal subsector, investors may be more sensitive to external factors such as fluctuations in energy commodity prices, global economic conditions, and earnings information compared to institutional ownership mechanisms.

From the perspective of Signalling Theory, institutional ownership should serve as a positive signal for investors because it reflects stronger monitoring functions over company management. Higher institutional ownership is expected to strengthen supervision of management activities and improve investor confidence regarding the quality of information disclosed by the company. However, the findings of this study indicate that such signals are not strong enough to influence market reactions. Investors may not yet perceive institutional ownership as a primary indicator when assessing corporate prospects during earnings announcements.

Meanwhile, based on the Efficient Market Hypothesis, the market will react to information considered relevant and valuable to investors. Nevertheless, the findings of this study indicate that information regarding institutional ownership is not yet perceived as information with high economic value by investors, and therefore does not generate significant market reactions. Consequently, market reactions in oil, gas, and coal subsector companies are likely influenced more strongly by other forms of information considered more relevant by investors than by good corporate governance mechanisms through institutional ownership.

IV. CONCLUSION

Based on the results of the study, this research aims to analyze the effect of carbon emission disclosure (CED) and good corporate governance (GCG) on market reactions to earnings announcements in oil, gas, and coal subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The findings indicate that non-financial information has not been fully perceived positively by investors, particularly in companies with high sensitivity to environmental issues. In general, investor responses are still largely influenced by perceptions of risk, corporate fundamentals, and external market conditions. The conclusions of this study are presented as follows:

1. Carbon emission disclosure has a significant effect on market reaction, but the relationship is negative. This result indicates that the broader the carbon emission disclosure made by the company, the lower the market reaction proxied by abnormal return tends to be. Investors in the oil, gas, and coal subsector still perceive carbon emission information as a signal associated with environmental risks, potential additional operational costs, and future regulatory pressures. As a result, carbon emission disclosure has not been fully interpreted as positive information capable of increasing investor confidence in the company's future prospects.
2. Good corporate governance proxied by institutional ownership does not have a significant effect on market reaction. These findings indicate that investors have not yet considered institutional ownership as a primary factor when responding to corporate earnings announcements. Market reactions tend to be influenced more strongly by earnings information, company fundamentals, commodity price fluctuations, and broader economic conditions rather than by institutional ownership structures within the company. This suggests that the governance mechanism represented by institutional ownership has not been sufficiently strong to influence investor decision-making in the sampled companies.
3. This study contributes to the development of capital market accounting literature by integrating financial and non-financial information within the context of an earnings announcement event study. The novelty of this research lies in the use of carbon emission disclosure and good corporate governance to explain market reactions using abnormal return in oil, gas, and coal subsector companies in Indonesia. In addition, this study provides further evidence that investor responses to non-financial information may vary depending on industrial characteristics, environmental sensitivity, and market perceptions toward sustainability-related disclosures.

Recommendations

Based on the results of this study, several suggestions are proposed for related parties as well as future researchers. These suggestions are expected to provide useful considerations for improving corporate practices and enriching future academic research.

1. For oil, gas, and coal subsector companies, it is recommended to improve the quality of non-financial information disclosure, particularly regarding carbon emissions and the implementation of corporate governance practices. Companies should also demonstrate a stronger commitment to environmental management and sustainability practices so that the disclosures provided can build more positive investor perceptions. Transparent and credible disclosure practices may help reduce investor uncertainty regarding environmental risks and strengthen corporate reputation in the capital market.
2. For investors, this study is expected to serve as a consideration in investment decision-making by not only focusing on earnings information but also taking into account non-financial information such as carbon emission disclosure and corporate governance practices. Non-financial information may provide additional insights regarding corporate sustainability, risk management, and long-term business prospects, especially in environmentally sensitive industries.
3. For future researchers, it is recommended to include additional variables that may influence market reaction, such as media coverage, profitability, company size, environmental performance, or corporate social responsibility disclosure. Future studies may also use other proxies for good corporate governance, such as independent commissioners, audit committees, managerial ownership, or audit quality. Furthermore, expanding the research object to other industrial sectors and extending the observation period may provide more comprehensive findings and broader insights regarding the relationship between non-financial information and market reactions in the capital market

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