

The Influence of Corporate Social Responsibility Disclosure, Accounting Conservatism, Earnings Persistence, and Systematic Risk on Earnings Response Coefficient (ERC)

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Abstract

Earnings response coefficient is a valuation model used to show the probability of fluctuations in share value as a result of market reactions to earnings information presented by companies issuing shares. The phenomenon that occurred in this research was found in several companies where stock price movements and profits were not in line. This research aims to determine the effect of disclosure of corporate social responsibility, conservatism, earnings persistence and systematic risk on mining companies listed on the Indonesia Stock Exchange (BEI) for the 2018-2023 period simultaneously and partially. This research uses quantitative methods and purposive sampling. The analysis model used is a panel data regression analysis model with Eviews 12 analysis software. The research results state that corporate social responsibility (CSR) disclosure, conservatism, earnings persistence and systematic risk have a negative and significant effect on the earnings response coefficient.

Keywords: Corporate Social Responsibility Disclosure, Conservatism, Earnings Persistence, Systematic Risk, Earnings Response Coefficients.

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Introduction

Earning response coefficient (ERC) is the market reaction to the company's published earnings information which can be observed from stock price movements around the date of issuance of financial statements. According to Katarina and Luciana (2019) stated that the earnings information response is a measurement method that can be used to assess the strength between earnings and stock returns. The strength of the relationship between earnings power and stock returns can be measured by the earnings response coefficient (ERC). Earnings response coefficient is the abnormal return value of a security as a response to the market reaction to the unexpected return component announced by the company that issued the security which triggers the market reaction to the earnings information (Simatupang et al., 2019). (Simatupang et al., 2022). The earnings response coefficient (ERC) value shows how the quality

of the company's earnings for investors. The high value of earnings response coefficient (ERC) indicates that investors respond positively to earnings information, which is a good sign because it indicates that the earnings information is quality. However, the low value of the earnings response coefficient (ERC) can be concluded that earnings provide less information to investors that can be used to make economic decisions. (Putri Rosalia et al., 2024).

Mining companies carry out various activities such as research, exploration, feasibility studies, construction, mining, processing, transportation, sales and post-mining activities. Mining companies are responsible for managing mineral resources such as ore, gas and new energy, as well as ensuring sustainability and compliance with government regulations and international standards. Their activities range from research to the sale of finished products, playing an important role in providing mineral resources to various sectors of the economy. These industries include coal mining, oil and gas, metals and minerals, and rocks, and contribute significantly to national economic growth.

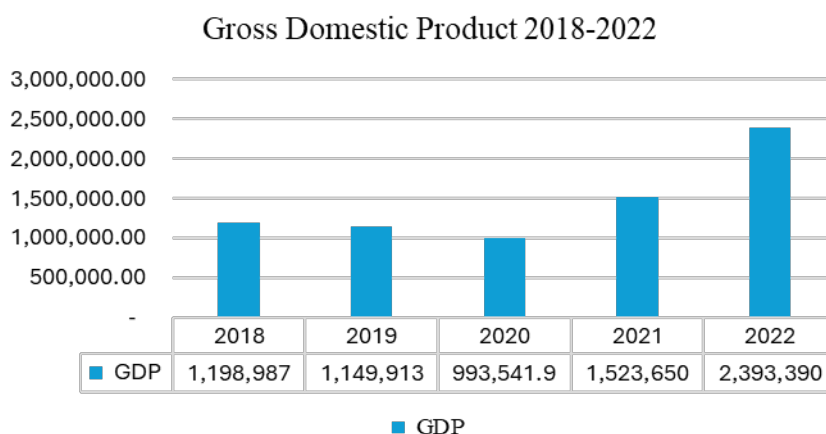


Figure 1. Gross Domestic Product (GDP) of Mining Sector in 2018-2022

Source: (Central Bureau of Statistics, 2022), data processed by the author (2023)

Based on Figure 1, the gross domestic product (GDP) graph shows the growth of the mining sector industry from 2018 to 2022 experiencing fluctuations that contribute to GDP every year. The GDP of the mining sector has increased from 2020 to 2022. The highest GDP value occurred in 2022 with a value of IDR 2,393,390.90 billion, while the lowest GDP value occurred in 2020 with a value of IDR 993,541.90 billion. The decline in the GDP growth rate in each sector is often influenced by government policies that have direct and indirect impacts, as well as the impact of the Covid-19 pandemic felt in Indonesia. This led to a contraction in Indonesia's economic growth which resulted in a decline in almost all business sectors in 2020. Factors such as social and economic considerations play an important role in investment decision making.

The mining industry is one of the industries that contribute to Indonesia's economic growth. According to the Minister of State-Owned Enterprises (BUMN), the contribution of mining to GDP is 2,300 Trillion or 8.57% of total GDP. (Romys Binikasri, 2023). The mining industry contributes significantly to the country's economy in terms of revenue, employment, and regional economic growth. Mining became one of the drivers of the economy in the third quarter of 2023, growing 7.0% year-on-year. This result was led by the metal ore mining subsector which rose 17.8% on an annualized basis due to local demand for the needs of the base metal industry, especially refined nickel. The sector is also becoming increasingly important in line with the government's industrial downstreaming plan. (Eqqi Syahputra, 2023).

Name	Data	Year				
		2018	2019	2020	2021	2022
EARTH	Profit	158.218.349	9.470.482	-337.350.969	223.377.014	556.664.506
	Share Price	127	50	62	56	137
MDKA	Profit	57.867.494	-611,284	28.891.683	33.386.800	64.844.810
	Share Price	655,60	1.043,89	2.097,54	3.756,06	3.980,00

Source: *Company Financial Statements and data processed by the author (2023)*

The table above is the movement of profits and share prices of PT Bumi Resources Tbk and PT Merdeka Copper Gold Tbk from 2018 to 2022. PT Bumi Resources Tbk in 2018 had a profit of Rp 158,218,349 with a share price on the date of publication of the financial statements of Rp 127. The movement of profits and stock prices in 2018 to 2019 went hand in hand downward in accordance with the efficient market theory. According to the efficiency market theory by Scott (2015), security prices will quickly reflect new information available in the market. Information about increases and decreases in earnings should match the stock price at the time the earnings announcement is made. (Kristanti & Almilia, 2019). However, the difference occurred in 2020, PT Bumi Resources experienced a decrease in profit of 99.9% but an increase in share price of 12%. The discontinuity in the movement of earnings and stock prices also occurred in 2021, while in 2022 the movement of earnings and stock prices had gone hand in hand. This happened at PT Merdeka Copper Gold Tbk from 2018 to 2019, there was a 99% decrease in profit and an increase in share price of 59.04%. This is a disconnect with the efficient market theory where the movement of profits and stock prices does not match. Meanwhile, in 2020, 2021, and 2022, the increase in company profits was in line with the increase in stock prices. The data from this phenomenon shows that investor responses are not always in line with company earnings information.

Another phenomenon occurred in the first quarter of 2019, PT Bumi Resources Tbk (BUMI) experienced a significant profit decline of 46.27%, which raised concerns among investors and market analysts. Earnings Response Coefficient (ERC) becomes relevant in this context as it measures the sensitivity of stock prices to earnings announcements. A drastic drop in earnings can lead to large fluctuations in stock prices, especially if it is perceived as an indication of underlying problems within the company. Signaling theory also plays a role, as management uses earnings information to signal about the company's condition and future prospects. If this drop in earnings is seen as a decline in earnings quality or the result of fundamental factors such as falling commodity prices and increased operating costs, the market response can be very negative. In addition, macroeconomic situations such as commodity price fluctuations also affect the ERC. In the case of BUMI, the sharp drop in earnings triggered a significant market reaction, suggesting that investors are highly sensitive to earnings information as an indicator of company performance.

Literature Review

Efficient Market Theory

The efficient market theory describes how the market responds to information to achieve a new balanced price. If the market responds quickly and accurately to available information, thus creating an equilibrium price that reflects that information, then the market can be considered efficient. This links capital market theory, which asserts equilibrium conditions, with the concept of efficient markets which attempts to explain how markets process information to achieve a new equilibrium (Wijayanti et al., 2014).(Wijayanti et al., 2020).

Signaling theory

Signaling theory according to Anugrah & Dianawati (2020) is a strategy to reduce problems related to adverse selection. Internal parties who have information will provide it to external parties. This information is considered a signal which will then be interpreted by external parties to determine the decisions to be made. Internal parties who have information will provide it to external parties. The information is considered a signal which will then be interpreted by external parties to determine the decision to be taken. The purpose of signaling to external parties is to show that the company has good quality and it is hoped that external parties (markets) can distinguish good and bad quality companies. This theory shows that company information (good news or bad news) provides positive or negative signals to external parties. Company information can be in the form of accounting information or non-accounting information.

Earnings Response Coefficient (ERC)

Earnings response coefficient is a valuation model used to show the probability of fluctuations in stock value as a result of market reactions to earnings information presented by companies that issue shares. ERC can be used as a measuring tool to assess earnings quality. The higher the ERC value, the higher the stock return that can be expected from increased earnings. Investors will find it easier to know the company's future profits by knowing the ERC level. (Putri Inanto Trisnayanti & Yustisia, 2022).. According to Scott (2015) at Awawdeh (2020)The earnings response coefficient refers to the amount of abnormal stock returns after an unexpected corporate earnings announcement. ERC is based on a regression of stock prices and accounting earnings. Cumulative Abnormal Return (CAR) is used as a proxy for stock price, while Unexpected Earning (UE) is used to represent accounting earnings. Unexpected earnings can trigger a buying panic, while an unexpected drop in earnings can lead to a stock selling panic. Abnormal return (AR) on the announcement date is an unreliable indicator of the total impact of earnings announcements. A better indicator is the cumulative abnormal return (CAR), which is the sum of abnormal returns (AR) over the announcement period. ERC is defined as the sensitivity of earnings to returns as indicated by the high or low slope coefficient of the earnings regression model. (Ticoalu & Panggabean, 2020).

Corporate Social Responsibility (CSR) Disclosure

Corporate social responsibility (CSR) disclosure is a social obligation for companies to take actions that reflect their business responsibilities for the benefit of society. (Sadjiarto & Evan, 2023).. By reducing the use of earnings information that potentially contains biased information, the information contained in the corporate social responsibility (CSR) report has the potential to provide new discourse for investors. In the company's annual report, the purpose of corporate social responsibility (CSR) disclosure is to reduce the information gap caused by limited information (Aprilia & Rahayu, 2023). (Aprilia & Rahayu, 2023)..

Conservatism

In accordance with FASB No. 2 (Financial Accounting Reports Board), conservatism is a prudent response to uncertainty that aims to ensure that the uncertainties and hazards inherent in the business environment have been adequately accounted for. Accounting conservatism ensures the accuracy of earnings values by presenting them carefully. This theory suggests that organizations should be cautious in recognizing and measuring assets and gains, and immediately recognize potential losses and liabilities. (Rahmadani & Achyani, 2023). Conservatism helps mitigate the risk of overestimating the value of assets or income, which can lead to a more conservative and accurate presentation of financial statements. (Waty et al., 2023)

Earnings Persistence

Earnings persistence is a concept that describes the company's ability to maintain the amount of current earnings and future earnings generated repeatedly (repetitive) in the long term (sustainable). (Utomo et al., 2022). Earnings persistence is a component of the qualitative characteristic of relevance, namely predictive value, which shows the ability of current earnings to predict future earnings. Earnings persistence reflects the quality of the company's earnings and shows that the company can maintain profits over time, not just because of certain events, such as asset sales, trademark sales, and other non-operational activities. (Stephanie Chandra & Tundjung, 2020). The existence of significant earnings persistence can cause a market response, because strong earnings persistence has the ability to encourage investors to make decisions more quickly. (Handi et al., 2022)..

Systematic Risk

Systematic risk is the risk stemming from external, uncontrollable variables that affect the price fluctuations of all securities in the market. It is not linked to a specific industry or security and cannot be eliminated through portfolio diversification. Companies with a high risk profile can promise high rewards, but also carry a high degree of uncertainty. This encourages investors to be cautious in choosing high-risk companies. (Ferian et al., 2023). Systematic risks arise from the influence of external forces on an organization that are beyond the organization's control, for example regarding general economic conditions, such as fluctuations in gross national product (GNP), interest rates, or inflation. No organization can effectively anticipate or reduce systematic risks. (Taufiq et al., 2023)..

The Effect of Corporate Social Responsibility (CSR) Disclosure on Earnings Response Coefficient

The share price determined for capital market trading can be influenced by CSR disclosure. CSR disclosure will send a message to stakeholders and investors, reducing existing information asymmetry and influencing investor reactions. According to Immanuel & Prabowo (2021) CSR disclosure can send signals to investors, influencing their market responses by providing information that reduces uncertainty about the company's future and shows the company's concern for stakeholders. If the company publishes better information, the loyalty of shareholders will be maintained, and the high popularity of the company will affect investors' responses. (Sasongko et al., 2020). For this reason, CSR disclosure has an impact on ERC. Research Results Yosie and Wiwiek (2020) stated that *corporate social responsibility (CSR)* disclosure has a positive effect on the *earnings response coefficient*, this illustrates that the more extensive CSR disclosure made by the company, the impact on the ERC value will also increase. In addition, investors also consider CSR information disclosed in annual reports before making investment decisions. This result is in line with signaling theory because CSR disclosure as company information is considered as *good news* which is then responded positively by the market which is indicated by an increase in the ERC value obtained from stock price movements.

H1: Corporate social responsibility (CSR) disclosure has a positive effect on earnings response coefficient (ERC).

The Effect of Conservatism on Earnings Response Coefficient

Accounting conservatism is a reaction or caution in the face of uncertainty. Accounting conservatism causes *understatement* in the current period and *overstatement* in the next period. Based on *signaling theory*, information about corporate profits will provide signals to investors. Earnings information resulting from the application of conservative principles is considered less accurate because it has lower information content, this causes investors to not respond well to the earnings information. Conservatism guarantees quality earnings, which leads to an increased investor response and a higher ERC. Conversely, decreased conservatism and low quality earnings result in decreased investor reaction

and lower ERC. (Rahmadani & Achyani, 2023). The results of research conducted by Aprilia & Rahayu (2023) stated that conservatism has a positive effect on ERC. This result is because conservatism is a prudential principle that recognizes profits and immediately recognizes losses and debts that are likely to occur. The higher the company that applies this conservatism principle, the higher the ERC value because this conservatism principle can be used as a company's encouragement in providing information and minimizing company errors in informing earnings.

H2: Conservatism has a positive effect on earnings response coefficient (ERC)

The Effect of Earnings Persistence on Earnings Response Coefficient

Persistent earnings are earnings that have little or no interference, can reflect the company's actual financial performance and have higher quality. *Earnings persistence* contains an element of predictive value that can be used by users of financial statements to evaluate past, present and future earnings predictions. Therefore, it is very important for companies to increase profits in the future, and of course the greater the profit earned, the greater the return and the higher the ERC, which will provide *good news* for the company. Research results Rahmadani & Achyani (2023) stated that *earnings persistence has a positive effect on ERC*. The study shows that earnings persistence can predict the company's long-term earnings (quality earnings) and will respond positively to ERC. ERC increases when earnings fluctuate more permanently over time. If the company is expected to maintain its profits in the future, then the earnings information presented will have a greater impact on the market.

H3: Earnings persistence has a positive effect on earnings response coefficient (ERC).

Effect of Systematic Risk on Earnings Response Coefficient

Systematic risk is the result of *uncontrollable* macroeconomic conditions. This macroeconomic condition is considered as a good signal or bad signal by market participants. In the coal mining industry which is very close to export-import activities, macroeconomic conditions such as changes in foreign exchange rates and interest rates have a significant impact on revenue which also has an impact on reducing the level of profit which will ultimately reduce the value of the *earning response coefficient*. The results of research conducted by Hasanah & Putra (2023) stated that systematic risk has a positive effect on ERC. The announcement of earnings information can be a signal that the company has *good prospects* for the future (*good news*). The results of the study state that ERC will increase along with the high systematic risk. Therefore, to reduce information asymmetry, company management will give positive signals to the market.

H4: Systematic risk has a positive effect on earnings response coefficient (ERC).

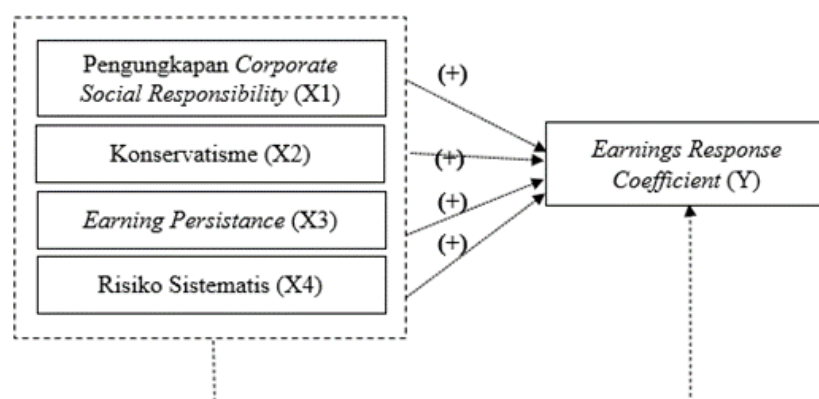


Figure 2. Conceptual Framework

Research Method

Population is a generalization area consisting of objects / subjects that have certain quantities and characteristics set by researchers to study and then draw conclusions. (Prasetya, 2022). The population in this study is mining sector companies listed on the Indonesia Stock Exchange for the period 2018-2023, namely 62 companies. The sample selection method used in this study is purposive sampling method.

Table 1. Sample Criteria

No.	Sample Selection Criteria	Total
1	Mining sector companies listed on the Indonesia Stock Exchange (IDX) in 2018-2023	62
2	Mining sector companies that are not consistently listed on the Indonesia Stock Exchange (IDX) in 2018-2023	(6)
3	Mining sector companies that do not consistently publish financial reports on the Indonesia Stock Exchange (IDX) during 2018-2023.	(26)
4	Mining sector companies that do not consistently publish sustainability reports on the Indonesia Stock Exchange (IDX) in 2018-2023	(22)
	Total sample used as the object of research	8
	Total research observations for the period 2018-2023 (8x6)	48

Source: Data processed by the author (2024)

Based on the sample selection criteria above, this study will use 8 mining sector companies listed on the Indonesia Stock Exchange (IDX) in 2018-2023, so that the total observations in this study are 48 observations. The dependent variable in this study is earnings response coefficient (ERC). The independent variables in this study consist of corporate social responsibility disclosure, conservatism, earnings persistence, and systematic risk. Earnings response coefficient (ERC) is defined as the sensitivity of earnings to returns as indicated by the high or low slope coefficient of the earnings regression model. (Ticoalu & Panggabean, 2020). According to Scott (2015) at Awawdeh (2020) The earnings response coefficient refers to the amount of abnormal stock returns after an unexpected earnings announcement. The following are the steps to calculate the earnings response coefficient (ERC):

- a) Calculate the daily stock *return* with the following formula:

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

Description:

R_{it} : Stock return of company i on day t

P_t : Closing price of the stock on day t

P_{t-1} : Closing price of stock i on day t-1

- b) Calculate the daily market *return* with the following formula:

$$R_{Mt} = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}$$

Description:

R_{Mt} : Market index *return* on day t

JCI : Composite stock price index on the day

JCI_{t-1} : Composite stock price index on day t-1

- c) Calculate *abnormal return* (AR) with the following formula:

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

Description:

AR_{it} : Abnormal return on company i period t

R_{it} : Daily stock return of company i on day t

R_{Mt} : Company i's daily market return on day t

- d) Calculate the *cumulative abnormal return* (CAR) with the following formula:

$$CAR_{it} = \sum_{-t}^{+t} AR_{it}$$

Description:

CAR_{it} : Cummulative abnormal return of company i period t

AR_{it} : Abnormal return of company i period t

- e) Calculating *unexpected earnings* (UE) which is the difference between actual earnings and earnings expectations, with the following formula:

$$UE_{it} = \frac{E_{it} - E_{it-1}}{E_{it-1}}$$

Description:

UE_{it} : Unexpected earnings of company i in period t

E_{it} : Accounting profit of company i period t

E_{it-1} : Accounting profit of company i period t-1

- f) Calculate the *earnings response coefficient* with the following formula:

$$CAR_{it} = \alpha + \beta UE_{it} + \varepsilon$$

Description:

CAR_{it} : Cummulative abnormal return (CAR) of company i during the observation period

UE_{it} : Unexpected earnings of company i in period t

α : Constant

β : Earnings response coefficient

ε : Error

Corporate social responsibility (CSR) disclosure is measured using the *CSR Index* (CSRI) by comparing the company's CSR disclosure indicators (X_i) with CSR disclosure indicators according to the 2017 GRI standard. The value (X_i) is obtained by giving a score of 1 if the CSR disclosure made by the company is in accordance with the GRI standard. Conversely, if the company does not disclose CSR in accordance with the GRI standard, then the company is given a score of 0. The number of indicators in the GRI Standard is 86. The following is the formula for calculating *corporate social responsibility* disclosure:

$$CSRI = \sum \frac{X_i}{n}$$

Description:

CSRI : Corporate social responsibility index

$\sum Xi$: 1: if the item is disclosed

0 : if the item is not disclosed

N : Number of GRI Standard items for the company

Conservatism is measured using the Givoly and Hayn model. According to Givoly & Hayn (2000) at Indriani & Fachruzzaman (2020) argue that conservatism consistently produces negative accruals. This accumulation is the ratio between cash flow from operating activities and net profit before depression/amortization. In the financial statements, the application of conservative accounting is more obvious when the negative accumulation is larger. The following is the formula for calculating conservatism:

$$CONACC = \frac{(NI + Dep - CF_0) \times (-1)}{Total Asset}$$

Description:

CONACC : Accounting conservatism

NI : Net income

Dep : Depreciation or depreciation and amortization expense

CF₀ : Cash flow from operating activities

Total Asset : Total assets

Earnings persistence is measured by comparing the *earnings before tax* of the period with the *earnings before tax of the previous period* and compared to total assets (Wijaya et al., 2019). (Wijaya et al., 2019). The following is the formula for calculating *earnings persistence*:

$$EP = \frac{EBT_t - EBT_{t-1}}{Total Asset}$$

Description:

EBT_t : Profit before tax in year t

EBT_{t-1} : Profit before tax year t-1

Total Asset : Total assets

Systematic Risk is calculated using Beta which can be used to estimate the risk of systematic events. The beta coefficient is a measurement obtained through a regression process between stock returns and market returns. (Hasanah & Putra, 2023). This coefficient indicates the extent to which a company's return is influenced by changes in overall market return. (Awawdeh, Al-Sakini, et al., 2020).. A high Beta value indicates that the amount of risk is also high compared to the risk associated with the market.

$$R_{it} = \alpha_{it} + \beta_{it}R_{Mt} + \varepsilon_{it}$$

Description:

R_{it} : Return of security i

β_{it} : Beta of the 1st security

RM_t : Market index return

ε_{it} : Error component in the model for company I in period t

The following is the formula for calculating stock returns and market returns:

Daily Stock Return, calculated as follows:

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

Description:

Rit : Stock return of company i on day t

Pt : Closing price of the stock on day t

Pt-1 : Closing price of stock i on day t-1

The daily market *return*, calculated as follows:

$$R_{Mt} = \frac{IHSG_t - IHSG_{t-1}}{IHSG_{t-1}}$$

Description:

RMt : Market index return on day t

JCI : Composite stock price index on day t

JCI t-1 : Composite stock price index on day t-1

Result and Discussion

Descriptive statistical measurements in this study use a ratio scale consisting of mean, maximum, minimum, and standard deviation. Variables that use a ratio scale consist of *earnings response coefficient*, *corporate social responsibility* disclosure, conservatism, *earnings persistence*, and systematic risk.

Table 2. Descriptive Statistics

	Earnings Response Coefficient	Corporate Social Responsibility Disclosure	Conservatism	Earnings Persistence	Systematic Risk
Mean	0,0666	0,6168	0,1129	-0,0175	0,1045
Minimum	-1,4200	0,3100	-0,6700	-2,2900	0,0400
Maximum	3,5400	0,9400	1.1100	0,9500	0,2800
Std. Deviation	0,6203	0,1825	0,4716	0,4246	0,0418
Observations	48	48	48	48	48

Source: *Eviews 12 Output Results (2024)*

Earnings response coefficient has a mean (average value) of 0.0666 and a standard deviation of 0.6203. The mean value is greater than the standard deviation value, so it can be said that the data with low variation but has a consistent distribution and regular pattern. The maximum value of ERC is valued at 3.5400 owned by PT Vale Indonesia Tbk in 2019. The minimum ERC value is -1.4200 owned by PT Timah Tbk in 2018. This shows that the earnings information submitted by the company was responded negatively by investors by -1.4200 in 2018.

Corporate social responsibility (CSR) disclosure has a mean (average value) of 0.6168 and a standard deviation of 0.1825. The mean value is greater than the standard deviation value, so it can be said that the data with low variation but has a consistent distribution and regular pattern. The maximum value of CSR disclosure is 0.9400 or 94% owned by PT Timah Tbk in 2023. The minimum value of CSR disclosure is 0.3100 or 31% owned by PT Indo Tambangraya Megah Tbk in 2018. This shows that CSR disclosure at PT Indo Tambangraya Megah Tbk in 2018 is still low.

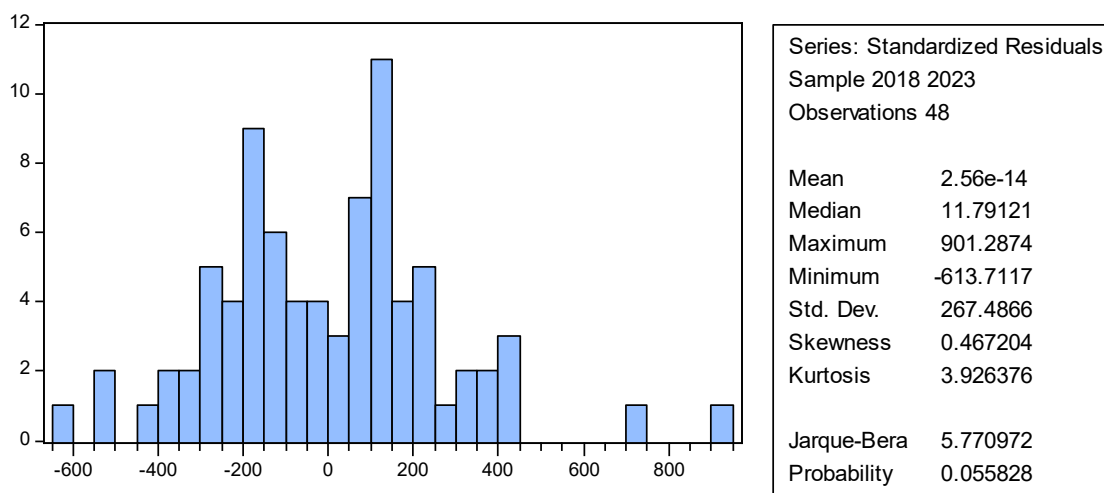
Conservatism has a mean (average value) of 0.1129 and a standard deviation of 0.4716. The mean value is smaller than the standard deviation value, it can be said that the data has a high variation and uneven distribution. The maximum value of conservatism is 1,1100 owned by PT Vale Indonesia in 2020. The minimum value of conservatism is -0.6700 owned by PT Indo Tambangraya Megah Tbk in

2019. This shows that the company PT Indo Tambangraya Megah Tbk in 2019 was more aggressive in recognizing revenue and assets, and slower in recognizing expenses and liabilities.

Earnings persistence has a mean (average value) of -0.0175 and a standard deviation of 0.4246. The mean value is smaller than the standard deviation value, it can be said that the data has a high variation and uneven distribution. The maximum value of *earnings persistence* is 0.9500 owned by PT Bumi Resources Tbk in 2021. The minimum *earnings persistence value* is worth -2.2900 owned by PT Bumi Resources Tbk in 2020. This shows that the earnings of PT Bumi Resources Tbk in 2020 with an earnings persistence value of -2.290 are not very persistent or sustainable. Systematic Risk has a mean (average value) of 0.1045 and a standard deviation of 0.0418. The mean value is greater than the standard deviation value, so it can be said that the data with low variation but has a consistent distribution and regular pattern. The maximum value of systematic risk is 0.2800 owned by PT Bumi Resources Tbk in 2022. The minimum value of systematic risk is worth 0.0400 owned by PT Bumi Resources Tbk in 2023. This indicates that the risk of 0.0400 at PT Bumi Resources Tbk in 2023 has a stock price movement with fewer fluctuations so that stocks tend to be stable. Stocks with low beta values are suitable for investors who are looking for a more stable portfolio with lower risk.

Classical Assumption Test

Normality Test



Source: Eviews 12 Output Results (2024)

Figure 3. Normality Test Results

Based on Figure 2, the results of the normality test show that the data is normally distributed, it can be seen from the probability value of 0.055 > 0.05. So the data is normally distributed and the data passes the normality test problem.

Heteroscedasticity Test

Table 3. Heteroscedasticity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.771017	0.281512	2.738839	0.0095
X1	-0.623011	0.337850	-1.844407	0.0734
X2	-0.565256	0.569396	-0.992728	0.3275
X3	-0.003300	0.143348	-0.023020	0.9818
X4	0.154272	1.471837	0.104816	0.9171

Effects specification

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Cross-section fixed (dummy variables)				
R-squared	0.416727	Mean dependent var		0.339063
Adjusted R-squared	0.238505	S.D. dependent var		0.437976
S.E. of regression	0.382194	Akaike info criterion		1.126454
Sum squared resid	5.258614	Schwarz criterion		1.594434
Log likelihood	-15.037050	Hannan-Quinn criter.		1.303326
F-statistic	2.338242	Durbin-Watson stat		2.603197
Prob (F-statistic)	0.027145			

Source: Eviews 12 Output Results (2024)

Based on Table 3, the results of the heteroscedasticity test above show that the probability number of each independent variable using the Glesjer Absolute Residual method > 0.05 so that the data is free from heteroscedasticity problems.

Multicollinearity Test

Table 4. Multicollinearity Test Results

	X1	X2	X3	X4
X1	1.000000	0.150329	0.045157	-0.105647
X2	0.150329	1.000000	0.002363	-0.237911
X3	0.045157	0.002363	1.000000	0.216901
X4	-0.105647	-0.237911	0.216901	1.000000

Source: Eviews 12 Output Results (2024)

Based on Table 4, the multicollinearity test results show that the correlation value between variables is < 0.80 . Then the data is free from multicollinearity problems.

Autocorrelation Test

Table 5. Autocorrelation Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.338143	0.234998	5.694277	0.0000
X1	-0.007801	0.003333	-2.340716	0.0200
X2	-0.146798	0.055974	-2.622609	0.0093
X3	-0.010232	0.003377	-3.030008	0.0025
X4	-1.283569	0.131059	-9.793799	0.0000

Effects specification

Cross-section fixed (dummy variables)

R-squared	0.974387	Mean dependent var	9233611
Adjusted R-squared	0.972252	S.D. dependent var	9774118
S.E. of regression	16281333	Akaike info criterion	31.53841
Sum squared resid	9.54E+13	Schwarz criterion	31.70729
Log likelihood	-626.7681	Hannan-Quinn criter.	31.59947
F-statistic	456.5097	Durbin-Watson stat	1.925869
Prob (F-statistic)	0.000000		

Source: Eviews 12 Output Results (2024)

Based on the classic autocorrelation assumption test, the Durbin-Watson value in this study is above the DU value and less than 4-DU. In this study, the DU value is 1.72 and the 4-DU value is 2.28. Therefore, since $1.72 < 1.92 < 2.28$, it can be said that the data is free from autocorrelation problems.

Panel Data Regression Analysis

Panel Data Regression Model Selection

Chow Test

Table 6. Chow Test Results

Redundant Fixed Effects Tests

Equation : U ntitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	246.315606	(7,36)	0.0000
Cross-section Chi-square	329.613214	7	0.0000

Source: Eviews 12 Output Results (2024)

Based on the Chow test above, the model selected in the panel data test between the *Common Effect Model* and the *Fixed Effect Model* is the *Fixed Effect Model*. This is determined from the Chow test results which show a Chi-Square probability value of 0.000, which is below 0.05.

Hausman Test

Table 7. Hausman Test Results

Correlated Random Effects – Hausman Test

Equation : U ntitled

Test cross-section fixed effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	19.305908	4	0.0037

Source: Eviews 12 Output Results (2024)

Based on the Hausman test above, the model selected in the panel data test between the *Fixed Effect Model* and the *Random Effect Model* is the *Fixed Effect Model*. This is based on the Hausman test results which show a Chi-Square probability value of 0.003, which is below 0.05.

Lagrange Multiplier Test

Table 8. Lagrange Test Results

Null (no rand. effect) Alternative Tests	Cross-section One-sided	Period One-sided	Both
Breusch-Pagan	0.586167 (0.4439)	0.951044 (0.3295)	1.537212 (0.2150)
Honda	-0.765616 (0.7780)	-0.975215 (0.8353)	-1.230953 (0.8908)
King-Wu	-0.765616 (0.7780)	-0.975215 (0.8353)	-1.239036

Null (no rand. effect) Alternative Tests	Cross-section One-sided	Period One-sided	Both
			(0.8923)
GHM	--	--	0.000000
			(0.7500)

Source: Eviews 12 Output Results (2024)

Based on the *Lagrange Multiplier test* above, the model selected in the panel data test between the *Random Effect Model* and the *Common Effect Model* is the *Common Effect Model*. This is indicated by the Breusch-Pagan test results which show a probability value of 0.44, which is above 0.05.

Panel Data Regression Analysis

Based on the results of testing the panel data regression model that has been carried out, namely the Chow Test, Hausman Test, and Lagrange Multiplier Test, it can be concluded that the panel data regression used is the

Common Effect Model

Table 9. Common Effect Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.338143	0.234998	5.694277	0.0000
X1	-0.007801	0.003333	-2.340716	0.0200
X2	-0.146798	0.055974	-2.622609	0.0093
X3	-0.010232	0.003377	-3.030008	0.0030
X4	-1.283569	0.131059	-9.793799	0.0000

Source: Eviews 12 Output Results (2024)

The results of panel data regression analysis from research on the effect of *corporate social responsibility*, conservatism, *earnings persistence*, and systematic risk on *earnings response coefficient* in mining companies listed on the Indonesia Stock Exchange (IDX) in 2018-2023. The regression equation is as follows:

$$ERC = 1.338143 - 0.007801 CSR - 0.146798 CONNAC - 0.010232 EP - 1.283569 RS$$

Coefficient of Determination (R^2)

Table 10. R^2 Test Results

R-squared	0.974387	Mean dependent var	9233611
Adjusted R-squared	0.972252	S.D. dependent var	9774118
S.E. of regression	1628133	Akaike info criterion	31.53841
Sum squared resid	9.54E+13	Schwarz criterion	31.70729
Log likelihood	-626.7681	Hannan-Quinn criter.	31.59947
F-statistic	456.5097	Durbin-Watson stat	1.925869
Prob (F-statistic)	0.000000		

Source: Eviews 12 Output Results (2024)

Based on the coefficient of determination test (R^2) above that the *adjusted R-squared* value has a value of 97.22%, this indicates that the independent variables consisting of *corporate social responsibility* disclosure, conservatism, *earnings persistence*, and systematic risk affect the dependent variable *earnings response coefficient* by 97.22% and the rest is influenced by other variables not contained in this study.

Simultaneous Test (F Test)

Table 11. F-Test Results

R-squared	0.974387	Mean dependent var	9233611
Adjusted R-squared	0.972252	S.D. dependent var	9774118
S.E. of regression	1628133	Akaike info criterion	31.53841
Sum squared resid	9.54E+13	Schwarz criterion	31.70729
Log likelihood	-626.7681	Hannan-Quinn criter.	31.59947
F-statistic	456.5097	Durbin-Watson stat	1.925869
Prob (F-statistic)	0.000000		

Source: Eviews 12 Output Results (2024)

Based on the simultaneous test (F test) shows that the probability value (F-statistic) is 0.0000 <0.05. So it can be interpreted that *corporate social responsibility disclosure*, conservatism, *earnings persistence*, and systematic risk simultaneously affect the *earnings response coefficient*.

Partial Test (t-Test)

Table 12. T-Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.338143	0.234998	5.694277	0.0000
X1	-0.007801	0.003333	-2.340716	0.0200
X2	-0.146798	0.055974	-2.622609	0.0093
X3	-0.010232	0.003377	-3.030008	0.0030
X4	-1.283569	0.131059	-9.793799	0.0000

Source: Eviews 12 Output Results (2024)

Based on the partial test results (t test) above, it can be explained as follows:

- The disclosure of *corporate social responsibility* (X_1) obtained a probability value of 0.02 <0.05 with a coefficient value of -0.007801 so that CSR disclosure has a negative and significant effect on the *earnings response coefficient*.
- Conservatism (X_2) obtained a probability value of 0.0093 <0.05 with a coefficient of -0.146798 so that conservatism has a negative and significant effect on the *earnings response coefficient*.
- Earning persistence* (X_3) obtained a probability value of 0.0030 <0.05 with a coefficient of -0.010232 so that *earnings persistence* has a negative and significant effect on *earnings response coefficient*.
- Systematic Risk (X_4) obtained a probability value of 0.000 <0.05 with a coefficient of -1.283569 so that systematic risk has a negative and significant effect on the *earnings response coefficient*.

Discussion

The Effect of Corporate Social Responsibility (CSR) Disclosure on Earnings Response Coefficient

CSR disclosure has a negative and significant effect on *earnings response coefficient*. Investors can have conflicting expectations about CSR, viewing it as an additional cost or symptom of reputational problems, lowering their confidence in the company's financial prospects. CSR implementation often requires large investments, which, if perceived to outweigh long-term rewards, can have a detrimental impact on ERC. In addition, the positive effects of CSR may not be immediately apparent in the financial statements, so investors focused on short-term gains may view these disclosures negatively. CSR may also increase investors' knowledge of the various risks a company faces, lowering their view of stability. Excessive reactivity to unfavorable information in CSR disclosures, as well as skepticism about the presumed reasons, can all contribute to a decrease in ERC. This is in line with research conducted by

Siregar (2018) which states that CSR disclosure has a negative effect on ERC.

The Effect of Conservatism on Earnings Response Coefficient

Conservatism has a negative and significant effect on *earnings response coefficient*. The results of this study are in line with Christian & Ahalik (2020) stated that conservatism has a negative effect. Conservatism encourages the recognition of losses and liabilities sooner than profits and assets, so that it can produce financial reports that are more cautious and tend to take the company's performance easily. In addition, conservatism can reduce unexpected earnings because companies tend not to report uncertain or speculative profits. So that the market reaction to financial statements that show an increase in income can be weak. Thus, excessive conservatism in financial statements can make investors less responsive to changes in reported earnings thereby reducing ERC.

The Effect of Earnings Persistence on Earnings Response Coefficient

Earnings persistence has a negative and significant effect on earnings response coefficient. High *earnings persistence* can reduce the *earnings response coefficient* (ERC) because stable earnings over time make the market less responsive to changes in earnings. This is because investors may see the information as less relevant to assessing the company's future performance, resulting in changes in reported earnings not having a significant impact on stock prices. Conversely, companies with greater fluctuations in earnings tend to experience a faster market response to changes in earnings.

Effect of Systematic Risk on Earnings Response Coefficient

Systematic risk has a negative and significant effect on *earnings response coefficient*. The results of this study are in line with research conducted by Putri Inanto Trisnayanti & Yustisia (2022) but there are inconsistencies in research conducted by Ticoalu & Panggabean (2020) which states that systematic risk has a positive effect. Investor reactions to *unexpected returns* are reduced as a result of increased company risk, which is followed by a lower ERC. This results in investors being cautious in making decisions regarding high-risk companies. If the company is low risk, investors will respond positively to the ERC as they are confident of the returns they will receive. This will result in a larger market reaction caused by an increase in the ERC value. It is also argued that companies try to provide investors with relevant information signals to reduce information asymmetry and allow investors to respond to the signals provided. Information about a company's systematic risk has a disproportionately negative impact on the ERC.

Conclusion

Based on the results of hypothesis testing and the discussions presented, the research on the effect of corporate social responsibility (CSR) disclosure, conservatism, earnings persistence, and systematic risk on the earnings response coefficient in mining companies listed on the Indonesia Stock Exchange from 2018 to 2023 can be concluded as follows: CSR disclosure has a negative and significant effect on the earnings response coefficient; conservatism has a negative and significant effect on the earnings response coefficient; earnings persistence has a negative and significant effect on the earnings response coefficient; and systematic risk has a negative and significant effect on the earnings response coefficient. Based on the research conducted, there are limitations and shortcomings stemming from various aspects. Therefore, the researcher offers several suggestions for future research to improve. First, this study only considers CSR disclosure, conservatism, earnings persistence, and systematic risk as factors affecting the earnings response coefficient. Future research is expected to include other variables that may influence the earnings response coefficient, such as investment opportunity set, default risk, and stock volatility. Second, expanding the scope of research by using different research objects is recommended.

Third, future studies should consider using different methods in both research design and sample selection.

Reference

- Anugrah, Y. R., & Dianawati, W. (2020). Corporate social responsibility (CSR) disclosure, earnings response coefficient (ERC), and the chance to grow. *Cuadernos de Economia*, 43(123), 382–390. <https://doi.org/10.32826/cude.v4i123.400>
- Aprilia, N. I., & Rahayu, S. I. (2023). The Influence of Corporate Social Responsibility (CSR) Disclosures, Accounting Conservatism, and Leverage on Earnings Response Coefficient (ERC). *Research of Accounting and Governance*, 1(1), 43–52. <https://doi.org/10.58777/rag.v1i1.14>
- Awawdeh, H. Al, Al-Sakini, S. A., & Nour, M. (2020). Factors affecting earnings response coefficient in Jordan: Applied study on the Jordanian industrial companies. *Investment Management and Financial Innovations*, 17(2), 255–265. [https://doi.org/10.21511/imfi.17\(2\).2020.20](https://doi.org/10.21511/imfi.17(2).2020.20)
- Christian, K., & Ahalik. (2020). Pengaruh Income Smoothing, Konservatisme Akuntansi, dan Informasi Laba terhadap Koefisien Respon Laba. *Jurnal Riset Akuntansi & Komputerisasi Akuntansi*, 11(2), 288–307.
- Eqqi Syahputra. (2023, November 28). *Mencari Perusahaan Tambang Terbaik di Tengah Ketidakpastian*. CNBC Indonesia.
- Ferian, Akhyar, C., Ilham, R. N., & Subhan, M. (2023). The Effect Of Leverage, Systematic Risk, Firm Size, Growth Opportunity And Roa On Earning Response Coefficient In Pharmaceutical Companies On The Indonesia Stock Exchange. *Journal of Accounting Research, Utility Finance and Digital Assets*, 1(3).
- Givoly, D., & Hayn, C. (2000). The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative? *Journal of Accounting and Economics*, 29(3), 287–320.
- Handi, H., Rahmatika, N., & Fanani, B. (2022). *Understanding Earnings Response Coefficient from Growth Opportunities, Earnings Persistence, and Intellectual Capital; Empirical Study from IDX-30 Indexed Companies*.
- Hasanah, U., & Putra, A. (2023). Pengaruh Pengungkapan Corporate Social Responsibility, Struktur Modal, Dan Risiko Sistematis Terhadap Earning Response Coefficient. In *Journal Advancement Center for Finance and Accounting* (Vol. 03). <http://journal.jacfa.id>
- Immanuel, A. M., & Prabowo, S. (2021). Effect of CSR, Financial Distress, and Corporate's Growth on Earning Response Coefficient. *Jurnal ASET (Akuntansi Riset)*, 13(2), 362–374. <https://doi.org/10.17509/jaset.v13i2.39621>
- Indriani, R., & Fachruzzaman. (2020). Accounting Conservatism in Indonesia. *European Union Digital Library*.
- Kristanti, K. D., & Almilia, L. S. (2019). Factors Affecting Earnings Response Coefficient (ERC) in Manufacturing Companies Listed on BEI. *The Indonesian Journal of Accounting Research*, 22(02). <https://doi.org/10.33312/ijar.451>
- Praselia, I. (2022). *Metodologi Penelitian Pendekatan Teori dan Praktek* (Akrim, Ed.; 1st ed.). UMSU Press.
- Putri Inanto Trisnayanti, P., & Yustisia, N. (2022). *Aspek-Aspek Yang Berdampak Kepada Earnings Response Coefficient*.
- Putri Rosalia, E., Surya Abbas, D., & Jayanih, A. (2024). Pengaruh Leverage Dan Profitabilitas Terhadap Earnings Response Coefficient. *Jurnal Ekonomi Dan Keuangan*, 2(1), 1–11. <https://doi.org/10.61132/moneter.v1i4.96>
- Rahmadani, R. A., & Achyani, F. (2023). The Influence of Growth Opportunities, Earnings Persistence, Accounting Conservatism, and Capital Structure on Earnings Response Coefficient (ERC) (Empirical Study of Banking Companies Listed on the Indonesia Stock Exchange for the 2019-2021 Period). In *International Journal of Latest Research in Humanities and Social Science*. www.ijlrhss.com
- Romys Binekasri. (2023, December 14). *Ekonomi RI Ditopang Pertambangan, Erick Thohir Bilang Gini*. CNBC Indonesia.
- Sadjiarto, A., & Evan, N. (2023). The Influence of Corporate Social Responsibility Disclosure and Capital Structure on Earning Response Coefficient of Indonesian Mining Companies. *International Journal of Organizational Behavior and Policy*, 2(2), 117–126. <https://doi.org/10.9744/ijobp.2.2.117-126>
- Sasongko, N., Kuning Puspawati, R., & Wijayanto, K. (2020). Corporate Social Responsibility (CSR), Firm Size, Profitability, and Leverage On Earnings Response Coefficient (ERC) (An Empirical Study of Manufacturing Companies Listed on the Indonesia Stock Exchange for the period of 2015-2018). *Riset Akuntansi Dan Keuangan Indonesia*, 21–35. <http://journals.ums.ac.id/index.php/reaksi/index>
- Scott, W. R. (2015). *Financial Accounting Theory* (7th ed.). Pearson.
- Simatupang, K., Sinaga, N., Hutagaol, A. D., Katharina, N., & Kalsum, U. (2022). *Influence Conservatism Accounting, Company Size, Leverage, Capital Structure And Profitability Against The Earning Response Coefficient*. 17(3), 2023. <https://doi.org/10.22216/jit.v17i3.2432>

- Siregar, B. G. (2018). Analisis Pengaruh Corporate Social Responsibility (Ekonomi, Lingkungan Dan Sosial) Terhadap Earning Response Coefficient Pada Perusahaan Manufaktur Dalam Issi 2012-2016. *At-Tijarah: Jurnal Ilmu Manajemen Dan Bisnis Islam*, 4(1), 96–111.
- Stephanie Chandra, E., & Tundjung, H. (2020). Pengaruh Konservatisme Akuntansi, Persistensi Laba, Dan Risiko Sistematis Terhadap Earnings Response Coefficient. In *Jurnal Multiparadigma Akuntansi Tarumanagara* (Vol. 2, Issue 2020). www.idx.co.id
- Taufiq, M., Qosim, Sitorus, J. H. E., Ermawati, N., Nanda, P., Soemarsono, Sari, N. A., Odiatma, F., Hardini, H. T., Anwar, S., Nurdin, Shara, Y., Satyawan, M. D., Budianto, R., & Hiktaop, K. (2023). *Pengantar Akuntansi Manajemen* (D. Fadhila, Ed.; 1st ed.). Mitra Cendekia Media.
- Ticoalu, N. Y., & Panggabean, R. R. (2020). *Earnings Persistence, Systematic Risk, Audit Quality, and Earnings Response Coefficient*. <http://conference.feb.uns.ac.id/2020>www.conference.feb.uns.ac.id/2020
- Utomo, E. N., Febrianto, H. G., & Fitriana, A. I. (2022). Urgensi Persistensi Laba: antara Volatilitas Arus Kas, Volatilitas Penjualan dan Ukuran Perusahaan. *AKUNTABEL: Jurnal Akuntansi Dan Keuangan*, 19(4), 786–794.
- Waty, E., Ningrum, D. A., Setyobudi, Haryanti, C. S., Yuliandhari, W. S., & Suarni, A. (2023). *BUKU AJAR TEORI AKUNTANSI*. PT. Sonpedia Publishing Indonesia.
- Wijaya, H., Adhitya, S., Cahyadi, H., & Salim, S. (2019). Factors Affecting Earning Response Coefficient With Profitability as Moderating Variable in Manufacturing Companies. *Advances in Economics, Business and Management Research*, 145, 246–256.
- Wijayanti, I., Mawardi, R., & Baso Halim, A. (n.d.). The Effect of Corporate Social Responsibility Disclosure, Leverage, Firm Size, and Profitability Toward Earnings Response Coefficient. In *International Journal of Innovation, Creativity and Change*. www.ijicc.net (Vol. 13). www.ijicc.net