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The Effect of Return on Assets, Debt to Equity Ratio, and Current Ratio on Earnings Management

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Abstract

This study aims to analyze the effect of return on assets, debt-to-equity ratio, and current ratio on earnings management. The method used is quantitative research with secondary data drawn from company financial reports, using purposive sampling as the data collection technique. The data analysis used multiple linear regression analysis. The population in this study were mining companies listed on the Indonesia Stock Exchange during 2022-2024. The sample used in this study was 41 companies. The results of this study indicate that (1) return on assets have no effect on earnings management. This can be caused because companies with high ROA will maintain the company's reputation in the eyes of investors and be in the public spotlight so that the company will not carry out profit management actions that will harm the company, (2) debt-to-equity ratio have no effect on earnings management. This may be because the higher a company's debt level, the more conservative management will be in its financial and operational reporting. Management will be more cautious and less likely to take high risks through earnings management, and (3) current ratio has a positive effect on earnings management. This means that the higher the CR, the less capable the company is of maximizing its current asset management for its operations. Consequently, the company's financial performance appears less favorable to shareholders. This triggers management to engage in earnings management.

Keywords: ROA, DER, CR, Earnings Management

1. Introduction

The rapid developments in today's business world are forcing companies, especially public companies, to create a competitive advantage in obtaining external funding to support their operations. Profit information contained in financial statements is generally a primary focus for investors and potential investors. Profit is one of the potential pieces of information contained in financial reports and is crucial for both internal and external parties. This situation necessitates corporate managers to employ specific strategies to motivate themselves to generate profits that meet investor expectations. This motivation ultimately leads to financial reports being misused in various ways, such as smoothing, inflating, and decreasing profits to influence reported earnings, a practice known as earnings management (Purnama, 2017).

Factors that influence earnings management such as Return on Assets (ROA), Debt to Equity Ratio (DER) and Current Ratio (CR). Return on Assets (ROA) reflects a company's ability to generate profits from its assets (Kasmir, 2019). The research results of Lestari and Wulandari (2019), Astriah, et al., (2021) and Napiajo, et al., (2023) stated that profitability proxied by ROA has a positive effect on earnings management. In contrast to the research results of Sari and Khafid (2020) and Wowor, et al., (2021) which stated that profitability proxied by ROA had no effect on earnings management.

The Debt to Equity Ratio (DER) is used to determine the amount of funds provided by borrowers (creditors) to the company's owners (Kasmir, 2019). The research results of Sari and Khafid (2020), Astriah, et al., (2021) and Christian and Sumantri (2022) stated that leverage proxied by DER has a negative effect on earnings management. This is different from the research results of Purnama (2017), Hardiyanti et al., (2022) and Abi and Wulandari (2024) which stated that leverage proxied by DER had no effect on earnings management.

Current Ratio (CR) is a ratio used to measure a company's ability to pay short-term liabilities or debts that are due immediately when billed in full (Kasmir, 2019). The research results of Amelia and Purnama (2023) and

Rachmalia and Nursiam (2024) stated that liquidity proxied by CR has a negative effect on earnings management. This contrasts with the research findings of Mayliana et al. (2023), Abi and Wulandari (2024), and Izzati et al. (2024), which stated that liquidity, as proxied by CR, had no effect on earnings management.

Earnings management can be explained using agency theory, where managers are morally responsible for optimizing the principals' profits and, in return, receive compensation according to the existing contract. There are two distinct interests within the company, each of which seeks to achieve or maintain a desired level of prosperity. Both principals and agents are motivated to increase profitability for their own well-being and to obtain investments, loans, bonuses, and other benefits.

This research was conducted because many companies in Indonesia still engage in earnings management, one of which is PT Timah (Persero) Tbk, a state-owned tin mining company (BUMN). In January 2016, a financial reporting scandal at PT Timah (Persero) Tbk surfaced after the chairman of the Timah Employees Association (IKT) from the provinces of Bangka Belitung and the Riau Islands delivered a speech before the Ministry of State-Owned Enterprises. The directors of PT Timah (Persero) Tbk lied to the public through the media, claiming that efficiency and strategy had yielded positive performance in the first half of 2015 financial statements. However, in reality, PT Timah (Persero) Tbk's operating profit in the first half of 2015 had suffered a loss of IDR 59 billion. Not only did the company manipulate its fictitious financial statements, but PT Timah also misrepresented its financial performance. Timah (Persero) Tbk also recorded that there had been an increase in debt of almost 100% in 2015 compared to 2013. In 2013, the company's debt only reached IDR 263 billion, but in 2015 the amount of debt of PT. Timah (Persero) Tbk increased to IDR 2.3 trillion (www.tambang.co.id). Earnings management is interesting to study because of the conflict between the use of accounting as a measure of actual performance versus as a tool to manipulate information to achieve managerial goals.

Based on the phenomena and differences in results that have been discussed previously, the aim of this study is to seek empirical evidence and analyze the influence of Return on Assets (ROA), Debt to Equity Ratio (DER) and Current Ratio (CR) on earnings management.

2. Research Methods

2.1. Definition and Operationalization of Variables

2.1.1. Dependent Variable

The dependent variable used in this study is earnings management. Earnings management is the choice made by managers in determining accounting policies or actions that can influence earnings to achieve certain objectives in earnings reporting (Scott, 2015:445). In this study, Utami's (2005) model was used to detect the presence or absence of earnings management. The Utami (2005) model is a proxy for earnings management measured by the ratio of accrued working capital to sales. The author used this model because it uses the sales deflator as the working capital indicator. Earnings management often occurs in sales accounts. The calculation of earnings management based on Utami's (2005) model is as follows:

$$\text{Earnings Management} = \frac{\text{working capital acrual } (t)}{\text{sales } (t)}$$

Where: Accrued working capital = Δ AL - Δ HL - Δ Cash

Note:

Δ AL = Change in current assets in period t

Δ HL = Change in current liabilities in period t

Δ Cash = Change in cash and cash equivalents in period t

2.1.1. Independent Variable

Return on Assets (ROA)

Return on Assets (ROA) describes a company's ability to generate profits from the assets used (Kasmir, 2019). To calculate ROA, the following formula is used:

$$\text{Return on Assets (ROA)} = \frac{\text{earnings after tax}}{\text{total assets}}$$

Debt to Equity Ratio (DER)

Debt to Equity Ratio (DER) is a ratio used to assess debt with equity (Kasmir, 2019). To calculate DER, the following formula is used:

$$\text{Debt to Equity Ratio (DER)} = \frac{\text{total liability}}{\text{total equity}}$$

Current Ratio (CR)

Current Ratio (CR) is a ratio used to measure a company's ability to pay short-term liabilities or debts that will soon fall due (Kasmir, 2019). To calculate CR, the following formula is used:

$$\text{Current Ratio} = \frac{\text{current assets}}{\text{current liability}}$$

2.2. Population and Samples Research

The population in this study was 56 mining companies listed on the Indonesia Stock Exchange during 2022-2024. The sample was determined using a purposive sampling method, based on the following criteria:

1. Mining companies consecutively listed on the Indonesia Stock Exchange during 2022-2024.
2. Mining companies that generated profits during 2022-2024.

So in this study a sample of 41 companies was obtained.

2.3. Analysis Method

Multiple linear regression analysis is an analysis used to test the effect of two or more independent variables on a dependent variable using a ratio measurement scale in a linear equation. The independent variables in this study are Return on Assets (ROA), Debt to Equity Ratio (DER), and Current Ratio (CR). The dependent variable is earnings management. The equation model used to test the hypotheses in this study is as follows:

$$ML = \alpha + \beta_1 ROA + \beta_2 DER + \beta_3 CR + \varepsilon$$

Information:

| | |
|-----------------------------|--------------------------|
| ML | = Earnings Management |
| ROA | = Return on Assets |
| DER | = Debt to Equity Ratio |
| CR | = Current Ratio |
| α | = Constant |
| $\beta_1, \beta_2, \beta_3$ | = Regression Coefficient |
| ε | = Error term |

3. Results and Discussions

3.1. Result

3.1.1 Descriptive Test

Table 1. Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------------------|-----|-----------|-----------|------------|----------------|
| Return On Assets (ROA) | 123 | .000200 | .617600 | .13093837 | .133071445 |
| Debt to Equity Ratio (DER) | 123 | -.004000 | 10.791000 | .62782468 | 1.481251434 |
| Current Ratio (CR) | 123 | .005000 | 9.576000 | 1.22564785 | 1.648639067 |
| Earnings Management | 123 | -1.090367 | 1.468347 | .05276181 | .268647867 |
| Valid N (listwise) | 123 | | | | |

Sources: SPSS 26

Based on the results of the descriptive statistical tests in Table 1, with 123 data sets, the following information was obtained:

The earnings management variable had an average value of 5.28%. This indicates that, on average, the sample companies engaged in earnings management practices to a small extent, amounting to only 5.28%. The lowest earnings management value, at -109.04%, was held by PT Bumi Resources Minerals Tbk in 2023, and the highest value, at 146.83%, was held by PT Pelayaran Nasional Bina Buana Raya Tbk in 2022, with a standard deviation of 0.268648.

The return on assets (ROA) variable had an average value of 13.09%. This indicates that, on average, the sample companies' ability to generate profits from their total assets is quite good, as it is above the industry average of 5%. The lowest ROA value of 0.02% was held by PT Dwi Guna Laksana Tbk in 2022 and the highest value of 61.76% was held by PT Golden Energy Mines Tbk in 2022 with a standard deviation of 0.133071.

The debt-to-equity ratio (DER) variable has an average value of 62.78%. This indicates that, on average, the financial condition of the sample companies is healthy, as the amount of debt is smaller than the amount of capital held, or below the industry average of 90%. The lowest DER value, at -0.4%, was held by PT Adaro Energy Tbk in 2022, and the highest value, at 1.079%, was held by PT Dwi Guna Laksana Tbk in 2023, with a standard deviation of 1.48125.

The current ratio (CR) variable has an average value of 122.56%. This indicates that, on average, the sample companies are in an unhealthy (poor) liquidity condition, making them unable to cover all their short-term obligations, as the CR value is still below the industry average of 200%. The lowest CR value, namely 0.5%, was owned by PT Dwi Guna Laksana Tbk in 2024 and the highest value, namely 957.6%, was owned by PT Dana Brata Luhur Tbk in 2024 with a standard deviation of 1.64864.

3.1.2 Classical Assumption Test

Normality test

Table 2. One-Sample Kolmogorov-Smirnov Test

| | | Unstandardized Residual |
|----------------------------------|----------------|-------------------------|
| N | | 89 |
| Normal Parameters ^{a,b} | Mean | .0000000 |
| | Std. Deviation | .08825116 |
| Most Extreme Differences | Absolute | .077 |
| | Positive | .057 |
| | Negative | -.077 |
| Test Statistic | | .077 |

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| | |
|------------------------|---------------------|
| Asymp. Sig. (2-tailed) | .200 ^{c,d} |
|------------------------|---------------------|

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Sources: SPSS 26

Based on table 2 (data after outliers), it can be seen that the Asymp. Sig (2-tailed) value is 0.200 or greater than 5%. It can be concluded that the data in this study is normally distributed, which means the regression model has met the assumption of normality.

Multicollinearity Test

Table 3. Multicollinearity Test

| Model | Collinearity Statistics | |
|----------------------------|-------------------------|-------|
| | Tolerance | VIF |
| 1 (Constant) | | |
| Return On Assets (ROA) | .974 | 1.027 |
| Debt to Equity Ratio (DER) | .804 | 1.244 |
| Current Ratio (CR) | .791 | 1.264 |

a. Dependent Variable: Earnings Management

Sources: SPSS 26

Based on table 3, there are no independent variables that have a tolerance value of less than 0.10 and a VIF value greater than 10. So, it can be concluded that in this study there is no multicollinearity between independent variables.

Autocorrelation Test

Table 4. Autocorrelation Test

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1 | .291 ^a | .085 | .052 | .089795030 | 1.712 |

a. Predictors: (Constant), Current Ratio (CR), Return On Assets (ROA), Debt to Equity Ratio (DER)

b. Dependent Variable: Earnings Management

Sources: SPSS 26

Based on Table 4, the Durbin-Watson (DW) value is 1.712. This value lies between -2 and 2, so it can be concluded that there is no autocorrelation in this study.

Heteroscedasticity Test

Table 5. Heteroscedasticity Test

| Model | Sig. |
|----------------------------|------|
| 1 (Constant) | .000 |
| Return On Assets (ROA) | .294 |
| Debt to Equity Ratio (DER) | .065 |
| Current Ratio (CR) | .741 |

a. Dependent Variable: ABS_RES

Sources: SPSS 26

Based on table 1.7, the significance values obtained for each ROA, DER, and CR variable are 0.294, 0.065, and 0.741 > 5%, so it can be concluded that in this study there are no symptoms of heteroscedasticity.

3.1.3 Model Fit Test

Determination Coefficient Test

Table 6. Determination Coefficient Test

| Model | R | R Square | Adjusted R Square |
|-------|-------------------|----------|-------------------|
| 1 | .291 ^a | .085 | .052 |

a. Predictors: (Constant), Current Ratio (CR), Return On Assets (ROA), Debt to Equity Ratio (DER)

b. Dependent Variable: Earnings Management

Sources: SPSS 26

Based on Table 6, the coefficient of determination, or R-square, is 0.085, meaning that ROA, DER, and CR only have an 8.5% influence on earnings management. The remaining 91.5% is influenced by other variables not included in this study.

F Test

Table 7. F Test

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|----------------|----|-------------|-------|-------------------|
| 1 Regression | .063 | 3 | .021 | 2.618 | .046 ^b |
| Residual | .685 | 85 | .008 | | |
| Total | .749 | 88 | | | |

a. Dependent Variable: Earnings Management

b. Predictors: (Constant), Current Ratio (CR), Return On Assets (ROA), Debt to Equity Ratio (DER)

Sources: SPSS 26

Based on Table 7, the calculated F-value is 2.618 and the significance value is 0.046, which is less than 5%. This means that the regression model used in this study is suitable for further testing.

3.1.4 Hypothesis Test

T Test

Table 8. T Test

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|----------------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | -.001 | .017 | | -.078 | .938 |
| Return On Assets (ROA) | .039 | .108 | .038 | .360 | .720 |
| Debt to Equity Ratio (DER) | -.034 | .027 | -.149 | -1.292 | .200 |
| Current Ratio (CR) | .026 | .010 | .313 | 2.684 | .009 |

a. Dependent Variable: Earnings Management

Sources: SPSS 26

Based on the test results in table 8, the following was obtained:

- (1) return on assets has no effect on earnings management.
- (2) debt to equity ratio has no effect on earnings management.
- (3) current ratio has a positive effect on profit management.

3.1.5 Multiple Linear Regression Analysis

Table 9. Multiple Linear Regression Analysis

| Model | Unstandardized Coefficients | | Standardized Coefficients |
|----------------------------|-----------------------------|------------|---------------------------|
| | B | Std. Error | Beta |
| 1 (Constant) | -.001 | .017 | |
| Return On Assets (ROA) | .039 | .108 | .038 |
| Debt to Equity Ratio (DER) | -.034 | .027 | -.149 |
| Current Ratio (CR) | .026 | .010 | .313 |

a. Dependent Variable: Earnings Management
Sources: SPSS 26

Based on the results of the multiple linear regression test in table 9, the multiple linear regression equation is obtained as follows:

$$ML = -0,001 + 0,039 ROA - 0,034 DER + 0,026 CR + \epsilon$$

The multiple linear regression equation above shows a constant value (α) of -0.001. This indicates that if all independent variables are constant, earnings management is -0.001. The results of this regression test also have the following significance:

- 1) The regression coefficient for return on assets (ROA) (β_1) is 0.039. This means that a 1% increase in ROA will increase earnings management by 0.039.
- 2) The regression coefficient for debt-to-equity ratio (DER) (β_2) is -0.034. This means that a 1% increase in DER will decrease earnings management by 0.034.
- 3) The regression coefficient for current ratio (CR) (β_3) is 0.026. This means that a 1% increase in CR will increase earnings management by 0.026.

3.2. Discussion

3.2.1 The Effect of Return on Assets on Earnings Management

Based on the t-test results, it was concluded that return on assets had no effect on earnings management. This means that a higher or lower return on assets (ROA) will not influence a company's decision to engage in earnings management. This can be caused because companies with high ROA will maintain the company's reputation in the eyes of investors and be in the public spotlight so that the company will not carry out profit management actions that will harm the company.

3.2.2 The Effect of Debt to Equity Ratio on Earnings Management

Based on the t-test results, it was concluded that the debt to equity ratio has no effect on earnings management. This means that a higher or lower debt to equity ratio (DER) will not influence a company's intention to engage in earnings management. This may be because the higher a company's debt level, the more conservative management will be in its financial and operational reporting. Management will be more cautious and less likely to take high risks through earnings management.

3.2.3 The Effect of the Current Ratio on Earnings Management

Based on the t-test results, it was concluded that the current ratio has a positive effect on earnings management. This means that the higher the current ratio, the greater the company's earnings management activities. This means that the higher the CR, the less capable the company is of maximizing its current asset management for its

operations. Consequently, the company's financial performance appears less favorable to shareholders. This triggers management to engage in earnings management.

4. Conclusion

1) return on assets had no effect on earnings management. This can be caused because companies with high ROA will maintain the company's reputation in the eyes of investors and be in the public spotlight so that the company will not carry out profit management actions that will harm the company. 2) debt to equity ratio has no effect on earnings management. This may be because the higher a company's debt level, the more conservative management will be in its financial and operational reporting. Management will be more cautious and less likely to take high risks through earnings management. 3) current ratio has a positive effect on earnings management. This means that the higher the CR, the less capable the company is of maximizing its current asset management for its operations. Consequently, the company's financial performance appears less favorable to shareholders. This triggers management to engage in earnings management.

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