

Original Article

The Influence of Return on Assets (ROA) and Return on Equity (ROE) on Profit Growth in Mining Companies Listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022

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Abstract: The goal of this study is to ascertain whether the Return on Equity (ROE) and Return on Asset (ROA) have an impact on the profit growth of mining businesses that are listed on the Indonesia Stock Exchange (BEI) between 2018 and 2022. The study employs a quantitative methodology and makes use of secondary data from mining firms' annual reports. With a population of 16 enterprises, the sample is drawn using the purposive sampling strategy, yielding 80 observations (16 companies x 5 years). Multiple regression analysis, along with hypothesis testing, is the technique employed. The results of the study show that there is no relationship between mining businesses' profit growth and ROA or ROE. The fact that ROA and ROE cannot account for the fluctuation in profit growth at the same time is indicated by the coefficient of determination (R^2) of 0.024. The results of the partial and simultaneous hypothesis testing indicate that ROE and ROA have little bearing on the rise of profits.

Keywords: Return on Assets (ROA), Return on Equity (ROE), Profit Growth.

I. INTRODUCTION

Indonesia is one of the countries with abundant natural resources, especially in terms of mining resources such as coal, gold, nickel, copper, and petroleum. The mining sector's significant contribution strongly supports Indonesia's economic progress. As a result, scholars believe that a more thorough analysis of the financial records of mining companies listed on the Indonesia Stock Exchange is necessary. The balance sheet, income statement, and cash flow statement are among the financial records that researchers will examine in this investigation into mining businesses.

Profit growth is the percentage change in earnings obtained by a company. Businesses that consistently see increases in profits have the ability to draw in investors and forecast their success in the future (Hartini 2012:1–7). Positive profit growth indicates sound financial standing for the business, which will ultimately raise its value because of the size of anticipated future dividend payments, contingent on business circumstances (Taruh 2012:1-11). In essence, a profitable business will operate well. In the world of investments, large profits are a sign of strong business performance; the greater the projected earnings, the better the performance. Profit growth projections are required since profit growth cannot be assured. Growth in profits will surely affect the choices made by creditors who will lend money to the business, as well as investors and potential investors who will put their cash in it.

Financial statements must be released regularly by companies that go public. These financial statements are meant to provide a clear picture of the company's development and financial situation. An essential source of accounting data for a business is its financial statements. According to Accounting Standard No. 1 (IAS, 2009), financial statements aim to give information about an entity's cash flow, performance, and financial condition that will help most users make informed financial decisions. The management's accountability for using resources entrusted to them is also demonstrated through financial statements.

Financial ratios are one tool used to forecast a company's earnings in advance. Since financial ratio analysis is the quickest approach to evaluate a company's financial performance, it is the most widely employed technique. The Return on Equity (ROE) and Return on Assets (ROA) financial ratios were employed by the researchers in this investigation. (Sartono, 2015:123) claims that ROA demonstrates a company's capacity to turn a profit from its assets. (Kasmir, 2015:201) defines ROA as a ratio that shows the return on the quantity of assets utilised by the business. (Kasmir, 2015:204) states that the ratio known as Return on Equity (ROE) is utilised to calculate net profit after taxes. The ability to make a profit on investment based on book value for shareholders is demonstrated by the ratio known as Return on Equity (ROE). The better this percentage is, the more powerful the owners' position inside the organisation is.



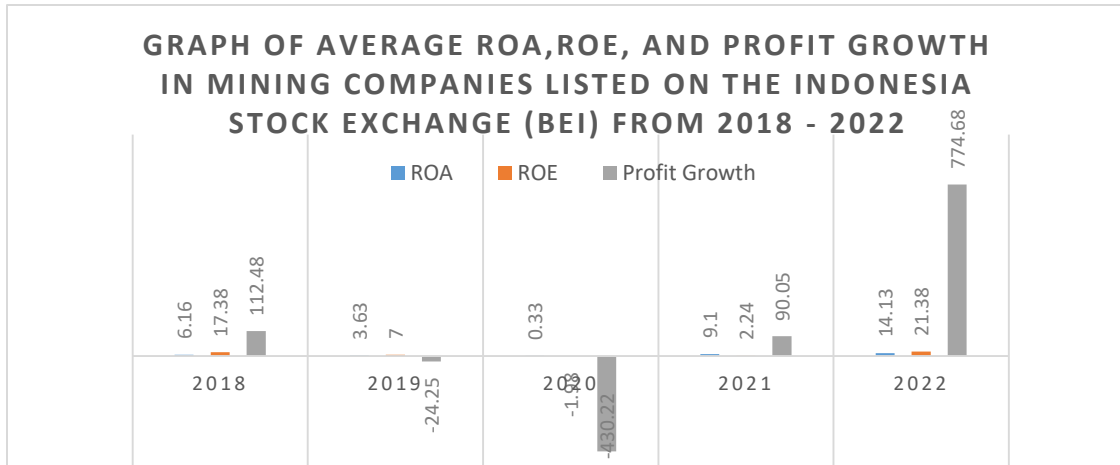


Figure 1: The average ROA, ROE, and Profit Growth.

It is evident from Figure 1 that changes in ROA and ROE values are related to the increase in profits of mining businesses listed on the Indonesia Stock Exchange (BEI) between 2018 and 2022. In 2019, the average ROA, ROE, and Profit Growth experienced a simultaneous decrease. In 2020, the average ROA, ROE, and Profit Growth also experienced a simultaneous decrease. However, in 2021, the average ROA, ROE, and Profit Growth increased. In 2022, the average ROA, ROE, and Profit Growth again experienced a simultaneous increase.

The research conducted by Lestari, P. D., and Sulastris P. (2021) indicated that ROA and ROE have a favourable influence on profit growth, which is consistent with the findings of other prior studies, including Ravasadewa (2020), which showed that ROA and ROE have a significant influence on profit growth. On the other hand, different results were obtained from the study conducted by Safitri, A. M., and Mukaram (2018), who found that ROA has an influence, while ROE does not have a significant influence, and the research by Saepudin. A., Lamsah, & Artiningsih, D. W. (2022) stated that ROA has a negative influence, while ROE has a positive influence on Profit Growth.

According to a study by Saepudin, Lamsah, and Artiningsih (2022), profit growth in coal mining companies listed on the Indonesia Stock Exchange between 2017 and 2021 is not significantly impacted by return on equity and return on asset, even when they occur partially and concurrently. Sulastris & Lestari's research from 2021 came to the conclusion that profit growth is positively impacted by return on equity, return on asset, and net profit margin. According to Sundari & Satria's research from 2021, profit growth is not significantly impacted by return on equity and return on the asset when taken into account concurrently.

The researcher is motivated to conduct a study titled: "The Influence of Return on Assets (ROA) and Return on Equity (ROE) on Profit Growth in Mining Companies Listed on the Indonesia Stock Exchange from 2018 to 2022" to ascertain the extent to which ROA and ROE have an impact on the profit growth of companies, as well as the variations in previous research regarding the influence of ROA and ROE on profit growth.

II. LITERATURE REVIEW

A) Financial Statements

The process of accurately documenting, categorising, and summarising financial occurrences as a means of informing stakeholders about a company's financial activities and data results in financial statements. Munawir (2004) asserts that financial statements can evaluate managers' effectiveness in running the business and that a manager's success is determined by the amount of profit the business makes. Based on the analysis of financial statements, if the results achieved by management are not satisfactory, the company's owners can take action, such as replacing the management or even selling their shares.

B) Financial Ratios

Lending ratios, leverage ratios, activity ratios, and profitability ratios are the broad categories into which financial ratios can be divided (Riyanto, 1995). According to (Kasmir, 2015:104), financial ratios entail comparing the numbers in financial statements. According to (Harahap, 2015:297), financial ratios are numbers derived from comparing one item in the financial statement with another item with important and relevant links. The profitability ratios in this study are represented by Return on Equity (ROE) and Return on Assets (ROA).

C) Profitability Ratios

Every company aims to achieve profit or earnings. "Company management is required to achieve certain targets that have been planned by the company beforehand. One of the analysis tools to assess a company's ability to generate profit, typically done, is profitability ratios. The better the profitability ratios, the higher the company's profit earnings are depicted."

D) Return On Assets (ROA)

Return On Assets, in accordance with (Sartono, 2015:123), indicates the capacity of the business to make money from the assets it uses. According to (Kasmir, 2015:201), Return On Assets is a ratio that shows the return on the quantity of assets the business uses. Thus, it can be said that Return On Assets (ROA) is a ratio that businesses use to evaluate their net profit margin in relation to their total assets. Equation (1) can be used to formulate ROA mathematically.

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\% \quad \text{---(1)}$$

The magnitude of this calculation result shows how much profit the company can make with all of its assets available to common shareholders. The stronger the company's financial situation and the better its asset utilisation status, the higher its return on assets (ROA). Thus, great profitability is more significant to management and other stakeholders than enormous profits. A company's success and its capacity to make efficient use of its resources are what determine its profitability. As a result, a company's profitability can be ascertained by contrasting its total assets or capital with the profit realised within a given time period.

E) Return On Equity (ROE)

A company's financial ratio that relates to profitability is called return on equity. This ratio is a part of the profit and loss ratio and the balance sheet ratio. The ability of a business to turn a profit with its own capital is gauged by its return on equity (ROE). Return on equity is the ratio used to calculate net profit after taxes using own capital, according to (Kasmir, 2015: 204). Meanwhile, according to Van Horne and Wachowicz (2005: 225), ROE compares net profit after tax with equity shareholders have invested in the company. According to Mulyadi (2006: 127), ROE is the ratio between net income and the amount of capital reported in the same period. The magnitude of the results of this calculation shows how much the company's ability to generate profits available to ordinary shareholders with their equity capital. ROE can be calculated using equation (2).

$$ROE = \frac{\text{Net Profit After Tax}}{\text{Total Equity}} \times 100\% \quad \text{---(2)}$$

From the aforementioned viewpoint, it is clear that ROE is a crucial ratio for shareholders. Since this ratio measures the rate of return on shareholders' investments in the company. The company's stockholders make less profit the lower this percentage is. ROE measures the rate of return on investment made by shareholders or capital owners. The excellent Return On Equity (ROE) outweighs the capital expenditure. Indicating that the business effectively uses equity to boost cumulative profits over prior years.

F) Profit Growth

Operationally, profit is defined as the difference between realised revenue from transactions that takes place in a given period and the expenses incurred in generating that revenue. A rise or reduction in profit on an annual basis is known as profit income. Profit growth is a useful metric for evaluating a business's performance. For many people, including entrepreneurs, financial analysts, shareholders, the economy, and so forth, profit income is crucial information.

According to (Harahap, 2015: 310), profit growth is a ratio that illustrates the ability of the business to raise net income compared to the prior year. According to (Hapsari, 2017), profit growth is a shift in the percentage rise in profits that the business makes. The growth ratio is a tool used to determine how much an organisation raises its profit growth rate by comparing its annual profit growth rate to its earnings in prior years. Strong profit growth is indicative of the company's sound financial standing. It will eventually raise the company's worth. Equation (3) can be used to determine profit growth.

$$\text{Profit Growth} = \frac{\text{Net profit for the year } t - \text{Net profit for the year } t - 1}{\text{Net profit for the year } t} \quad \text{---(3)}$$

Therefore, the ability of the business to turn a profit during a given time period can be defined as profit.

G) Hypothesis Development

A corporation will utilise its assets more profitably if its return on assets (ROA) is higher. Sundari & Satria's research (2021) findings indicate that profit growth is significantly impacted by return on assets or ROA. Additionally, research by

Erawati & Widayanto demonstrates that ROA has a major impact on increasing a company's profit. The following is how the hypothesis is then derived:

H1: ROA has a positive effect on profit growth

Because more working capital can be utilised to finance business operations, which can ultimately result in profits, the greater the value of this ratio, the higher the profit level generated (Agus Endro Suwarno, 2004). The findings of Sundari & Satria's research from 2021 indicate that ROE has no discernible impact on profit growth. Safitri & Mukaram's (2018) research supports the study's findings, which indicate that ROE has no discernible impact on profit growth.

H2: ROE has a negative effect on profit growth

Within the Figure 2 framework. Describing how profit growth is impacted by Return on Equity (ROE) and Return on Assets (ROA).

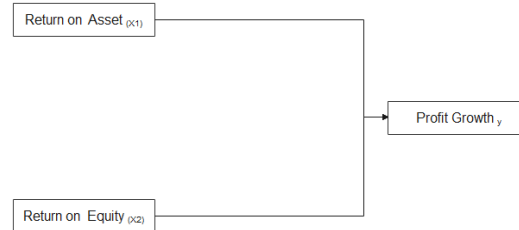


Figure 2: Conceptual Framework

III. RESEARCH METHOD

The objective of this quantitative study is to examine how ROA and ROE affect the profit growth of mining businesses that are listed on the Indonesia Stock Exchange (BEI) between 2018 and 2022. The study's population comprises mining sector businesses listed on the BEI between 2018 and 2022. Purposive sampling was the method of sampling employed in this study, and a sample of 16 companies was chosen at random from the entire population. Since the study covered a five-year period, the total number of observations or data points obtained is 80 (16 companies x 5 years). The financial and annual reports of the chosen mining businesses made available to the public on the Indonesia Stock Exchange website, served as the primary data source for this study. The primary goal of this study is to ascertain whether there is a substantial correlation between mining companies' profit growth in the BEI and their ROA and ROE throughout the given time period. By using quantitative analysis, the study aims to provide empirical evidence and insights into how these financial indicators may impact the profit performance of mining companies in the selected period.

Multiple linear regression analysis is used in this work. Due to the quantitative nature of this study, data processing is done with the SPSS software and can be represented by equation (4).

$$\text{Profit Growth} = a + a_1\text{ROA} + a_2\text{ROE} + e \quad (4)$$

IV. RESULTS AND DISCUSSION

This study completed traditional assumption tests before conducting hypothesis testing, demonstrating that the research data is normal. The impact of each variable, Return on Equity (ROE) and Return on Assets (ROA), on the profit growth of mining companies listed on the Indonesia Stock Exchange between 2018 and 2022 is examined in this study using multiple regression analysis. The F-test and t-test are the hypothesis tests used to examine these influences. The regression analysis significance level is set at $p < 0.05$, and the software SPSS for Windows: Version 25 is used.

A) Autocorrelation Test

Tabel 1: Autocorrelation Test

Runs Test	
	Unstandardized Residual
Test Value ^a	-86.15008
Cases < Test Value	40
Cases >= Test Value	40
Total Cases	80
Number of Runs	33
Z	-1.800
Asymp. Sig. (2-tailed)	.072
a. Median	

According to the results of the run test and autocorrelation test, the asymptotic significance (2-tailed) value is 0.072. Based on the fact that the Asymp. Sig. (2-tailed) value is greater than 0.05; it can be said that the data utilised do not exhibit autocorrelation.

B) Multicollinearity Test

Table 2: Multicollinearity Test Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std.Error				Tolerance	VIF
1	Constant	29.000	167.455		.173	.863		
	Return On Asset	-6.487	15.363	-.080	-.422	.674	.357	2.805
	Return On Equity	8.769	7.855	.211	1.116	.268	.357	2.805

a. Dependent Variable: Profit Growth

The results of the test indicate that there is no multicollinearity among the independent variables in this regression model, based on the "Collinearity Statistic" in the "Coefficients" table output. Both the ROA and ROE variables have tolerance values of 0.357, which is higher than 0.10. Furthermore, the variables ROA and ROE have Variance Inflation Factor (VIF) values of 2.805, less than 10. Thus, it can be said that this regression model's multicollinearity is not a problem.

C) Heteroscedasticity Test

Table 3: Heteroscedasticity Test Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std.Error				Tolerance	VIF
1	(Constant)	485.414	157.617		3.080	.003		
	Return On Asset	-4.925	14.460	-0.65	-3.41	.734	.357	2.805
	Return On Equity	-.603	7.393	-0.16	-.082	.935	.357	2.805

a. Dependent Variable: Abs_RES

The report shown indicates that the variable Return on Equity (ROE - X2) has a significance (Sig.) value of 0.935, whereas the variable Return on Asset (ROA - X1) has a value of 0.734. Since both of these values are higher than 0.05, the regression model does not appear to exhibit heteroskedasticity. It is, therefore, possible to conclude that the regression model does not have a heteroskedasticity problem because the significance values for both variables are greater than the standard significance level (alpha) of 0.05.

D) Simultaneous Hypothesis Test (Test F)

Table 4. Simultaneous Hypothesis Test (Test F) ANOVA^a

Model		Sum of Squares	df	Mean Square	f	Sig.
1	Regression	3591875.250	2	1795937.625	.937	.396 ^b
	Residual	147537236.7	77	1916068.009		
	Total	151129111.9	79			

a. Dependent Variable: Profit Growth

b. Predictors: (Constant), Return On Equity, Return On Asset

To ascertain if the variables ROA and ROE do not significantly affect the Profit Growth of mining companies listed on the Indonesian Stock Exchange (BEI) for the period of 2018–2022, the simultaneous or F test was performed. According to the test results, the significance value (sign) is 0.396, which is greater than 0.05, and the computed F value (0.937) is less than the F table value (4.89).

It can be concluded from this test, which was conducted at a 95% confidence level and a 5% significance level, that the variables do not significantly affect the Profit Growth of mining companies listed on BEI for the period of 2018–2022 when the calculated F value is smaller than the F table value. Thus, the test findings demonstrate that none of the variables, ROA nor

ROE, has a statistically significant simultaneous impact on the Profit Growth of mining businesses listed on BEI over the period of 2018–2022.

E) Determination Test (R2)

Table 5. Determination Test (R2)
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.154 ^a	.024	-.002	1384.221

a. Predictors: (Constant), Return on Equity, Return On Asset

The coefficient of determination (R2) calculation was conducted to see the overall level of influence (contribution) in percentage for variables X1 and X2 on Y. The R2 value obtained through the calculation is closer to zero, not close to one, as mentioned previously. A positive R2 value closer to one would indicate a strong regression model that can explain the variability of the dependent variable.

In this case, the R2 value of -0.002 indicates that the model explains only 0.2% of the variability in the Profit Growth (Y) of the mining companies. The remaining 99.8% of the variability is influenced by other variables not included in the current regression model. This suggests that the model has very little explanatory power and does not effectively capture the relationship between the mining companies' ROA, ROE, and Profit Growth. It is essential to note that an R2 value close to zero indicates a weak regression model. Further analysis or inclusion of other relevant variables may be necessary to improve the model's explanatory power.

F) Partial Hypothesis Test (t-test)

Table 6. Partial Hypothesis Test (t-test)

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	29.000	167.455		.173	.863
	Return On Asset	-6.487	15.363	-0.80	-.422	.674
	Return On Equity	8.769	7.855	.211	1.116	.268

a. Dependent Variable: Profit Growth

The first and second hypotheses were tested using the t-test, sometimes referred to as the partial test:

1. Influence of Variable ROA (X1) on Profit Growth of mining companies in BEI during 2018-2022:

The crucial t-value (t-table) of 1.991 is more than the computed t-value of -0.422 for the ROA variable. Given that the probability level for the ROA variable is 0.674 (greater than 0.05), it follows that the ROA variable does not have a significant partial effect on the Profit Growth of mining businesses during 2018–2022 in BEI. Therefore, there is no evidence to support the hypothesis (H1), which claims that ROA has a major impact on the profit growth of coal mining businesses in BEI between 2018 and 2022.

2. Influence of Variable ROE (X2) on Profit Growth of coal mining companies in BEI during 2018-2022:

The crucial t-value (t-table) of 1.991 is more than the computed t-value of 1.116 for the ROE variable. Given that the probability level for the variable is 0.268 (greater than 0.05), it follows that the ROE variable does not have a significant partial effect on the Profit Growth of coal mining businesses in BEI during the 2018–2022 timeframe. Thus, the hypothesis (H2) that claims that, from 2018 to 2022, mining businesses in BEI will have a considerable increase in profit growth due to ROE is validated.

To summarise, the t-test results indicate no significant partial influence of either ROA or ROE on mining companies' profit growth throughout the period. In the BEI between 2018 and 2022, ROE and ROA did not exhibit a substantial partial impact on the profit growth of coal mining enterprises.

V. CONCLUSION

The conclusion drawn from the data analysis and debate is that, for the mining businesses listed on the Indonesia Stock Exchange (BEI) between 2018 and 2022, there is no relationship between profit growth and Return on Equity (ROE) or Return on Asset (ROA). This suggests that there is no meaningful correlation between the profit growth of mining businesses and the companies' financial success as determined by ROA and ROE. The coefficient of determination (R2) of -0.002 indicates that there is no variation in the profit growth of the companies that can be explained simultaneously by ROA and ROE. In other words, ROA and ROE, when considered together, do not make a significant contribution to the profit growth of mining companies. It can be partially inferred from the incomplete hypothesis testing results that ROA has no substantial impact on profit growth. This suggests that the company's capacity for profitability and managerial effectiveness, as demonstrated by

ROA, does not influence the increase in mining businesses' profits favourably.

Similarly, partial hypothesis testing indicates that ROE only partially influences profit growth. This implies that variables other than Return on Equity (ROE) might have a bigger impact on how much mining companies' profits grew throughout the study period. All things considered when ROA and ROE are added together and examined concurrently, they have little effect on the increase in mining businesses' profits. This conclusion shows that ROA and ROE do not have a significant impact on evaluating the performance and profit growth of mining companies. For future research with a similar title or topic, it is suggested to use less fluctuating variables (variables that do not change frequently over a short period), and researchers should increase the use of literature in the article preparation.

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