1st International Conference on Management, Business and Economy (ICoMBEc 2025)
Vo. 1 No. 1 2025
e-ISSN : XXXX-XXX

The Effect of *Current Ratio* (CR) and *Debt to Equity Ratio* (DER) on *Return on Assets* (ROA) of PT Aneka Tambang Tbk from 2020 to 2024

Nur Aini Ramadhani[1] , Zulianingsih[2*]
[1,2] Pamulang University
Zuliaaaaa003@gmail.com

Abstract

This study aims to analyze the effect of *Current Ratio* (CR) and *Debt to Equity Ratio* (DER) on *Return on Assets* (ROA) at PT Aneka Tambang Tbk during the period 2020–2024. The background of this study is based on the importance of liquidity management and capital structure in determining the profitability of mining companies operating amid global commodity price fluctuations. This study uses a descriptive-verificative quantitative approach with secondary data sourced from the annual financial reports (Annual Report) of PT Aneka Tambang Tbk. Data analysis was performed using multiple linear regression, with a series of classical assumption tests such as normality, multicollinearity, heteroscedasticity, and autocorrelation tests. The results show that, partially, *the Current Ratio* (CR) does not have a significant effect on *Return on Assets* (ROA), with a t-value of 1.558 and a significance of 0.158 (> 0.05). Conversely, *the Debt to Equity Ratio (*DER) has a significant effect on ROA, with a t-value of 5.504 and a significance of 0.001 (< 0.05). Simultaneously, both variables have a significant effect on ROA, with an F value of 4.294 and a significance of 0.072 (< 0.05). The coefficient of determination (R^2) of 0.85 5 indicates that 85.5% of the variation in ROA can be explained by CR and DER, while the rest is influenced by other factors outside the model. These results support *Signaling Theory, Trade-Off Theory,* and *Pecking Order Theory,* which confirm that the balance between liquidity and capital structure is an important factor in increasing the profitability of mining companies.

Keywords:
Current Ratio (CR), Debt to Equity Ratio (DER), Return On Asset (ROA)

Introduction

The mining industry is a fundamental sector that is highly dependent on the availability of natural resources beneath the earth's surface. This dependence makes it a *non-renewable* industry that is sensitive to geological conditions and environmental policies. Operationally, this industry is primarily involved in the management and utilization of minerals and coal. Important aspects of the mining industry include general investigation, exploration, feasibility studies, production operations, and reclamation.

PT Aneka Tambang Tbk (ANTAM) is a state-owned enterprise (SOE) engaged in the mining sector and is a key player in the global market for nickel, gold, and bauxite commodities. As a publicly listed company (Tbk), ANTAM faces complexities and dual challenges. In addition to operating in the high-risk mining sector

(particularly related to global commodity price volatility and sustainability issues), ANTAM also has fiscal and transparency responsibilities to its public shareholders.

The company's financial performance reflects the effectiveness of management in managing company resources to achieve optimal profitability. In a global context, financial indicators such as *the Current Ratio* (CR) and *Debt to Equity Ratio* (DER) are important benchmarks for assessing the financial health and ability of a company to generate profits from its assets.

According to Ammy and Hasibuan (2020), "The relationship between liquidity, capital structure, and profitability is a central issue in corporate finance studies, especially in high-risk sectors such as mining." Globally, commodity price volatility and capital market fluctuations reinforce the urgency of research on how asset efficiency and debt management affect *Return on Assets (*ROA) (Amiruddin et al., 2023).

Current trends show that mining companies are experiencing significant fluctuations in profitability ratios due to external pressures such as the COVID-19 pandemic and changes in global energy policy (Nguyen & Vo, 2022). *According to Bloomberg data (2024), the average Return on Assets (ROA) of global mining companies decreased by up to 15%,* along with an increase in the debt-to-equity ratio. In the Indonesian context, PT Aneka Tambang Tbk (ANTAM) is one of the companies that is interesting to study because it has financial dynamics that are influenced by changes in the prices of nickel and gold commodities as well as debt restructuring strategies.

According to Kasmir (2023:135) in his book *Financial Statement Analysis,* "*The Current Ratio* is a ratio used to measure a company's ability to pay its short-term liabilities or maturing debts with its current assets."

The Debt to Equity Ratio (DER), according to Kasmir (2023:158), "is a ratio used to assess debt with equity. This ratio is useful for determining the amount of funds provided by creditors compared to the company's owners." Kasmir explains that the higher the DER, the higher the company's financial risk, as it indicates dependence on borrowed funds. Conversely, a DER that is too low may indicate that the company is not optimally utilizing *leverage* to increase profits.

Return on Assets (ROA) according to Kasmir (2021:201), "*Return on Assets* is a ratio that shows the return on the total assets used in a company. This ratio measures the extent to which capital invested in total assets can generate net income." To provide an empirical picture of the company's financial condition, particularly PT Aneka Tambang Tbk (ANTAM), this study includes supporting data from the company's financial reports for the period 2020-2024.

Table 1. Supporting Data for Variables

Year	Current Assets	Total Assets	Current Liabilities	Total Liabilities	Total Equity	Net Profit
2020	9,150,514	31,729,513	7,553,261	12,690,064	19,039,449	1,149,354
2021	11,728,143	32,916,154	6,562,383	12,079,056	20,837,098	1,861,740

2022	11,694,779	33,637,271	5,971,662	9,925,211	23,712,060	3,820,964
2023	20,064,546	42,851,329	8,576,440	11,685,659	31,165,670	3,077,648
2024	17,991,975	44,522,645	9,770,898	12,323,139	32,199,506	3,852,218

Source: Financial Statements of PT Aneka Tambang Tbk

Table 1 shows that the company's Total Assets have increased significantly, from 31.73 trillion in 2020 to 44.52 trillion in 2024. This asset growth is also supported by a strengthening capital structure, where Total Equity increased steadily from 19.04 trillion to 32.20 trillion in the same period. In terms of profitability, despite operating in a highly volatile sector, ANTAM managed to record an upward trend in Net Profit, reaching a peak of 3.85 trillion in 2024, after fluctuating in 2023. However, along with this expansion, the company also faced increased liquidity and debt risks, as seen in the rise in Current Liabilities and Total Liabilities in the 2023–2024 period. This phenomenon raises critical questions about the efficiency of the company's management. Therefore, this study is highly relevant to analyze how key financial ratios, such as liquidity and capital structure, affect PT ANTAM Tbk's *Return on Assets* (ROA) amid a trend of asset growth and high profit fluctuations.

Theoretical Framework

1. Grand Theory: Signaling Theory

This study is based on Signaling Theory proposed by Spence (1973), which explains that financial information published by companies is a signal for investors in assessing business conditions and prospects. According to signaling theory, financial ratios convey information about the firm's performance and future expectations to external stakeholders. In this context, Current Ratio (CR) and Debt to Equity Ratio (DER) become signals for investors to assess the level of liquidity and capital structure, which ultimately influence perceptions of Return on Assets (ROA) and company profitability.

According to Rahman & Azmi (2021), stable financial ratios indicate efficient financial management and are a positive signal to the market. Conversely, extreme fluctuations in liquidity or leverage can lead to higher risk perceptions among investors and creditors. Thus, this theory explains that any change in financial ratios can affect market confidence in a company's ability to generate profits.

2. Supporting Theory: Trade-Off Theory and Pecking Order Theory

Trade-Off Theory (Myers, 1984) explains that companies seek to balance the benefits and costs of using debt. The trade-off model posits that optimal capital structure is achieved by balancing the tax advantages of debt with the bankruptcy costs associated with excessive leverage. In the context of PT Aneka Tambang Tbk, its financing policy (as reflected in the DER) shows how management chooses an efficient capital structure amid fluctuations in mining commodity prices.

In addition, the Pecking Order Theory is also relevant in explaining the relationship between DER and ROA. According to this theory, companies tend to prefer internal sources of funding (retained earnings) before using external debt (Frank & Goyal, 2008). Thus, an increase in DER may indicate a decline in the company's internal ability to finance its operations, which in turn may put pressure on profitability (ROA).

3. **Current Ratio and Return on Assets**

According to Kasmir (2023), "Current Ratio measures a company's ability to meet its short-term obligations with its current assets." An optimal Current Ratio indicates that the company is able to maintain liquidity without sacrificing asset productivity. A study by Migliaccio & De Palma (2024) confirms that a healthy level of liquidity contributes to increased asset efficiency and profitability.

However, other studies such as Qablina (2024) found that an excessively high Current Ratio actually indicates the presence of idle assets, which reduces the effectiveness of asset utilization and has the potential to suppress ROA. Thus, the relationship between CR and ROA is not always linear — there is an optimal point where liquidity supports financial performance without sacrificing asset efficiency.

4. **Debt to Equity Ratio and Return on Assets**

Debt to Equity Ratio (DER) is a key indicator in assessing a company's capital structure. According to Kasmir (2023), "DER shows the proportion between debt and equity, which reflects the company's financial risk level." Research by Aleskerova & Fedoryshyna (2024) shows that a balanced capital structure can increase investor confidence and long-term profitability.

Conversely, Tahawa & Wijaya (2025) assert that an excessive increase in DER can reduce ROA due to high interest expenses and default risk. In the context of mining companies such as PT Aneka Tambang Tbk, fluctuations in revenue due to global commodity prices can amplify the impact of leverage on profitability. Therefore, management needs to optimize the capital structure so that the DER remains at an efficient level and does not reduce the ability of assets to generate profits.

5. **Conceptual Linkages**

Based on the theory and empirical findings, the relationship between variables can be explained as follows:

a. Current Ratio (CR) → has a positive effect on Return on Assets (ROA) if the level of liquidity supports smooth operations.

b. Debt to Equity Ratio (DER) → has a negative effect on Return on Assets (ROA) if increased leverage results in high financial burdens.

These two variables interact through the mechanisms of asset efficiency and financing policy, both of which are key indicators of a company's financial performance (Nguyen & Vo, 2022; Rohman & Dewi, 2021). Therefore, theoretically, it can be formulated that the balance between liquidity and leverage

will have a direct implication on the effectiveness of asset utilization and the company's profitability.

Method

1. Type and Approach of Research

This study uses a quantitative approach with a descriptive-verificative research type. A quantitative approach is used because this study aims to analyze the effect of independent variables, namely Current Ratio (CR) and Debt to Equity Ratio (DER) on the dependent variable Return on Assets (ROA) based on company financial data. According to Sugiyono (2022), "a quantitative approach is used to examine a specific population or sample with the aim of testing predetermined hypotheses." Thus, this study focuses on testing the relationship between variables through statistical analysis.

2. Research Population and Sample

The population in this study is all annual financial reports (Annual Reports) of PT Aneka Tambang Tbk for the period 2020–2024. The sampling technique uses purposive sampling, with the following criteria:

a. The financial reports have been audited and published by the company.
b. The data for the variables studied (CR, DER, ROA) are available in full for the research period.

Thus, five observations (2020–2024) were obtained, representing the company's financial performance during that period.

The methodology section should then describe the research design, population and sample (if applicable), data collection techniques, instruments employed, and the methods of analysis adopted.

3. Type and Source of Data

The data used is secondary data, which is data obtained from the official financial reports of PT Aneka Tambang Tbk published on the company's website or the Indonesia Stock Exchange (IDX). According to Indriantoro & Supomo (2018), "secondary data is data obtained indirectly through official documents or publications from related institutions."

Data source:

a. PT Aneka Tambang Tbk. (2024). Annual Report 2020–2024. Jakarta: PT Aneka Tambang (Persero) Tbk.
b. https://www.antam.com/id/investor/annual-reports

4. Data Collection Techniques

The data collection method was carried out through documentation, namely by downloading and reviewing annual financial reports containing information on the company's total assets, total liabilities, equity, and net profit. The data was then processed into financial ratios according to the formula for each variable.

5. Operational Definition of Variables

Variable	Type	Formula	Indicator	Scale
Current Ratio (CR)	Independent	CR = Current Assets/Current	Indicates the company's	Ratio

		Liabilities	ability to meet short-term obligations	
Debt to Equity Ratio (DER)	Independent	DER = Total Debt/Equity	Measures the company's capital structure	Ratio
Return on Assets (ROA)	Dependent	ROA = Net Profit/Total Assets	Measures the effectiveness of asset utilization in generating profit	Ratio
Return on Assets (ROA)	Dependent	ROA = Net Profit/Total Assets	Measures the effectiveness of asset utilization in generating profit	Ratio

6. Data Analysis Methods

a. Descriptive Statistics

According to Sugiyono (2017:147), "Descriptive statistical analysis is statistics used to analyze collected data as it is, without intending to make conclusions that apply to the general public or generalizations." Descriptive statistical analysis is useful for describing the magnitude of each variable (independent and dependent) in a study, including the Current Ratio (CR), Debt to Asset Ratio (DAR), and Return on Assets (ROA).

b. Classical Assumption Test

1. Normality Test

According to Ghozali (2021: 196), normality tests are conducted to test whether the residual variables are normally distributed in a regression model. A good regression model has residual variables that are normally distributed. The normality test in this study uses the One Kolmogorov-Smirnov test with the Monte Carlo approach. According to Ghozali (2021: 201), the One Kolmogorov-Smirnov normality test hypothesis is as follows: H_0 : Residual data is normally distribute

H_a : Residual data are not normally distributed

The basis for decision making on normality testing is as follows

If *Sig. (2-tailed)* < 0.05, then reject H_0 , meaning that the residual variables are not normally distributed.

If *Sig. (2-tailed)* > 0.05, then do not reject H_0, meaning that the residual variables are normally distributed.

2. **Multicollinearity Test**

   According to Ghozali (2021: 157), the multicollinearity test is conducted to test whether there is correlation between independent variables in the regression model. A good regression model does not have correlation between independent variables. The basis for decision making in the multicollinearity test is as follows:
   If the *tolerance* value is ≤ 0.10 and the variance inflation factor (VIF) value is ≥ 10, this indicates multicollinearity.
   If the *tolerance* value is > 0.10 and the variance inflation factor (VIF) value is < 10, it means that there is no multicollinearity.

3. **Heteroscedasticity Test**

   The heteroscedasticity test aims to test whether there is variance inequality from one observation to another in the regression model. Heteroscedasticity can be detected using the Glejser test, which involves regressing the absolute residual value against the dependent variable to determine whether there is a 5% confidence level. If the significance value of the independent variable is > 0.05, then there is no heteroscedasticity. Conversely, if the significance value of the independent variable is < 0.05, then there is heteroscedasticity.

   According to Ghozali (2018:120), the heteroscedasticity test aims to test whether there is a difference in the variance of the residuals from one observation to another in the regression model. If the variance of the residuals from one observation to another remains constant, it is called homoscedasticity, and if it differs, it is called heteroscedasticity. A good regression model is one that is homoscedastic or does not exhibit heteroscedasticity. One way to determine whether there is heteroscedasticity in a multiple linear regression model is by looking at the scatterplot graph or the predicted value of the dependent variable, namely SRESID, with the residual error, namely ZPRED.

4. **Autocorrelation Test**

   According to Ghozali (2021:162), "The autocorrelation test aims to test whether there is a correlation between the disturbance errors in period t-1 (previously) in the linear regression model." If there is a correlation, then there is an autocorrelation problem. Autocorrelation arises because observations that are sequential over time are related to one another. This problem arises because the residuals (disturbance errors) are not independent from one observation to another. To see whether or not there is autocorrelation, the Durbin-Watson test (DW test) can also be used. The Durbin-Watson test is used for first-order autocorrelation and requires an intercept (constant) in the regression model and no lag variables among the independent variables. The hypotheses to be tested are:
   H0: there is no autocorrelation (t = 0)
   Ha: there is autocorrelation (t ≠ 0)

Furthermore, if the result of the decision is No decision, then a Run Test needs to be performed to see whether the residual data exhibits autocorrelation or not, with the following conditions:
If the *asymp. Sig. (2-tailed)* value is < 0.05, then autocorrelation occurs
If the value of asymp. Sig. (2-tailed) is > 0.05, then there is no autocorrelation.

c. **Multiple Linear Regression Test**

This analysis is used to determine the extent of the influence of the independent variables, namely: *Current Ratio (X1)* and *Debt To Asset Ratio (X2)* on the dependent variable, namely: *Return On Asset (Y)*. The multiple linear regression equation is as follows (Ghozali, 2018):

$$\boldsymbol{Y = a + \beta X_1 + \beta X_2 + e}$$

Explanation:

X1 = *Current Ratio* β = Regression Coefficient
X2 = *Debt to Equity Ratio* a = Constant
Y = *Return on Assets* e = Standard Error

d. Hypothesis Testing

1. Partial Test (t-test)

According to Ghozali (2018:98), "The t-test shows how far the influence of one independent variable individually explains the variation in the dependent variable." The t-test is used to test the influence of each independent variable used in the study on the dependent variable partially. To test the effect of independent variables on dependent variables, partial regression coefficients (t-test) are used by comparing $t_{(calculated)}$ and $t_{(table)}$, then comparing them using a significance level (a) of 0.05 with a two-tailed test with df=n-k. (k= number of independent variables).

If $t_{calculated}$ is greater than t_{table} or the significance value is less than 0.05, then H0 is rejected and Ha is accepted, meaning that there is a significant effect between one independent variable and the dependent variable. If $t_{(calculated)} < t_{(table)}$ or the significance value is > 0.05, then H0 is accepted and Ha is rejected, meaning that there is no significant effect between one independent variable and the dependent variable.

2. Simultaneous Test (F-test)

According to Ghozali (2016:96), "The F test here aims to determine whether the independent variables collectively influence the dependent variable." To find the relationship between two or more variables, the correlation between the variables to be examined can be calculated. To determine the value of Ftable, use the formula df = (n-k-1) and compare Fcount < Ftable to determine whether the effect is significant or not. If the Fcount value is less than the Ftable value or the significance value is greater than 0.05, then Ho is accepted and Ha is rejected, meaning that there is no significant effect between one independent variable and the dependent variable. If the Fcount value is greater than the Ftable value or the significance value is less than 0.05, then Ho is rejected and Ha is accepted, meaning that there is a significant effect between one independent variable and the dependent variable.

3. **Determination Coefficient Test**

According to Ghozali (2021:147), "a value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable." The coefficient of determination is a coefficient that states the percentage of deviation (variability) of the dependent variable (Y) that can be explained by the independent variable (X) in the regression method being discussed. Determination analysis (R^2) measures the extent to which the model can explain the variation in the dependent variable. The value of the coefficient of determination is between 0 and 1. A small R^2 value means that the ability of the dependent variables is very limited.

In this study, the analysis of determination is used to determine the extent to which the independent variables explain the variation in the dependent variable. To determine the value of the coefficient of determination, the following formula is used in this study: $KD = R^2 \times 100\%$

Explanation:
KD = Coefficient of Determination
R^2 = Multiple Correlation Coefficient

Results

1. **Descriptive Statistics**

Table 1
Descriptive Test Results
Descriptive Statistics

	N	Min	Maximum	Mean	Standard Deviation
Current RatioN	5	121	234	181.00	40.181
DEBT TO EQUITY	5	3780	6665	4851.00	1306.078
RETURN ON ASSETS	5	262	1136	709.40	326.727
Valid N (listwise)	5				

Source: SPSS 22 2025 Output, Secondary data has been processed

Based on the results of the descriptive test above, we can describe the distribution of data obtained by the researcher as follows:
obtained by the researcher is:

a. Variable CR (X1), from the data it can be described that the minimum value is 1.21 while the maximum value is 2.34, the average value of CR is 181.00 and *the standard deviation* of CR data is 40.181
b. Variable DAR (X2), from the data, it can be described that the minimum value is 37.80 while the maximum value is 66.65, the average value of DAR is 48.51, and *the standard deviation* of DAR data is 1306.078
c. The ROA variable (Y) can be described from the data as having a minimum value of 2.62 and a maximum value of 11.36, with an average ROA value of 709.40 and *a standard deviation* of ROA data of 326.727.

2. Classical Assumption Test

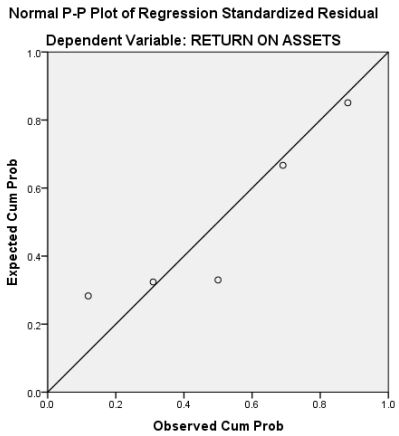
a. Normality Test

Table 2
Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		5
Normal Parameters[a,b]	Mean	.000000
	Std. Deviation	177.8043701
Most Extreme Differences	Absolute	.333
	Positive	.333
	Negative	-.208
Test Statistic		.333
Asymp. Sig. (2-tailed)		.072[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

From Table 2, the results of the Kolmogorov–Smirnov normality test can be seen, yielding a significant value of 0.075 > 0.050. This can be assumed that the distribution of the equation in this test is normal. The normality test was performed using a probability plot, which allows the detection of variable residuals by examining the distribution of residual points along the diagonal. This is consistent with the scatter plot processed in SPSS 22, as shown in the figure below.



As seen in Figure 1, the Normal P–P Plot of Regression Standardized Residuals shows a normal pattern of residual points. This is evident from the points scattered around the diagonal and their distribution along the diagonal. Thus, it can be concluded that the regression model meets the normality assumption.

b. **Multicollinearity Test**

Table 3
Multicollinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2498.892	1784.583		1.400	.296		
	CURRENT RATION	-2.604	5.633	-.320	-.462	.689	.309	3.241
	DEBT TO EQUITY	-.272	.173	-1.086	-1.568	.257	.309	3.241

a. Dependent Variable: RETURN ON ASSETS

Source: Data processed from SPSS v22 2025

Looking at Table 3, the results of the multicollinearity test show that the value of *the Current Ratio* (CR) variable is 3.241 and *the Debt to Equity Ratio* (DER) is 3.241 > 10, and both values are less than 1 and the variance inflation factor (VIF). The tolerance value is 0.309 > 0.1, so there is no multicollinearity in the data.

c. Heteroscedasticity Test

Table 4
Heteroskedasticity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	394.133	583.594		.675	.569		
	CURRENT RATION	-.474	1.842	-.293	-.257	.821	.309	3.241
	DEBT TO EQUITY	-.033	.057	-.663	-.583	.619	.309	3.241

a. Dependent Variable: Abs_RES

Source: Data processed from SPSS v22 2025

Based on the test results in Table 4, it can be concluded that the *Glejser* test produced a value indicating no heteroscedasticity, namely 0.821 for the *Current Ratio* (CR) variable and no evidence of heteroscedasticity with a value of 0.618 for *the Debt to Equity Ratio* (DER) variable. Both values indicate no evidence of heteroscedasticity because they have a significance value (sig) of >0.05. Therefore, this data regression model shows no evidence of heteroscedasticity and can be used as research data.

d. Autocorrelation Test

Table 5
Results of *the Durbin-Watson (DW)* Autocorrelation *Test*

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.839[a]	.704	.408	251.453	1.875

a. Predictors: (Constant), DEBT TO EQUITY, CURRENT RATION

b. Dependent Variable: RETURN ON ASSETS

Source: Data processed from SPSS v22 2025

Based on Table 5, it can be seen that the autocorrelation test result for the *Durbin Watson* value is 1.875, indicating a strong relationship between *the Current Ratio* and *Debt to Equity Ratio* and *Return on Assets*. The R *Square* value of 0.704 indicates that 70.4% of the variation in *Return on Assets* can be explained by the two independent variables, while the remaining 29.6% is influenced by other factors outside the model. The *Durbin-Watson* value of 1.875 is within the range of 1.5–2.5, so it can be concluded that there is no autocorrelation in the model. Thus, the regression model used is suitable for further analysis.

Table 6

Runs Test

	Unstandardized Residual
Test Value[a]	-.92246
Cases < Test Value	5
Cases >= Test Value	5
Total Cases	10
Number of Runs	4
Z	-1.006
Asymp. Sig. (2-tailed)	.314

a. Median

Source: Data processed from SPSS v22 2025

Based on Table 6, the results of the Run Test above show that the significance value is 0.314, where 0.314 > 0.05. This indicates that the residuals are random and there is no autocorrelation in the regression model. Thus, the regression model can be said to meet the classical assumption of autocorrelation and is suitable for further analysis.

3. Multiple Linear Regression Test

Table 7
Results of Multiple Regression Test of *Current Ratio* (CR) (X1) and *Debt to Equity Ratio* (DER) (X2) on *Return on Assets* (ROA) (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2482.565	863.415		-2.875	.024
	CURRENT RATIO	.060	.010	1.388	5.788	.001
	DEBT TO EQUITY RATIO	.603	.246	.588	2.450	.044

a. Dependent Variable: RETURN ON ASSETS

Source: Data processed from SPSS v22 2025

Based on Table 7, it can be seen that the results of the multiple linear regression test, as seen from the regression calculation analysis results, obtained the regression equation Y = 2582.565 - 0.60 X1 - 0.603 X2. From this equation, the researcher can conclude that:

a. The constant value of -2582.565 can account for *the Current Ratio* (X1) and *Debt to Equity Ratio* (X2) variables being considered constant (zero), meaning that *the Return on Assets* (Y) has a negative value of -2482.565.

b. The regression coefficient of Current Ratio (X1) has a value of 0.60 with a positive sign, meaning that the *Current Ratio* (X1) variable will cause an increase in *Return on Assets* (Y) of 0.603 with other variables remaining constant.

c. The regression coefficient value for company size (X2) is 0.603 with a negative sign, meaning that if the constant remains and there is no change in the *Debt to Equity Ratio* (X2) variable, then every one unit increase in the other variables remains constant.

4. **Hypothesis Testing**

a. Partial Test (t-test)

Table 8

Hypothesis Test Results (t-test) *Current Ratio* (CR) (X1) *Debt to Asset Ratio* (DAR) (X2)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-437.150	280.539		-1.558	.158
	CURRENT RATIO	.039	.007	.889	5.504	.001

a. Dependent Variable: RETURN ON ASSETS

Against *Return on Assets* (ROA) (Y)

Source: Data processed from SPSS v22 2025

Based on Table 9, it can be seen that the results of the partial hypothesis test (t-test) as a researcher, we can obtain a $t_{calculated}$value $< t_{table}$or (1.558 < 5.504) and the result is also reinforced by the p-value > Sig.0.05 or (0.158 > 0.05), which means that H01 is accepted and Ha1 is rejected. This indicates that there is no significant effect between the *Current Ratio* and *Return on Assets* at PT. Antam Tbk.

Based on the data processing in the table above, the result for $t_{calculated} > t_{table}$ is 5.504 > 5.504) and the significant result of the *Debt to Assets Ratio* variable is greater than 0.05 or (0.001 < 0.05) from the results obtained, it can be concluded that H02 is rejected and Ha2 is accepted. This result indicates that there is an influence between *the Debt to Assets Ratio* variable and *Return on Assets*.

b. **Simultaneous Test (F-Test)**

Table 9

Simultaneous Hypothesis Test Results (F Test) *Current Ratio* (CR) (X1) and *Debt to Asset Ratio* (DAR) (X2) on *Return on Assets* (ROA) (Y)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	958889.243	1	958889.243	4.294	.072[b]
	Residual	1786614.757	8	223326.845		
	Total	2745504.000	9			

a. Dependent Variable: RETURN ON ASSETS

b. Predictors: (Constant), DEBT TO EQUITY RATIO

Source: Data processed from SPSS v22 2025

Based on Table 9, it can be seen that the results of the partial hypothesis test (F test) conclude that the $F_{calculated}$ value is > F_{table} or (4.294 > 4.066). This is also reinforced by P_{value} < Sig or (0.072 < 0.05). Thus, $H_{(03)}$ is rejected and $H_{(a3)}$ is accepted, so it can be concluded that there is a significant simultaneous effect between *the Current Ratio* and *Debt to Equity Ratio* on *Return on Assets* at PT Aneka Tambang Tbk.

c.Determination Coefficient Test

Table 10
Simultaneous Coefficient of Determination Test Results *Current Ratio* (CR) (X1) *Debt to Asset Ratio* (DAR) (X2) on *Return on Assets* (ROA) (Y)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.942[a]	.888	.855	210.025

a. Predictors: (Constant), DEBT TO EQUITY RATIO, CURRENT RATIO

b. Dependent Variable: RETURN ON ASSETS

Source: Data processed from SPSS v22 2025

Based on Table 8, it can be seen that the results of the Coefficient of Determination test show that the Adjusted R Square (coefficient of determination) value is 0.855, which means that the influence of the independent variable (X) on the dependent variable *Return on Assets* (RoA) (Y) is 85.5% influenced by other factors.

Discussion

1. *The Current Ratio* (CR) at PT Aneka Tambang (ANTAM) Tbk has no partial effect on *Return On Asset* (ROA). This refers to the results showing a $t_{calculated}$ value of 1.558 < t_{table} 5.504 and a significance value of 0.158 > 0.05.
2. *The Debt to Equity Ratio* (DER) at PT Aneka Tambang (ANTAM) Tbk partially affects *Return On Assets* (ROA). This refers to the results showing a $t_{calculated}$ value of -1.558 < t_{table} 5.504 and a significance value of 0.001 < 0.05.
3. *The Current Ratio* (CR) and *Debt to Equity Ratio* (DER) at PT Aneka Tambang (ANTAM) Tbk simultaneously affect *Return On Assets* (ROA). This refers to the results showing the value of $F_{(calculated)}$ 4.294> $F_{(table)}$ 4.066 and a significance value of 0.072 < 0.05.

Conclusion

Based on the results of the research and conclusions described above regarding the study of the Effect of *Current Ratio* (CR) and *Debt to Asset Ratio* (DAR) on *Return on Assets* (ROA) at PT Aneka Tambang TBK for the period 2020–2024, the following conclusions can be drawn:

1. The Current Ratio (CR) has no significant partial effect on Return on Assets (ROA) at PT Aneka Tambang Tbk for the period 2020–2024. This indicates that the company's liquidity level is not yet a major factor determining profitability. Although PT

2. ANTAM has adequate liquidity, most of its current assets have not been optimally utilized to generate income.
3. The Debt to Equity Ratio (DER) partially has a significant effect on Return on Assets (ROA). This means that financing decisions through debt affect the company's profitability. Efficient use of debt can increase asset productivity and company profits, but excessive use can pose financial risks.
4. Simultaneously, the Current Ratio (CR) and Debt to Equity Ratio (DER) have a significant effect on Return on Assets (ROA). This means that the combination of liquidity management and capital structure has an important contribution to PT ANTAM's profitability performance.
5. The results of this study support Signaling Theory, Trade-Off Theory, and Pecking Order Theory, which explain that financial ratios serve as signals in demonstrating financial management efficiency and the balance between internal and external financing.

Acknowledgments

The author expresses his praise and gratitude to Allah SWT for His mercy and blessings so that this research and journal compilation could be completed successfully. The author also expresses his deepest gratitude to:

1. The supervising lecturer who provided guidance, direction, and valuable input throughout the research process.
2. The Faculty of Economics and Business for providing academic support and research facilities.
3. PT Aneka Tambang Tbk (ANTAM) for providing secondary data as material for this research analysis.
4. Family and friends who have always provided prayers, motivation, and encouragement until this research was completed.

The author acknowledges that this research still has limitations. Therefore, constructive criticism and suggestions are highly appreciated for the improvement of future research. It is hoped that the results of this research will contribute positively to the advancement of knowledge, particularly in the fields of financial management and corporate performance analysis.

References

Amiruddin, F., Rahman, A., & Syafrudin, M. (2023) . Financial leverage and profitability dynamics in global mining firms post-pandemic. *Journal of Finance and Accounting Research*, *8*(2), 101–118.

Aleskerova, Y., & Fedoryshyna, L. (2024) . Financial management activities of enterprises in the modern economic conditions. *Baltic Journal of Economic Studies*, *10*(1), 54–62. https://doi.org/10.30525/2256-0742/2024-10-1-54-62

Ammy, B., & Hasibuan, J. S. (2020). The influence of Current Ratio and Debt to Equity Ratio on Return on Assets in Construction and Building Companies Listed on the Indonesia Stock Exchange. *International Journal of Economic and*

Technology Studies, 2(3), 44–55. https://jurnal.ceredindonesia.or.id/index.php/injects/article/view/172

Frank, M. Z., & Goyal, V. K. (2008). Trade-off and pecking order theories of debt. In *Handbook of Empirical Corporate Finance* (Vol. 2, pp. 135–202). Elsevier. https://doi.org/10.1016/B978-0-444-53265-7.50007-7

Ghozali, I. (2021). *Application of Multivariate Analysis with IBM SPSS 26 Program*. Diponegoro University Publishing Agency.

Indriantoro, N., & Supomo, B. (2018). *Business Research Methodology for Accounting and Management*. BPFE.

Kasmir. (2021). *Introduction to Financial Management (Third Edition)*. PT RajaGrafindo Persada.

Kasmir. (2023). *Financial Statement Analysis (Revised Edition)*. PT RajaGrafindo Persada.

Migliaccio, G., & de Palma, A. (2024). Profitability and financial performance of Italian real estate companies: Quantitative profiles. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-02-2024-0110

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 575–592. https://doi.org/10.2307/2327916

Nguyen, T. H., & Vo, D. H. (2022). Financial structure and firm performance in the mining sector: Global evidence during COVID-19. *Resources Policy*, *76*, 102–115. https://doi.org/10.1016/j.resourpol.2022.102115

Qablina, N. (2024). *Business and Financial Performance of the Indonesian Cosmetics And Household Industry: A Case Study of PT Mustika Ratu Tbk (2017–2022)* [Universitas Islam Indonesia]. https://dspace.uii.ac.id/handle/123456789/53483

Tbk., P. T. A. T. (2024). *Annual Report 2020–2024*. PT Aneka Tambang (Persero) Tbk. https://www.antam.com/id/investor/annual-reports

Rahman, M. A., & Azmi, N. (2021). Capital structure determinants and firm profitability: Revisiting pecking order theory. *Journal of Economic Studies*, *48*(5), 1102–1119. https://doi.org/10.1108/JES-10-2020-0481

Rohman, A., & Dewi, F. (2021). The role of capital structure in determining profitability: Evidence from Indonesian listed firms. *Indonesian Journal of Accounting and Finance*, *18*(2), 130–147.

Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, *87*(3), 355–374. https://doi.org/10.2307/1882010

Sugiyono. (2022). *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta.