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# Factors Affecting Capital Structure

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**Abstract:** This study aims to analyze the effect of asset growth, liquidity, asset structure, and company size on the capital structure of mining companies listed on the Indonesia Stock Exchange for the period 2019–2022. This study uses a quantitative approach with an explanatory method. The data used is secondary data in the form of companies' annual financial reports. The research sample was determined using purposive sampling and resulted in 27 companies with a total of 108 observations. Data analysis was performed using multiple linear regression with the help of SPSS software, after testing classical assumptions. The results show that simultaneously, all independent variables have a significant effect on capital structure. Partially, liquidity has a negative and significant effect on capital structure, while asset growth, asset structure, and company size show a negative but insignificant effect. These findings indicate that mining companies tend to prioritize the use of internal funds in making financing decisions, especially in uncertain economic conditions.

**Keywords:** Asset Growth, Liquidity, Asset Structure, Company Size, Capital Structure.

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## 1. INTRODUCTION

Capital structure is a strategic financial decision that determines the proportions of debt and equity used to finance a company. This decision has direct implications for the cost of capital, bankruptcy risk, and the company's long-term value. The financial literature shows that a suboptimal capital structure can increase financial burdens and reduce company performance, while an appropriate capital structure can enhance funding efficiency and increase company competitiveness (Ramli et al., 2019). Therefore, identifying the factors that influence capital structure is an important issue in contemporary financial management studies.

Various theories have been developed to explain corporate capital structure behavior, including the trade-off theory and the pecking order theory. The trade-off theory emphasizes the balance between the tax benefits of using debt and the cost of bankruptcy. In contrast, the pecking order theory explains companies' preference for internal funding before resorting to external debt and equity. Both theories assert that internal company characteristics play a significant role in determining capital structure policy. Yet, empirical evidence shows that these variables often exhibit contextual effects and are inconsistent across sectors and research periods (Stoiljković et al., 2022).

In the mining industry, the issue of capital structure becomes even more complex. This industry is capital-intensive, has a long business cycle, and is highly risky due to its dependence on global commodity price fluctuations. Mining companies require substantial investments in exploration, development, and production, making long-term financing policies crucial. In addition, the 2019–2022 period has been marked by significant economic dynamics, including the impact of the COVID-19 pandemic and commodity price volatility, which may influence the capital structure decisions of mining companies in Indonesia.

Several previous studies have examined the determinants of capital structure, focusing on internal firm variables. Asset growth is often associated with increased external funding requirements, reflecting the company's expansion and investment opportunities. Several studies have found that asset growth positively affects leverage, consistent with the need for funding to support expansion (Ramli et al., 2019; Venny & Handoyo, 2023). However, other studies show a negative or insignificant effect, especially when growth is financed through retained earnings or when companies avoid excessive debt risk (Tursina, 2024). These diverse findings indicate that the relationship between asset growth and capital structure remains empirically open.

Liquidity is also an important variable in explaining capital structure. High liquidity reflects a company's ability to meet short-term obligations and is generally associated with a preference for internal financing. In line with the pecking-order theory, several empirical studies have found that liquidity negatively affects capital structure.

Research by Ramli et al. (2019) and Tursina (2024) shows that companies with high liquidity tend to reduce their debt use because they have sufficient internal funds. Conversely, other studies show different findings.

Wahyuni and Kristanti (2024) and Venny & Handoyo (2023) found that liquidity has a positive effect on capital structure, especially in companies in capital-intensive industries. These findings indicate that high liquidity levels increase creditor confidence and the company's ability to meet long-term interest and principal payment obligations, thereby encouraging increased use of debt-based financing.

In addition, asset structure is an important determinant of a company's capital structure policy. According to the trade-off theory framework, high fixed assets can serve as collateral, increasing the likelihood that a company will obtain external financing at a lower cost, thereby potentially increasing the level of debt (Tangibility Hypothesis). Several empirical studies support this positive relationship.

For example, Venny & Handoyo (2023) found that asset structure has a significant positive effect on capital structure in Indonesian mining companies, indicating that companies with a larger proportion of fixed assets tend to have higher debt ratios. Similarly, Ginting et al (2022) reported that high fixed assets increase a company's ability to access long-term credit, thereby encouraging increased leverage.

However, several other studies report different results. Wahyuni and Kristanti (2024) and Ramdhonah et al. (2019) found no significant relationship between asset structure and capital structure. This suggests that the function of fixed assets as collateral does not always translate directly into increased debt, especially if creditors consider other factors such as asset quality or industry risk. Furthermore, Nugroho & Nugroho (2024) report a negative relationship between fixed assets and leverage in several mining sub-sectors, which may be due to the inability of certain assets to serve as effective collateral in the eyes of financing institutions.

Company size is one of the internal characteristics often used to explain capital structure policy. From the trade-off theory perspective, large companies tend to have better business diversification, lower bankruptcy risk, and broader access to capital markets and financial institutions. These conditions enable large companies to obtain debt-based financing at a relatively lower cost than small companies. In line with this argument, Ramli et al. (2019) found that company size has a positive effect on capital structure, indicating that larger companies tend to use debt in greater proportions. Similar findings were also reported by Stoiljković et al. (2022), who confirmed that company scale increases a company's capacity to manage long-term debt risk.

However, other empirical research results show different findings. Based on the pecking order theory, large companies generally can generate more stable profits, so they rely more on internal funding and tend to reduce their dependence on debt. Research by Ramdhonah et al. (2019) and Tursina (2024) found that company size has a negative or insignificant effect on capital structure, indicating that large companies do not always increase leverage even though they have broader access to funding.

Although the literature on capital structure is relatively extensive, previous research results show inconsistent findings, particularly regarding the influence of asset growth, liquidity, asset structure, and company size on capital structure. In addition, there is a lack of research that specifically examines mining companies in Indonesia with an observation period covering pre-pandemic, pandemic, and early economic recovery conditions (2019–2022). In fact, this period reflects significant changes in the business environment and corporate financing policies.

Based on this description, this study aims to analyze the effect of asset growth, liquidity, asset structure, and company size on capital structure in mining companies listed on the Indonesia Stock Exchange during the period 2019–2022. This study provides a theoretical contribution to enriching empirical studies on the determinants of capital structure in mining companies.

## 2. METHOD

This study uses a quantitative, explanatory research design to analyze the effects of asset growth, liquidity, asset structure, and company size on capital structure. The explanatory quantitative approach is used to test causal relationships among variables using numerical data and statistical analysis (Sugiyono, 2019). The research object is mining companies listed on the Indonesia Stock Exchange (IDX) using company financial report data for the period 2019–2022.

The data used in this study are secondary, in the form of mining company financial reports published by the Indonesia Stock Exchange. The sampling technique used is purposive sampling, which selects samples based on criteria relevant to the research objectives (Sugiyono, 2019). These criteria include mining companies that are listed consecutively during the 2019–2022 period, publish complete financial reports, and have data that is suitable for the research needs. Based on these criteria, 27 companies were selected as research samples, bringing the total number of observations during the research period to 108.

Capital structure as a dependent variable was measured using the Debt-to-Equity Ratio (DER), which is the ratio of a company's total debt to total equity and reflects its funding policy (Ghozali, 2021). The asset growth variable was measured by comparing the change in total assets from the current year to the previous year, then expressed as a ratio to describe the company's expansion rate (Kasmir, 2020). Liquidity was measured using the Current Ratio (CR), which shows the company's ability to meet its short-term obligations. In contrast, asset structure was measured through the proportion of fixed assets to total assets. Company size is measured using the natural logarithm of total assets, which aims to reduce data scale differences and produce a more normal distribution (Ghozali, 2021).

The collected data were analyzed using Statistical Package for the Social Sciences (SPSS) software. The analysis used multiple linear regression to determine the effects of asset growth, liquidity, asset structure, and company size on capital structure. Before testing the hypothesis, the regression model was first evaluated using classical assumption tests, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests, to ensure that the model met the necessary statistical criteria and produced unbiased estimates (Ghozali, 2021).

## 3. RESULTS AND DISCUSSION

Based on classical assumption testing, the regression model in this study generally meets the statistical prerequisites.

Table 1. Normality Test

| | |
|---|---|
| Kolmogorov-Smirnov Z | 0.980 |
| Asymp. Sig. (2-tailed) | 0.292 |

The normality test results using the Kolmogorov–Smirnov method yield a p-value of 0.292, which is greater than 0.05. Thus, the model residuals are normally distributed, allowing the regression analysis to proceed.

Table 2. Multicollinearity Test Results

| Model | Collinearity Statistics | |
|---|---|---|
| | Tolerance | VIF |
| PA | 0.907 | 1.102 |
| L | 0.844 | 1.185 |
| SA | 0.920 | 1.087 |
| UP | 0.996 | 1.004 |

In the multicollinearity test, all independent variables had tolerance values above 0.10 and Variance Inflation Factor (VIF) values below 10. These findings indicate that there was no high correlation between the independent variables, so the regression model was declared free from multicollinearity.

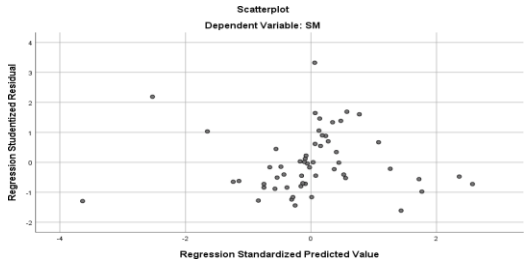


Figure 1. Heteroscedasticity Test Results

In addition, the results of the heteroscedasticity test based on a scatterplot indicate that the residuals are randomly distributed and do not form a pattern, suggesting no heteroscedasticity.

Table 3. Autocorrelation Test Results

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | 0.581[a] | 0.338 | 0.286 | 1.10445 | 1.498 |

Based on the autocorrelation test results, the DW value is 1.498. This means that the DW value of 1.498 is less than the DL value of 1.5909, indicating positive autocorrelation.

Table 4. Partial Test Results (T-test)

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .200 | 2.166 | | .092 | .927 |
| | PA | -0.109 | 0.115 | -0.114 | -0.950 | 0.346 |
| | L | -0.650 | 0.144 | -0.560 | -4.510 | 0.000 |

| | | | | | |
|---|---|---|---|---|---|
| SA | -0.122 | 0.115 | -0.126 | -1.063 | 0.293 |
| UP | -0.145 | 0.683 | -0.024 | -0.213 | 0.832 |

The results of the partial test (t-test) of asset growth on capital structure show significance. value is 0.346 > 0.05. This study finds that asset growth does not significantly affect capital structure. The results show that asset growth has a negative coefficient and is not significant for capital structure. This indicates that an increase in a company's assets does not lead to greater debt use. This observation is consistent with the pecking-order theory, which holds that growing firms prefer internal financing to external financing.

The findings are consistent with those of Susanti and Suarjaya (2014), Tursina (2024), and Ramdhonah et al. (2019), who argued that growth and leverage are negatively correlated as companies can finance growth with retained earnings. In the Indonesian mining sector, Ramdhonah et al. (2019) similarly argued that growth, as a determinant of policy debt, is not significant. Thus, in times of economic uncertainty, mining companies tend to be more cautious in increasing their financial liabilities.

The results of the partial test (t-test) of Liquidity on Capital Structure indicate that the p-value is 0.0000 < 0.05. Liquidity has been shown to have a negative, significant effect on capital structure. This indicates that the greater a company's ability to meet its short-term obligations, the lower its debt usage. Companies with adequate current assets will prefer internal financing rather than increasing risk through new loans.

This finding is consistent with the research by Ramli et al. (2019), Puspitasari (2022), and Odjanggai (2024) which shows that companies with high liquidity tend to have lower leverage. In addition, Wahyuni and Kristanti (2024) also confirm that an increase in the current ratio encourages companies to reduce their dependence on long-term debt. In the highly volatile mining industry, cash availability is an important factor in maintaining financial flexibility.

The results of the partial test (t-test) of asset structure on capital structure show significance. value is 0.293 > 0.05. Asset structure does not have a significant effect on capital structure. These results indicate that the proportion of fixed assets is not always a major consideration in financing decisions. Although in theory, fixed assets can be used as collateral, in practice, creditors also consider business risks and industry prospects.

This finding is in line with the research by Ginting et al (2022) and Gracia & Panggabean (2019), who found that tangibility does not always increase leverage in mining companies. However, this differs from Venny & Handoyo (2023), who found a significant positive relationship. This difference shows that the effectiveness of assets as collateral is highly dependent on economic conditions and credit policies in a given period.

The results of the partial test (t-test) show that the size of the company has no significant effect on capital structure. value of 0.832 > 0.05. This indicates that the size of total assets does not automatically determine debt usage preferences. Large companies may have broader access to funding, but they also have large internal funding capacities.

These results support the research of Astuti and Giovanni (2021) and Tursina (2024), who found that company size is not always a determinant of leverage after

controlling for other variables. Nonetheless, these findings contrast with those of Stoiljković et al. (2022), who found a positive correlation in several developing economies. The inconsistency further underscores the importance of contextual factors, particularly in the mining sector.

Table 5. Test Results (F Test)

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 31.729 | 4 | 7.932 | 6.503 | 0.000[b] |
| | Residual | 62.211 | 51 | 1.220 | | |
| | Total | 93.939 | 55 | | | |

Based on the F test results, Asset Growth, Liquidity, Asset Structure, and Company Size are jointly significant (p-value < 0.05). Thus, it can be concluded that the four variables of asset growth, liquidity, asset structure, and company size have a significant effect on capital structure. Research by Martini et al. (2021) confirms that these four factors interact in complex ways to influence capital structure.

## 4. CONCLUSION

This study aims to analyze the effect of asset growth, liquidity, asset structure, and company size on capital structure in mining companies listed on the Indonesia Stock Exchange for the period 2019–2022. The analysis shows that all independent variables simultaneously affect capital structure. However, partially, only liquidity has been proven to have a negative and significant effect on capital structure. Meanwhile, asset growth, asset structure, and company size show a negative but insignificant effect.

These findings indicate that a company's ability to meet its short-term obligations is a major factor in determining its debt policy, whereas increases in assets, fixed asset composition, and company scale do not necessarily lead to changes in the funding structure. Thus, capital structure decisions in mining companies during the study period reflect management's caution in utilizing internal funding sources rather than an increase in external financing.

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