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Analysis of the Effect of Long-Term and Short-Term Debt on Company Asset Growth

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Abstract

This study aims to analyze the effect of short-term debt and long-term debt on asset growth. Debt is an important form of external financing for companies to support their operational activities and asset expansion. Short-term debt is used to meet working capital needs, while long-term debt is used to finance long-term investments. This study uses a quantitative method with secondary data obtained from the financial reports of companies listed on the Indonesia Stock Exchange. This analysis was conducted using multiple linear regression to test the partial and simultaneous effects of variables on asset growth. The results show that short-term debt has a positive effect on asset growth because it can increase a company's working capital, while long-term debt affects the effectiveness of its use. A balanced financing structure of short-term and long-term debt is very important for optimal asset growth.

***Keywords**: Short-term debt; long-term debt; asset growth; capital structure.*

I. INTRODUCTION

Every company cannot run a business without capital because capital has a huge influence as a source of funds for companies in acquiring assets to carry out company activities. However, a company's achievements cannot be determined by the size of its capital, but rather by how it manages its assets efficiently.

Asset growth is a vital reflection of a company's competitiveness, demonstrating its ability to expand and strengthen its financial position. Amidst an increasingly competitive market, achieving sustainable asset growth is a crucial challenge that requires a well-developed funding strategy.

The funds needed to accelerate assets come from internal sources, such as retained earnings, and external sources, such as debt. Debt is generally a popular instrument for meeting capital needs. Short-term debt is payable within a period of less than 1 year and is generally used to cover daily operational needs, such as the procurement of raw materials. Long-term debt is payable within a period of more than 1 year and is more appropriately allocated for large investments, business development, and the purchase of fixed assets that will drive long-term growth.

Although debt is a catalyst for growth, unbalanced debt management carries risks. Excessive short-term dependence can put pressure on liquidity, while excessive long-term debt can burden the company with interest expenses and reduce financial flexibility.

Therefore, in-depth research on short-term and long-term debt in asset growth is very important. This discussion will serve as a strategic guide for management in formulating optimal, efficient, and sustainable funding policies.

II. RESEARCH METHODOLOGY

This type of research uses a quantitative approach with a descriptive-verificative method that aims to determine the effect of short-term debt and long-term debt on a company's asset growth. This quantitative approach was chosen because the research uses numerical data from company financial reports to test hypotheses statistically.

The data used is secondary data, namely data that has been published in a company's annual financial reports. The variable used is the dependent variable (Y), asset growth, which describes a company's ability to expand its existing resources over time.
Formula:

Asset Growth = ((Total Assets This Year - Total Assets Last Year) / Total Assets Last Year) × 100%
Using independent variables (X) (1)

A. Short-Term Debt (X_1)
This is a company's obligation that must be paid off in less than one year. It can be calculated using the formula [Short Term Debt Ratio] = Short Term Debt / Total Assets (2)

B. Long-Term Debt (X2)
These are obligations that must be repaid in more than one year. Calculated using: [Long-Term Debt Ratio] = Long-Term Debt / Total Assets (3)

C. Analysis Method
The data analysis method used is multiple linear regression, as used in the research by Mengga et al. (2023), Marjohan et al. (2025), and Wijaya et al.

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(2020). This analysis is used to determine the extent to which short-term and long-term debt affect company asset growth.

The regression method used is:

$$Y = \alpha + \beta 1X1 + \beta 2X2 + e \quad (4)$$

Explanation:

Y = Asset Growth
X_1 = Short-Term Debt
X_2 = Long-Term Debt
α = Constant
β_1, β_2 = Regression Coefficients
e = error

D. Classical Assumption Test

Referring to the analysis techniques in the journals by Putri & Hasanuh (2023), Kamaludin Ristiyana (2023), and Wita & Kurnia (2024), the classical assumption tests used are:

1. Normality Test

To ensure that the data is normally distributed.

2. Multicollinearity Test

To detect correlations between independent variables.

3. Heteroscedasticity Test

To determine whether there is variance inequality in the residuals.

4. Autocorrelation Test

Used primarily for panel/time series data so that residuals are not interrelated.

E. Hypothesis Testing

Hypothesis testing is performed by:

1. t-test (Partial)

Used to see the effect of each independent variable on asset growth.

Refer to the technique described by Hartati & Marsoem (2021).

2. F Test (Simultaneous)

To determine the combined effect of short-term and long-term debt on asset growth.

3. Coefficient of Determination (R^2)

To measure the ability of independent variables to explain dependent variables.

F. Analysis tools

Data processing was performed using SPSS software, as used in most previous studies such as Putri & Hasanuh (2023) and (Mezaluna & Versiandika, 2025).

III. RESULTS AND DISCUSSION

A. Liabilities Play an Important Role in Capital Structure and Financial Performance

Liabilities (debt) are a source of external funding for companies that will be used for operations or expansion. In capital structure, liabilities are directly related to equity, so the use of debt can affect a company's ability to generate shareholder profits and losses, which are measured by Return on Equity (ROE).

B. The Effect of Short-Term Debt (STD) on ROE → Positive and Significant

1. The t-value = 3.821 and significance 0.000 (<0.05) indicate that STD

has a significant and positive effect on ROE

Explanation:

2. Short-term debt has lower interest expenses, shorter tenors, and is generally used for operational working capital, not for long-term investments.
3. Because it has lower interest costs, net profit is not significantly eroded, thereby increasing the return for shareholders [ROE]

C. The effect of Long-Term Debt (LTD) on ROE → Negative and significant

1. The t-value = 3.477 and significance 0.001 (<0.05) indicate that LTD is significant but has a negative impact on ROE.

Explanation:

2. Long-term debt is typically used for fixed asset investments or business expansion.
3. However, LTD has higher interest rates, longer tenors, and potential early repayment penalties, so interest expenses weigh on company profits
4. Since ROE is calculated from net profit or equity, the meaning of profit declining due to high interest expenses → ROE also declines

D. The effect of Total Debt (TD) on ROE → Negative and significant

1. T-calculated = 2.699 sig = 0.010 (<0.05) → Total Debt has a significant and negative effect on ROE

Explanation:

2. Total Debt is a combination of STD and LTD when total debt increases =

oInterest expenses increase
oNet profit decreases
oThe company's ability to provide returns to shareholders decreases

E. Regression Model Shows Strong Relationship

The model test results show

1. R = 0.719 → the relationship between debt variables and ROE is relatively strong
2. R^2 = 0.517 → 51.7% of changes in ROE are influenced by liabilities
3. F test sig = 0.00 (<0.05) → the three debt variables simultaneously have a significant effect on ROE

This means that debt structure is a very decisive factor in financial performance, even though there are 48.3% other factors such as sales, cost efficiency, asset management, and market conditions.

F. These findings are consistent with previous theories and research

1. STD tends to support increased profitability because its costs are lower
2. LTD and TD tend to increase profits due to high interest and financial expenses

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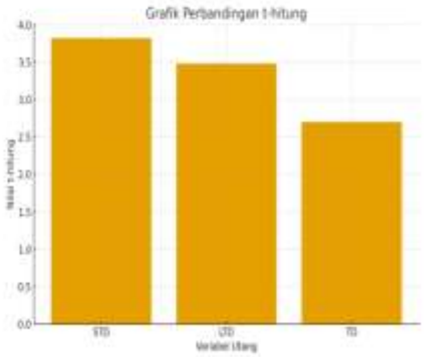

Figure 1. *Comparison of t-values*

IV. CONCLUSION

Based on the results of a study on the effect of short-term debt, long-term debt, and total debt) on Return on Equity (ROE), several key conclusions were drawn:

A. Short-term debt has a positive effect on ROE. The use of short-term debt can help increase a company's working capital at a relatively low interest rate, so that net profit is not significantly affected. The impact on returns for shareholders or ROE increases significantly.
B. Long-term debt has a negative and significant effect on ROE. Higher interest expenses, longer tenors, and potential penalties make long-term debt suppress net income. This causes ROE to decline even though debt is used for long-term investment financing.
C. Total debt has a significant negative impact on ROE. When total debt increases, total interest expenses increase. This reduces net profit and weakens the company's ability to provide returns to owners of capital, which tends to decline.
D. Overall debt usage has a strong influence on ROE. An R^2 value of 0.517 indicates that 51.7% of ROE changes can be explained by short-term debt, long-term debt, and total debt, while the remainder is influenced by other factors such as sales growth, operational efficiency, and asset management.
E. Debt structure is an important factor in financial performance. An unbalanced liability composition can increase financial risk and reduce profitability. Companies must manage their debt structure to maintain an optimal balance between short-term and long-term financing.

Research confirms that debt management is crucial to a company's profitability. Short-term debt has a positive impact, while excessive long-term debt and total debt actually reduce ROE performance. A strategic funding structure will help companies maintain financial health and provide optimal returns for shareholders.

V. RECOMMENDATIONS

Based on the research findings, companies are recommended to optimize the use of short-term debt because it has a positive and significant effect on Return on Equity (ROE). Short-term liabilities should be managed efficiently to support working capital and operational activities without creating excessive liquidity risk.

Meanwhile, companies should be more cautious in using long-term debt, as excessive long-term borrowing can reduce profitability due to higher interest expenses. Therefore, long-term debt should only be allocated to productive investments that generate returns higher than their financing costs.

Overall, maintaining a balanced debt structure between short-term and long-term liabilities is essential to improve financial performance and ensure sustainable growth. Future studies are suggested to include additional financial and macroeconomic variables and expand the research sample to obtain more comprehensive results.

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