The Effect of Profitability, Liquidity and Company Size on Capital Structure in Companies Listed on the Indonesian Stock Exchange

Ica Wulandari1*, Ika Wulandari2
1,2 Universitas Mercu Buana Yogyakarta, Indonesia
Email: ichaawulann@gmail.com, ikawulandari@mercubuana-yogya.ac.id

Abstract
This study investigates the effect of profitability, liquidity, and firm size on the capital structure of firms listed on the Indonesia Stock Exchange (IDX). Using data from manufacturing firms, the study found that profitability and liquidity have a negative and significant influence on capital structure decisions, with more profitable firms tending to rely on less debt and more internal sources of funds. However, firm size does not consistently have a significant negative impact on capital structure, suggesting that external factors such as capital market conditions and economic policies have a more dominant role in determining a firm's capital structure. These results provide important insights for financial practitioners in designing appropriate funding strategies to maximise firm value and effectively manage financial risk in the Indonesian capital market.

Keywords: Profitability, Liquidity, Company Size, Capital Structure

Introduction
Capital structure is a crucial element in corporate financial management because it determines the balance between debt and equity used for financing (Afa & Hazmi, 2021);(Lie et al., 2016);(Hanifa, 2019). Decisions on capital structure can significantly affect firm performance and value (Pradanimas & Sucipto, 2022);(Rianingsih et al., 2021). With an optimal capital structure, a firm can lower the overall cost of capital, reduce the risk of bankruptcy, and maximise shareholder value. Appropriate use of debt can provide tax benefits and increase return on equity, but it must be managed carefully to avoid excessive financial risk. Conversely, a preponderance of equity can provide financial stability and flexibility, although it may be more expensive. Therefore, prudent management of the capital structure is essential to ensure the long-term growth and sustainability of the company.

There has been an increasing trend in the use of leverage among issuers, with many companies choosing to increase the proportion of debt in their capital structure to take advantage of the relatively low cost of borrowing. The funding strategies used by companies are increasingly diverse, including the issuance of corporate bonds, sukuk, and syndicated
loans, which offer flexibility in managing capital requirements and risks. External factors such as government economic policies, interest rates, and macroeconomic stability play a large role in capital structure decisions. For example, loose monetary policy with low interest rates encourages companies to be more aggressive in taking on debt. On the other hand, global economic uncertainty and exchange rate fluctuations affect companies’ funding strategies and risk management, making them more cautious in balancing debt and equity.

The profitability of the company significantly affects the decision on capital structure (Sari & Djohar, 2022); (Octavian, 2022); (Gantino & Susanti, 2019). According to pecking order theory, more lucrative organizations prefer to rely on internal finance, such as retained earnings, before seeking external capital (Farizki et al., 2021). This happens because internal funding does not incur transaction costs and does not cause information asymmetry problems. On the other hand, trade-off theory suggests that corporations balance the tax benefits of debt with the possible consequences of bankruptcy (Fajaryani & Suryani, 2018); (Januardika, 2020). More lucrative businesses may be more motivated to employ debt to some extent to maximize the tax benefits of loan interest, while yet being careful not to increase the risk of bankruptcy.

Firm liquidity also plays an important role in determining capital structure. Companies with high liquidity have sufficient cash reserves to fulfil short-term obligations, so they may be less dependent on external debt. With high liquidity, companies can be more flexible in choosing the most efficient and favourable source of funding. In contrast, companies with low liquidity may be more forced to use short-term debt to fulfil daily operational needs, which may increase financial risk. A low degree of liquidity may also impede the company’s capacity to take advantage of investment possibilities that need big capital, due to inadequate access to the necessary money rapidly (Jati, 2017).

Firm size has a significant impact on capital structure decisions. Large firms tend to have easier access to capital markets and can obtain funding at a lower cost than small firms. In addition, large firms usually have the capacity to take higher risks as they have larger assets to pledge as collateral and more diverse sources of revenue. In contrast, small firms often face constraints in accessing external funding and may rely more on internal financing or loans from banks with stricter terms. The lower capacity to bear risk also makes small firms tend to be more conservative in the use of debt, to avoid greater risk of bankruptcy (Ilmi & Prastiwi, 2019).

The main objective of this study is to analyse the effect of profitability, liquidity, and company size on the capital structure of companies listed on IDX. This study aims to understand how these financial factors affect a firm’s decision to choose between debt and equity as a source of funding. By analysing data from companies listed on the IDX, this study is expected to identify significant patterns and trends in capital structure decisions and provide insight into effective financial strategies in the Indonesian capital market. The implications of the results of this study can guide financial managers in making optimal
funding decisions, taking into account factors such as profitability, liquidity, and firm size. This knowledge can help companies design a more efficient capital structure and reduce financial risk.

**Research Methods**

This study uses a quantitative approach. The quantitative method was chosen because it allows researchers to measure the relationship between variables in an objective and statistically testable way. The data used in this study are secondary data obtained from the annual financial statements of companies listed on the IDX during 2020-2022. The population in this study were all manufacturing companies listed on the IDX, but for analysis purposes, samples were taken using purposive sampling method. Sample selection criteria include companies that consistently publish annual financial reports during the study period, are not engaged in the financial sector, and have complete and relevant data for the variables studied. Purposive sampling is used because it allows researchers to select samples that meet certain criteria, so that the research results can be more targeted.

To analyse the data, this study used multiple linear regression analysis. This analysis was chosen because it allows researchers to measure the simultaneous effect of several independent variables on one dependent variable (Gujarati & Porter, 2009). Before conducting regression analysis, the data will first be tested with classical assumption tests, including normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test, to ensure that the data are eligible for regression analysis (Wooldridge, 2015).

Data processing and statistical analysis will be carried out using SPSS. This software was chosen because it has sufficient capabilities to perform complex statistical analyses and has been widely used in economic and financial research (Pallant, 2016). The results of the analysis will be interpreted to answer the research questions and test the hypotheses that have been formulated previously. In addition, the results of this study will be compared with the findings of previous studies to see the similarities or differences that exist.

**Results and Discussion**

**Result**

The data in this research was obtained using the documentation method, namely collecting and analyzing secondary data. This research uses financial report data from IDX for the 2020-2022 period. The sampling method used in data collection was a purposive sampling method with a population of 55 companies. Based on the criteria set by the author in the previous chapter, the following sample size was obtained:

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturing companies (Food and Beverages Sector) with Active status</td>
<td>55</td>
</tr>
</tbody>
</table>
The Effect of Profitability, Liquidity and Company Size on Capital Structure in Companies Listed on the Indonesian Stock Exchange

<table>
<thead>
<tr>
<th>Companies with incomplete data as of 2020-2022</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>40</td>
</tr>
</tbody>
</table>

**Source:** Secondary Data Processed, 2023

Table 1 shows the number of manufacturing companies in the manufacture industry listed on the IDX from 2020 to 2022, with a total of 55 companies.

**Classic assumption test**

**Normality Test**

The significant value in the results of the Normality Test using SPSS using Kolmogorov-Smirnov indicates whether the data used in this study is normally distributed. If the significance value is greater than 0.05, the data is normally distributed; this test uses the SPSS 25 program.

<table>
<thead>
<tr>
<th>Table 2. Normality Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-Sample Kolmogorov-Smirnov Test</td>
</tr>
<tr>
<td>Unstandardized Residual</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Normal Parameters&lt;sup&gt;a,b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Most Extreme Differences</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Test Statistic</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Test distribution is Normal.
<sup>b</sup> Calculated from data.
<sup>c</sup> Lilliefors Significance Correction.

**Source:** Secondary data processed, 2023

According to table 3, the normality test results have a probability value of 0.061, which is greater than 0.05, indicating that the residuals are normally distributed.

**Multicollinearity Test**

A multicollinearity test determines whether there is a correlation between independent variables in the regression process by examining the Variance Inflation Factor (VIF). Using SPSS 25 to process the data, multicollinearity is indicated if the VIF is greater than 10, while a VIF of 10 or less indicates no multicollinearity. The following are the results of the multicollinearity test:

<table>
<thead>
<tr>
<th>Table 3. Multicollinearity Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficients&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Unstandardized Coefficients</td>
</tr>
<tr>
<td>Model</td>
</tr>
</tbody>
</table>

**Source:** Secondary Data Processed, 2023
Table 4 demonstrates that all variables have a VIF value < 10, indicating that there is no multicollinearity between the independent variables.

**Autocorrelation Test**

These test determines whether there is a relationship in the linear regression model between confounding errors in period t and confounding errors in period t-1 (prior).

**Table 4. Autocorrelation Test Results**

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>.221</td>
<td>.449</td>
<td>.324</td>
<td>14.72046</td>
<td>2.179</td>
</tr>
<tr>
<td>a. Predictors:</td>
<td>(Constant), UK. PERUSAHAAN, PROFITABILITAS, LIKUIDITAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Dependent Variable: STRUKTUR MODAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on table 5, it can be concluded: Durbin Watson (dW) 2.179 means > dL (1.651) meaning there is no autocorrelation. Durbin Watson (dW) 2.179 > dU (1.753) meaning there is no autocorrelation. Durbin Watson (dW) 2.179 < value (4-dU) 2.247 meaning dW is located between dU and 4-dU so there is no autocorrelation. Durbin Watson (DW) 2.179 < value (4-dL) 2.349 meaning dW is located between dL and 4-dL so there is no autocorrelation

**Heteroscedasticity Test**

The heteroscedasticity test determines whether there is an inequality in variance in the regression model between the residuals of one observation and another. To determine the existence or lack of heteroscedasticity, use the Glejser test on the SPSS 25 output results. If the independent variable's significance value is ≤ 0.05, it indicates heteroscedasticity. The Glejser test in research yielded the following results:

**Tabel 5. Heteroscedasticity Test Results**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>20.349</td>
<td>11.978</td>
</tr>
<tr>
<td>PROFITABILITAS</td>
<td>-.849</td>
<td>.465</td>
</tr>
<tr>
<td>LIKUIDITAS</td>
<td>-.377</td>
<td>.548</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Abs_RES
The Effect of Profitability, Liquidity and Company Size on Capital Structure in Companies Listed on the Indonesian Stock Exchange

**Source:** Secondary data processed, 2023

Table 6 show that the variables of profitability, liquidity and company size do not have heteroscedasticity, which means that the residual value for each predicted value varies and the variation tends to be constant.

**Multiple Linear Regression Analysis**

The statistical model used to see Profitability (ROA), Liquidity (CR), and Company Size (Size) which influence Capital Structure (DER) and to find out the variables that influence it is by using regression analysis (including parametric statistics). Parametric statistics is used to evaluate interval and ratio data. The regression analysis methodology employed in this study is multiple linear regression. The data was handled with SPSS.

**Table 6. Multiple Linear Regression Results**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>10.944</td>
<td>.693</td>
</tr>
<tr>
<td>PROFITABILITAS</td>
<td>-0.210</td>
<td>-11.962</td>
</tr>
<tr>
<td>LIKUIDITAS</td>
<td>-0.611</td>
<td>-10.995</td>
</tr>
<tr>
<td>UK. PERUSAHAAN</td>
<td>0.176</td>
<td>.243</td>
</tr>
<tr>
<td>a. Dependent Variable: STRUKTUR MODAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Secondary data processed, 2023

In Table 7 above, the results of the multiple linear regression calculation are as follows:

\[ Y = 10.944 - 0.210 X_1 - 0.611 X_2 + 0.176 X_3 + e \]

Keterangan :
- Y : Struktur Modal (DER)
- \( X_1 \) Profitabilitas (ROA)
- \( X_2 \) Likuiditas (CR)
- \( X_3 \) : Ukuran Perusahaan (Size)

The equation above shows that:
1. Constant
   
   The constant value is 10.944, which means that if the independent variable consisting of profitability, liquidity and company size variables is zero then the capital structure is 10.944.
2. Profitability Coefficient (ROA)
   
   The profitability variable (ROA) has a negative regression coefficient on capital structure (DER), the coefficient value for the profitability variable (ROA) in the regression equation shows a negative value (0.210). This means that if the value of the profitability variable (ROA) increases, the capital structure (DER) will decrease.
3. Liquidity Coefficient (CR)
   
   The liquidity variable (CR) has a negative regression coefficient on capital structure (DER). The coefficient value for the liquidity variable in the regression equation shows a
negative value (0.611). This means that if the value of the liquidity variable (CR) increases, the capital structure (DER) will decrease.

4. Company Size Coefficient (Size)

The company size variable (size) has a positive regression coefficient on capital structure (DER), the coefficient value for the company size variable in the regression equation shows a positive value (0.176). This means that if the value of the company size variable (size) increases, the capital structure (DER) will increase. The t test is used to measure whether there is a partial influence of the independent variables (profitability, liquidity and company size) on the dependent variable (capital structure). This test can be done by looking at the significance value of each variable. If the probability value is <0.05 then H1 is accepted and Ho is rejected. Hypothesis as follows:

H0: The independent variable partially has no effect
H1: The independent variable has a partial effect

Hypothesis Test Result

Effect of Profitability on Capital Structure of Manufacturing Companies on the IDX

Based on the test results, it can be seen that t count > t table (-11.962 > 1.96) and the significance value is 0.002 > 0.05. This value indicates that profitability negatively affects the capital structure significantly in manufacturing companies on the IDX.

Effect of Liquidity on Capital Structure of Manufacturing Companies on the IDX

Based on the test results, it can be seen that t count > t table (-10.995 > 1.96) and the significance value is 0.012 > 0.05. This value indicates that liquidity negatively affects the capital structure significantly in manufacturing companies on the IDX.

Effect of Company Size on Capital Structure of Manufacturing Companies on the IDX

Based on the test result, it can be seen that t count < t table (0.243 < 1.96) and significant value 0.068 < 0.05. This value indicates that company size does not have an influence on capital structure in manufacturing company on the IDX.

Discussion

Effect of Profitability on Capital Structure of Manufacturing Companies on the IDX

The test results indicate that profitability negatively affects the capital structure of manufacturing companies on the IDX, which means that companies with higher levels of profitability tend to have a lower proportion of debt in their capital structure. The pecking order theory proposed by Myers and Majluf states that companies prefer to use internal funding sources such as retained earnings rather than seeking external funding (Astuti & Giovanni, 2021). This is due to the desire to avoid transaction costs and information asymmetry problems that often accompany external funding. Therefore, more profitable manufacturing companies will be more likely to use the profits generated to finance their operations and investments, reducing the need for debt.

Empirical studies support this finding. Research by Mulyawati (2022) shows that profitability has a negative relationship with debt levels, as more profitable firms tend to use
their internal profits to fund capital requirements. This research is relevant in the context of manufacturing companies on the IDX, where this sector often faces high operational and investment costs. By relying on higher profitability, companies can avoid reliance on debt that could increase the risk of bankruptcy and the interest burden to be paid.

Furthermore, research by Himam (2020) also found that profitability has a negative relationship with leverage in capital structure. In the context of manufacturing companies on the IDX, more profitable companies tend to have stronger and more stable cash flows, which allow them to fund investment projects without the need to seek external funding. This not only reduces the cost of capital but also minimises the financial risks associated with debt. In addition, Susanti (2020) research supports this argument by finding that companies with high profitability tend to reduce the use of debt in their capital structure. Manufacturing companies on the IDX, with high profitability often have a preference for using cheaper and risk-free internal funds over debt which incurs interest payment obligations and bankruptcy risk.

This dynamic is crucial for stakeholders, including investors and financial managers, as it affects the risk and return profile of the companies. Companies with higher profitability and lower leverage are often perceived as less risky and more financially stable, attracting more investors. Conversely, highly leveraged companies may face higher interest obligations and financial distress, which can negatively impact their stock performance and valuation.

**Effect of Liquidity on Capital Structure of Manufacturing Companies on the IDX**

The test results reveal that liquidity has a negative and considerable impact on capital structure in manufacturing companies listed on IDX. Liquidity is an important consideration in capital structure decisions for manufacturing companies listed on the IDX. High liquidity allows the company to have sufficient cash reserves to fulfil short-term obligations without having to rely on expensive short-term debt. Thus, organizations with a high amount of liquidity tend to have less debt in their capital structure.

Empirical research has confirmed the negative relationship between liquidity and capital structure. For example, a study by Simamora (2019) who discovered that enterprises with stronger liquidity likely to have lower leverage. This study is relevant in the context of manufacturing companies on the IDX, where sufficient liquidity can help companies manage financial risks and maintain financial flexibility that is important to support long-term growth.

In addition, research by Damayanty (2022) showed that firm liquidity has a significant negative effect on the use of debt in the capital structure. The results of this study confirm that companies with higher liquidity are more likely to use internal capital in funding investments, thereby reducing their need for debt. In the context of manufacturing companies on the IDX, where access to external funding sources may not be as flexible as in more
mature capital markets, the benefits of high liquidity in reducing dependence on debt may be key to maintaining financial stability and sustainable growth.

Besides affecting the capital structure, liquidity can also affect the overall performance of the company. Research by Purwandari (2018) found that low liquidity can be a potential indicator of greater financial problems in the future, including increased default risk. Therefore, managing liquidity well is not only important for optimal capital structure decision-making but also to ensure the continuity and stability of the company in the long run.

High liquidity not only helps in managing operational expenses and unexpected financial needs but also enhances the firm's ability to invest in new opportunities without incurring additional debt. Conversely, low liquidity can constrain a company's ability to respond to market changes and invest in growth initiatives, potentially leading to higher borrowing costs and financial instability. Therefore, effective liquidity management is crucial for manufacturing companies on the IDX to maintain a balanced capital structure, attract investors, and sustain long-term profitability and competitiveness.

**Effect of Company Size on Capital Structure of Manufacturing Companies on the IDX**

The test results indicate that company size has no influence on the capital structure of manufacturing companies on the IDX. This result contradicts the findings of Juliantika & Dewi (2016). This indicates that other factors may be more dominant in determining the capital structure of manufacturing companies. Financial theories such as pecking order theory and trade-off theory predict that larger firms may have better access to capital markets and the ability to obtain funding at a lower cost, thus tending to use more debt. However, in the context of a developing capital market in Indonesia, other factors such as liquidity, profitability and tax policy are often more influential in capital structure decision-making.

Manufacturing firms of different sizes do not always take the same approach in choosing their capital structure, as each firm's preferences and financial condition may vary. In addition, external factors such as capital market conditions and tax policies often have a more significant impact on capital structure than firm size itself. These findings illustrate the complexity of capital structure decision-making, where decisions are influenced not only by internal firm factors but also by broader external factors.

Furthermore, specific factors such as capital requirements for expansion, financial risk management, and management's preference for risk often influence capital structure decisions more than firm size itself. These findings illustrate that in identifying the determinants of capital structure, it is important to consider the complex internal and external dynamics that affect each firm uniquely.

In addition to internal firm factors and external market conditions, investor preferences and market perceptions of risk also play a key role in determining capital structure. Companies that are perceived to have lower risk tend to have easier access to capital at a lower cost, either through equity or debt. Therefore, communication strategies and
transparency in financial reporting as well as dividend and risk management policies can influence how the market assesses a company's capital structure. Companies should also consider investors' preferences towards leverage and dividend policy, as these may affect share value and access to capital in the future. In this context, the formulation of a company's capital structure on the IDX is not only based on internal and external factors, but also takes into account market dynamics and investor perceptions that may change over time.

Thus, firm size does not consistently influence the capital structure of manufacturing firms on the IDX. While firm size may influence access to capital markets and the potential to obtain funding at a lower cost, factors such as liquidity, profitability, tax policy, and capital market conditions often play a more dominant role in a firm's financial decision-making.

Conclusion
In this study, the findings show that profitability and liquidity have a significant influence on firms' capital structure decisions, with more profitable firms tending to use less debt and more internal sources of funds such as retained earnings. High liquidity also provides flexibility in financial management, reducing dependence on short-term debt. On the other hand, firm size does not consistently have a significant negative impact on capital structure, suggesting that other factors such as capital market conditions and economic policies have a more dominant role in corporate financial decision making.

In conclusion, this study provides valuable insights for financial managers in understanding the factors that influence capital structure in the Indonesian capital market environment. The use of financial theory approaches such as pecking order theory and trade-off theory in the context of an evolving capital market demonstrates the complexity of capital structure decision making. Therefore, to maximise firm value and manage financial risk effectively, financial managers need to carefully consider profitability, liquidity and other external factors in designing the optimal funding strategy. This study also makes a theoretical contribution by expanding the understanding of capital structure dynamics in emerging capital markets such as the IDX.

BIBLIOGRAPHY
Ica Wulandari*, Ika Wulandari


The Effect of Profitability, Liquidity and Company Size on Capital Structure in Companies Listed on the Indonesian Stock Exchange


Copyright holders:
Ica Wulandari*, Ika Wulandari (2024)

First publication rights:
Journal of Syntax Admiration

This article is licensed under: