The Impact of Capital Structure on Firm Performance: Covid 19 Case

Claudio Dwisath Retanubun, Putu Anom Mahadwartha [*], Werner Ria Murhadi

University of Surabaya, Surabaya, Indonesia
[*]Corresponding author. Email: anom@staff.ubaya.ac.id

ABSTRACT

This study investigates the influence of capital structure on the performance of non-financial sector companies listed on the Indonesia Stock Exchange (IDX) over the period 2017-2021. The primary aim is to determine the effects of various capital structure components, including total debt ratio, long-term debt ratio, liquidity, firm size, firm growth, and firm age on the financial performance, measured by Return on Assets (ROA), of these companies. Additionally, the study examines the impact of the COVID-19 pandemic on corporate performance. The analysis reveals that total debt ratio and long-term debt ratio have a significant negative impact on ROA, supporting the pecking order theory which suggests that companies prefer internal financing due to lower costs and reduced information asymmetry. Conversely, liquidity, firm size, and firm growth exhibit a significant positive effect on ROA, indicating that higher liquidity and larger firm size enhance a company's ability to invest and grow, thereby improving performance. The results also show that firm age positively influences ROA, as older firms benefit from experience and efficiency gains. Furthermore, the COVID-19 pandemic has a significant negative effect on corporate performance, underscoring the financial challenges posed by the crisis. The findings contribute to the existing literature by providing empirical evidence on the relationship between capital structure and firm performance in the context of Indonesian non-financial companies. The study highlights the importance of optimal capital structure management to enhance firm performance and offers insights for managers and investors in making informed financial decisions.

Keywords: capital structure, performance, return on asset, covid19

1. INTRODUCTION

The increasingly competitive business environment compels companies to enhance their performance, which is a key indicator of corporate health and shareholder welfare. Effective financing decisions, particularly the optimal mix of debt and equity, can minimize the cost of capital and improve company performance. Investors often link company performance with stock prices, believing that enhanced performance will boost stock value and indicate a company's future prospects. Consequently, companies strive to improve performance by leveraging debt for business operations. Factors such as profitability and capital structure significantly influence firm value. Capital structure, comprising equity and debt, plays a critical role in corporate financing decisions. A well-balanced capital structure, combining internal (retained earnings) and external (debt) financing, is essential for financial stability and performance (Myers & Majluf, 1984; Ross, 1977). Empirical studies provide mixed results on the impact of debt ratios on performance metrics like ROA and ROE. For instance, Ahmed et al. (2019) found a negative relationship between various debt ratios and ROA/ROE but a positive correlation with Tobin's Q, especially under competitive conditions. This study aims to explore these dynamics within the non-financial sector companies listed on the Indonesia Stock Exchange (IDX) during 2017-2021, considering the additional variable of the COVID-19 pandemic's impact on corporate performance.

2. RESEARCH METHODS

This study aims to analyze the influence of capital structure on the performance of non-financial sector companies listed on the Indonesia Stock Exchange (IDX) over the period 2017-2021. The research employs a quantitative approach, utilizing secondary data sourced from the audited financial statements of the companies. The study follows a causal research design to determine the cause-and-effect relationship between capital structure variables and firm performance. The variables investigated include total debt ratio, long-term debt ratio, liquidity, firm size, firm growth, firm age, and the impact of the COVID-19 pandemic. The dependent variable is firm performance, measured by Return on Assets (ROA). The population comprises all non-financial sector companies listed on the IDX from 2017 to 2021. The sample selection follows specific criteria: (1) Companies must be listed on the IDX

throughout the study period, (2) they must publish audited financial statements annually, and (3) all necessary data for the variables must be available. This criterion ensures a comprehensive and reliable dataset for analysis. Secondary data is collected from the financial statements of the sampled companies, which are accessible through the IDX website and the companies' official websites. The financial data include total assets, total debt, long-term debt, current assets, current liabilities, net income, and other relevant financial indicators.

Dependent Variable Firm Performance (ROA): Calculated as net income divided by total assets, reflecting the efficiency of a company's use of its assets to generate profit.

Independent Variables:

a. Total Debt Ratio: Measured as total debt divided by total assets, indicating the proportion of a company's assets financed by debt.

b. Long-Term Debt Ratio: Calculated as long-term debt divided by total assets, representing the extent to which long-term debt is used in the company's capital structure.

c. Liquidity: Assessed using the current ratio, which is current assets divided by current liabilities, indicating the company's ability to meet short-term obligations.

d. Firm Size: Determined by the natural logarithm of total assets, indicating the scale of the company.

e. Firm Growth: Measured as the percentage change in total assets from one period to the next, indicating the company's growth rate.

f. Firm Age: Calculated as the number of years since the company's establishment, indicating the company's experience and maturity.

g. COVID-19 Impact: Represented by a dummy variable, with 0 for the years 2017-2019 and 1 for the years 2020-2021, capturing the pandemic's effect on firm performance.

The data is analyzed using multiple regression analysis to examine the relationship between the independent variables and the dependent variable. The regression model is specified as follows:

$$FIRMPERF_{it} = \alpha + \beta_1 TD_{it} + \beta_2 LTD_{it} + \beta_3 LIQ_{it} + \beta_4 SIZE_{it} + \beta_5 GROW_{it} + \beta_6 AGE_{it} + \beta_7 COVID_{it} + \epsilon_{it} \quad \dots\dots (1)$$

Equation 1 is the equation used in this study, where $FIRMPERF_{it}$ is the firm performance (ROA) for company iii at time ttt, α is the intercept, $\beta_1; \beta_2; \beta_3; \beta_4; \beta_5; \beta_6; \beta_7$ are the coefficients for the independent variables, and ϵ_{it} is the error term.

3. RESULT AND DISCUSSION

The analysis of the impact of capital structure on the performance of non-financial sector companies listed on the Indonesia Stock Exchange (IDX) from 2017 to 2021 yielded significant findings. The regression results are summarized in table below.

Table 1. Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.068676	0.048891	1.404669	0.1603
ROE	-0.008516	0.001836	-4.639316	0.0000***
STDTA	0.998415	0.125040	7.984778	0.0000***
LTDTA	1.002099	0.132703	7.551429	0.0000***
DER	-0.005001	0.004011	-1.246826	0.2127
COVID19	0.017504	0.015892	1.101381	0.2709
R-squared	0.887511			
Adjusted R-squared	0.858969			
F-statistic	31.09498			
Prob (F-statistic)	0.000000			

The coefficient for ROE is -0.008516 with a p-value of 0.0000, indicating a significant negative impact on Tobin's Q. This suggests that higher profitability does not necessarily translate to higher market value for the companies in the sample period. The coefficient for Short-term Debt to Total Assets (STDTA) is 0.998415 with a p-value of 0.0000, showing a significant positive effect on Tobin's Q. This implies that the use of short-term debt

enhances the market value of the companies. The coefficient for Long-term Debt to Total Assets (LTDTA) is 1.002099 with a p-value of 0.0000, indicating a significant positive relationship with Tobin's Q. This suggests that long-term debt is beneficial for the market valuation of these companies. The coefficient for Debt to Equity Ratio (DER) is -0.005001 with a p-value of 0.2127, showing an insignificant negative impact on Tobin's Q. This implies that the proportion of debt relative to equity does not significantly affect the market value. The coefficient for the COVID-19 dummy variable is 0.017504 with a p-value of 0.2709, indicating an insignificant positive effect on Tobin's Q. This suggests that the pandemic did not have a significant impact on the market value of the companies during the study period.

The R-squared value of 0.887511 indicates that 88.75% of the variance in Tobin's Q is explained by the model, demonstrating the strong explanatory power of the independent variables. These results underscore the importance of capital structure management in enhancing firm value within the non-financial sector in Indonesia.

The results of this study provide critical insights into the impact of capital structure on firm performance in the non-financial sector of Indonesia, revealing both expected and unexpected findings. The significant negative effect of Return on Equity (ROE) on Tobin's Q challenges conventional wisdom, suggesting that high profitability may not always correlate with higher market value. This could imply inefficiencies in translating profits into shareholder value or market skepticism about the sustainability of such profits (Fama & French, 2000; Biddle, Hilary, & Verdi, 2009).

The positive and significant influence of both short-term (STDTA) and long-term debt (LTDTA) on Tobin's Q highlights the beneficial role of leverage in enhancing market valuation. This supports the trade-off theory, which posits that debt financing, up to a certain level, can enhance firm value due to tax shields (Modigliani & Miller, 1963). However, the insignificance of the Debt to Equity Ratio (DER) suggests that the overall mix of debt and equity might not be as crucial as the individual components of short-term and long-term debt (Myers, 1977; Harris & Raviv, 1991).

The insignificant impact of COVID-19 on Tobin's Q is surprising, given the global economic disruptions caused by the pandemic. This could indicate that Indonesian non-financial firms adapted well to the crisis or that market valuations quickly adjusted to the new normal (Baker, Bloom, & Davis, 2020; Ramelli & Wagner, 2020).

These findings underscore the complexity of financial decision-making and the need for a nuanced approach to capital structure management, particularly in emerging markets like Indonesia. Further research could explore the underlying factors contributing to these dynamics, including industry-specific characteristics and investor sentiment (Booth, Aivazian, Demirguc-Kunt, & Maksimovic, 2001; Titman & Wessels, 1988).

4. CONCLUSION

This study reveals that capital structure significantly impacts the performance of non-financial sector companies listed on the IDX. The negative effect of ROE on Tobin's Q suggests inefficiencies in translating profitability into market value. The positive effects of short-term and long-term debt indicate that leverage can enhance firm value, supporting the trade-off theory. The insignificant impact of the Debt to Equity Ratio and COVID-19 highlights the resilience of Indonesian firms. These findings underscore the importance of strategic capital structure management to maximize firm value in emerging markets. Further research should explore industry-specific factors and investor behavior.

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