

PROFITABILITY AND CAPITAL STRUCTURE'S EFFECT ON FIRM VALUE: THE MODERATING INFLUENCE OF COMPANY SIZE**Reisha Savira Mulyawati Ardiansyah, Eriana Kartadjumena**

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Abstract

This study aims to examine and test the influence of profitability and capital structure on firm value, with company size as a moderating variable in technology companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2022. This quantitative research employs convenience sampling with a sample size of 32 companies. The data used in this study is secondary data, comprising 94 financial statements. The analysis was conducted using moderated regression analysis with the assistance of eViews version 13. The results indicate that profitability does not affect firm value, whereas capital structure does influence firm value. Additionally, company size weakens the effect of profitability and capital structure on firm value

Keywords: Capital structure, Firm Size, Firm Value, Profitability, Technology Companies.

INTRODUCTION

According to Salvatore (2005), the primary goal of a company is to enhance its value, particularly for publicly listed companies, to increase shareholder wealth. Financial reports and good financial ratios can indicate a well-run business and increase company value. Emphasize the importance of company value for shareholder prosperity, measured by ratios like Price to Book Value (PBV), which reflects the company's stock price relative to its book value per share.

The Indonesia Stock Exchange (IDX) oversees stock trading and classifies industries into sectors like IDXTECHNO, which includes technology companies. In August 2023, the IDXTECHNO index declined by -0.91%, contrasting the overall market growth. Several key companies in this index saw significant stock price drops and net losses, such as PT Digital Mediatama Maxima Tbk. and PT Global Digital Niaga, Tbk.

The decline in IDXTECHNO can be attributed to the depreciation in the stock prices of several companies classified within this category. When companies constituting the stock index simultaneously experience a reduction in their share prices, the index itself is consequently affected and declines. Several companies within the top ten constituents of IDXTECHNO reported a decrease in their stock prices and incurred net losses during the month of August 2023. Below is a list of the top ten constituents of IDXTECHNO (dataindonesia.id):

How to cite: Reisha Savira Mulyawati Ardiansyah, Eriana Kartadjumena (2024) Profitability and Capital Structure's Effect on Firm Value: The Moderating Influence of Company Size, (06) 10,

E-ISSN: [2684-883X](#)

Table 1 Top Ten Constituent Companies On IDXTECHNO

No	Kode	Nama Perusahaan	Market Capitalization	Index Weight	Price Change (%)	Net Profit/Loss
1	DCII	DCI Indonesia Tbk.	15.34 T	21.83%	-5.77%	Rp 632,8 M
2	GOTO	GoTo Gojek Tokopedia Tbk.	14.31 T	20.36%	-6.59%	-Rp 7.160 M
3	BUKA	Bukalapak.com Tbk	11.33 T	16.13%	-16.79%	Rp -389,27 M
4	EMTK	Elang Mahkota Teknologi Tbk.	8.98 T	12.78%	-43.20%	-Rp 444,18 M
5	BELI	Global Digital Niaga Tbk.	8.66 T	12.32%	-3.83%	-Rp 1.750 M
6	MCAS	M Cash Integerasi Tbk.	2.47 T	3.51%	-12.77%	Rp 3.550 M
7	MTDL	Metrodata Electronic Tbk.	2.04 T	2.90%	-14.48%	Rp 272 M
8	NFCX	NFC Indonesia Tbk.	1.81 T	2.58%	-11.87%	Rp 3,03 M
9	DMMX	Digital Mediatama Maxima Tbk.	0.86 T	1.23%	-58.18%	Rp 10,48 M
10	WIRG	WIR ASIA Tbk.	0.84 T	1.20%	2.44%	Rp 26,02 M

The decline in technology sector stocks is attributed to financial performance falling short of market expectations. Such losses are inevitable due to the substantial investments and extended timelines required for establishing a digital ecosystem. According to Nafan Aji Gusta, an Analyst at Mirae Sekuritas, achieving profitability in technology firms is a gradual process (Gumilar, 2023).

The continuous decline in stock prices of IDXTECHNO companies, despite increased consumer bases for firms like Gojek and Bukalapak, is problematic for investors, as it negatively impacts the company's value. Companies must sustain their stock prices to deliver optimal returns to shareholders. A high Price-to-Book Value (PBV) ratio boosts market confidence in the company's future prospects and signifies significant shareholder wealth (Hermuningsih, 2013). Investors evaluate a company's value based on its financial performance, as detailed in financial statements. Improved financial performance is expected to enhance company value, thereby increasing investor returns. Better financial performance correlates with higher company value and greater investor returns (Widagdo et al., 2020). Thus, a company's increased value can attract potential investors seeking returns on their investments.

The Price-to-Book Value (PBV) ratio is a valuable metric for assessing firm value as it compares the share price to the company's book value. Share demand typically increases with rising share prices, driven by enhanced profitability, higher dividend payouts, and improved company liquidity. It is anticipated that better financial performance will correspondingly enhance firm value. Essentially, stronger financial performance leads to higher firm value and increased returns for investors (Widagdo et al., 2020).

Profitability can influence the fluctuations in a company's stock price (Hikmah et al., 2019). Profitability impacts stock prices, and the technology sector's stock decline is

attributed to unmet financial performance expectations. Noteworthy companies like Gojek and Bukalapak, despite increased user transactions, experienced net losses and falling stock prices post-IPO, highlighting challenges in financial performance and liquidity risks.

Capital structure is crucial to a company's overall value. An optimal capital structure balances debt and equity to minimize costs and maximize returns. According to Brigham & Houston (2011), a well-managed capital structure, as measured by ratios such as the Debt-to-Equity Ratio (DER), significantly influences company value. A high DER indicates greater financial leverage and risk, whereas a balanced ratio reflects a stable financing approach. Effective management of capital structure impacts investor confidence and market valuation. Firm size can moderate the relationship between capital structure and company value. Larger firms often have more resources and better access to capital markets, allowing them to manage debt more effectively and potentially mitigate the risks associated with high leverage. This size advantage can enhance the positive effects of a well-structured capital mix on company value, making firm size a critical factor in financial strategy and performance optimization.

Companies must optimize their financial performance to sustain or increase stock prices, thereby attracting investors by demonstrating strong profitability, liquidity, and low leverage, which collectively enhance company value and shareholder returns. Strong profitability and an efficient capital structure are generally associated with higher firm values, as improved financial performance leads to better returns for investors.

This study aims to determine whether profitability and capital structure positively impact firm value, addressing phenomena and research gaps identified in previous studies. Researchers seek to examine the relationship between profitability, capital structure, and firm value, with firm size as a moderating variable, to provide valuable insights for investors and companies in enhancing firm value.

RESEARCH METHOD

The data for this study comes from the annual financial statements of technology companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2022. This research adopts a quantitative approach, utilizing financial data with independent variables (profitability, capital structure) and a moderating variable (firm size). The dependent variable is firm value, assessed through the minimum, maximum, and average values of each indicator. Profitability is measured using the Return on Assets (ROA) indicator, capital structure using the Debt to Equity Ratio (DER) indicator, firm size using the natural logarithm of total assets, and firm value using the Price to Book Value (PBV) indicator.

This study can be classified as causal research, as it aims to identify, describe, and determine the direction of the relationship between profitability and capital structure on firm value, with firm size acting as a moderator. The population comprises all annual financial reports of technology companies listed on the IDX. The sample was selected using convenience sampling, a method that involves collecting information from a population that is conveniently accessible. A total of 32 companies and 94 financial reports were included in the sample. The operational definitions and variable measurements are detailed in Table 1.

Table 2 Operational Definition

Variable	Definition	Measurement	Source
Firm Value	Firm value is investors' perceptions of the level of frequent success firms linked with price stocks	Price Book Value	Brigham and Houston (2011)
Profitability	Ratio profitability is the objective ratio for knowing the ability firm to produce profit during a certain period.	Return on Asset	Kasmir (2019)
Capital structure	combination of long-term debt, short-term debt, preferred stock, and common stock used by a company to finance its assets.	Debt to Equity Ratio	Brigham dan Houston (2011)
Firm Size	The firm size describes how big or small something firm is, seen as how a great firm more easily gets funds from investors.	Natural Log indicator of Total Assets	Munawir (2010)

Source: Data Processed, 2024

Hypothesis testing and data analysis in this study involve descriptive analysis, panel data regression tests, and Moderated Regression Analysis (MRA). Before choosing the appropriate panel data regression model, three approaches must be considered: the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). To determine the most suitable model for this study, three tests are conducted: the Chow Test, Hausman Test, and Lagrange Multiplier Test. The regression equation used in this study is as follows:

$$Y_{it} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 M + \varepsilon$$

In this study, the moderator variable is firm Size. Firm size will moderate the relationship between ROA and DER on Firm Value. Thus, the panel data moderation regression equation can be formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 M + \beta_4 X_1 M + \beta_5 X_2 M + \varepsilon$$

Description:

Y = Predicted value

α = Constant

β_{1-2} = Regression coefficient

β_{3-5} = Regression coefficient of X and M variable interaction

X_1 = ROA

X_2 = DER

M = Firm Size

X_1M = Interaction between ROA and Firm Size variables

X_2M = Interaction between DER and Firm Size variables

ε = Residual Value

RESULT AND DISCUSSION

The method used to determine the sample in this study is convenience sampling, where this study indicates that the sample is a representation of the existing population and is in accordance with the objectives of the study. Companies included in the IDXTECHNO classification in 2019-2022 amounted to 32 companies, the data used in this study amounted to 94 financial reports. This is because there are several companies that have started listing their shares on the Indonesia Stock Exchange in the current period, so this is included in the unbalanced data panel.

The unit of analysis in this study is the company. The object of this study is the financial report. The subjects in this study are technology sector companies listed on the Indonesia Stock Exchange for the 2019-2022 period. The independent variables in this study are profitability, liquidity, and leverage with the addition of a moderating variable, namely company size. The dependent variable in this study is the value of the Company.

Descriptive analysis provides an overview or description of data seen from the average value (mean), maximum, minimum, and standard deviation of each variable. The results of descriptive statistical analysis showed in Table 2.

Table 3 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Profitability	94	-3,753075	0,971244	0,001137	0,445860
Capital structure	94	-81,31083	15,76881	-0,309812	9,364150
Firm Size	94	23,15952	32,56705	27,53480	1,842407
Firm Value	94	-17,17689	86,03392	5,357202	13,15878

Source: The Processed Primary Data (2024)

The descriptive statistics of this research are listed in table 2. The descriptive profitability test results show that Envy Technologies Indonesia Tbk (ENVY) has a minimum of -3,753. The maximum value is owned by Tourindo Guide Indonesia Tbk (PGJO). The mean 0,001, the standard deviation value more significant than the mean in the sample identification, meaning that the profitability variable has a high level of data variation. Descriptive capital structure test results shows that Anabatic Technologies Tbk (ATIC) has a minimum of -81.31. The maximum value is 15,769 also from Anabatic Technologies Tbk (ATIC). Mean -0,309. the standard deviation value more significant than the mean in the sample identification, meaning that the capital structure variable has a high level of data variation.

The descriptive firm size test results show that Tourindo Guide Indonesia Tbk (PGJO) has a minimum of 23,16. Maximum value 32,57 from GoTo Gojek Tokopedia Tbk. Mean value 27,53, the mean value more significant than the standard deviation in the sample identification, has been optimal to represent the overall observation data. Descriptive firm value test results shows that Anabatic Technologies Tbk (ATIC) has a minimum of -17,18. The maximum value is 86,03 from DCI Indonesia Tbk. Mean 5,35, the standard deviation value more significant than the mean in the sample identification, meaning that the capital structure variable has a high level of data variation.

To examine the moderating effects of firm size on the relationship between profitability and capital structure on firm value, a Moderated Regression Analysis (MRA) was conducted. The results of the MRA provide insights into whether and how firm size strengthens or weakens these relationships. The following table 3 presents the detailed findings of the MRA statistical test results.

Table 4 MRA Statistical Test Results

Dependent Variable: Y				
Method: Panel Least Squares				
Date: 09/07/24 Time: 19:22				
Sample: 2019 2022				
Periods included: 4				
Cross-sections included: 32				
Total panel (unbalanced) observations: 94				
Variable Coefficient Std. Error t-Statistic Prob.				
C	8.84870	20.64520	0.42860	0.66925
X1	-47.87728	68.86117	-0.69527	0.48871
X2	16.95652	7.82432	2.16715	0.03292
M	-0.14519	0.75153	-0.19320	0.84724
X1M	1.99232	2.76067	0.72167	0.47240
X2M	-0.57316	0.26984	-2.12403	0.03647

Source: Eviews13

Based on the MRA regression results in the table above, the MRA equation can be formulated:

$$Y = 8.84870 - 47.87728 \text{ ROA} + 16.95652 \text{ DER} - 0.14519 \text{ FirmSize} + 1.99232 \text{ ROA} * \text{FirmSize} - 0.57316 \text{ DER} * \text{FirmSize} + e$$

Effect of Profitability on Firm Value

The profitability variable has a regression coefficient 47.87728, this shows that the variable has a positive influence on the company value variable. This means that if Profitability (ROA) increases by one unit, the company value will increase by 47.87728 assuming other variables remain constant. The probability value for the profitability variable is 0.48871. The value is greater than the α value ($0.48871 > 0.05$) indicating that the profitability variable has no effect on the firm value variable. From these results it can be seen that the first hypothesis is rejected, there is no positive influence of profitability on firm value in technology companies listed on the Indonesia Stock Exchange.

The results of this study indicate that profitability has no significant influence on firm value. The results are in line with research conducted by Firdaus (2019), Hapsoro and Falih (2020), and Reschiawati, Syahdina, and Handayani (2020). The results show that if the change in profitability increases or decreases, it will not affect to firm value. Many technology companies are operating in a growth phase, where they invest their revenues back into research and development of new products, marketing, and business expansion. Investors may be more focused on the company's long-term prospects in adopting or creating new technologies that will generate competitive advantages, rather than just looking at current profitability.

Effect of Capital Structure on Firm Value

The capital structure variable has a regression coefficient of 16.95652, this shows that the variable has a positive influence on the firm value variable. This means that if Return on Assets (ROA) increases by one unit, the firm value will increase by 16.95652 assuming other variables remain constant. The probability value for the capital structure variable is 0.03292. The value is smaller than the α value ($0.03292 < 0.05$) indicating that the capital structure variable has an effect on firm value. From these results it can be seen that the second hypothesis is accepted, namely that there is a positive influence of capital structure on firm value in technology companies listed on the Indonesia Stock Exchange.

There is a positive influence of capital structure on the firm value of technology companies listed on the Indonesia Stock Exchange. This indicates that technology companies with a well-optimized capital structure can enhance their firm value. A balanced mix of debt and equity financing allows these companies to leverage their growth opportunities while maintaining financial flexibility. Additionally, an effective capital structure can signal to investors that the company is well-managed and capable of sustaining its growth, leading to increased investor confidence and higher firm value. This finding is supported by research conducted by Dewi et al. (2024), Hirdinis (2019), Saragih et al. (2019) which concluded that capital structure, approximated by the debt-to-equity ratio, has a positive and significant effect on firm value (PBV).

Firm Size Moderates the Effect of Profitability on Firm Value.

The estimated results of the interaction variable between profitability and company size has a regression coefficient of 1.99232, this shows that the variable has a positive influence of the interaction variable between capital structure and firm value variable. The probability value is 0.47240. The probability value above the α value ($0.47240 > 0.05$) indicates that the interaction variable is between profitability and company size. From these results it can be seen that H_0 is rejected and shows that company size weakens the influence of profitability on firm value in technology companies listed on the Indonesia Stock Exchange.

Firm size weakens the influence of profitability on the firm value of technology companies listed on the Indonesia Stock Exchange. This is consistent with the research conducted by Fitria and Irkhani (2021) and Rosihana (2023). It indicates that larger technology companies are more oriented towards long-term growth rather than short-term profitability. In this regard, investors may consider the future growth potential of the company more than current profits when assessing its value. Investors believe that large technology companies have the ability to withstand changes in profitability due to their large resources,

access to broad markets, and flexibility to adapt to market changes. Additionally, larger technology companies tend to have strong institutional shareholders who prioritize long-term growth. This can reduce the pressure to achieve a certain level of profitability that may affect the firm's value. Thus, Firm size cannot moderate profitability's effect on the firm value.

Firm Size Moderates the Effect of Capital structure on Firm Value

The estimated results of the interaction variable between capital structure and company size have a regression coefficient of -0.57316, this shows that the variable has a negative influence of the interaction variable between capital structure and firm value variable. The probability is 0.03647. The probability value shows below the α value ($0.03647 < 0.05$). These results indicate that company size can weaken the relationship between capital structure and firm value.

The firm size weakens the effect of capital structure on firm value. The firm size weakens the effect of capital structure on firm value. Larger firms often have more diversified operations, greater access to capital markets, and stronger bargaining power with creditors and suppliers. As a result, they may not rely as heavily on their capital structure to influence their firm value compared to smaller firms. Additionally, larger firms often have more established reputations and creditworthiness, which can lead to lower costs of capital and less sensitivity to changes in their capital structure. In contrast, smaller firms might experience more significant changes in firm value due to adjustments in their capital structure, as they typically face higher risks and costs associated with financing. Therefore, the moderating effect of firm size suggests that the relationship between capital structure and firm value is less pronounced for larger firms, as they benefit from economies of scale and other advantages that mitigate the impact of their capital structure decisions.

CONCLUSION

This study aims to investigate the firm size in moderating the effect of profitability and capital structure on firm value. The results of this study indicate that profitability have no significant influence against firm value. The results also showed there is a positive influence of capital structure on the firm value. The results showed that firm size weaken the effect of profitability and capital structure on firm value, because technology companies are considered to have sufficient resources to cope with changes in profitability and possess the flexibility to adapt to market fluctuations.

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