

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia



Catherine Yovani¹, Mustaruddin Saleh²

^{1,2} Faculty of Economy and Business, Tanjungpura University, PONTIANAK.

ABSTRACT: This study aims to examine the effect of Capital Structure, Firm Size, and Profitability on Firm Value with Managerial Ownership as intervening variables. The population in this study embraces 45 companies belonging to the technology, heavy construction, and civil engineering companies respectively for the period of 2015-2021. All data used is panel data retrieved from Indonesia Stock Exchange (IDX) website. Using the purposive sampling method, the final sample becomes 15 companies or 105 year-firm. Employing the path analysis, this study found that capital structure and profitability had a significant positive effect on managerial ownership, while firm size had a positive and insignificant effect on managerial ownership. Capital structure and profitability have a significant positive effect on firm value, while managerial ownership has a positive effect on firm value but is insignificant. In addition, firm size has a negative and significant effect on firm value. Finally, managerial ownership cannot mediate the relationship between independent variables of capital structure, firm size, and profitability on firm value.

KEYWORDS: Capital Structure, Firm Size, Profitability, Managerial Ownership, Firm Value

1. INTRODUCTION

The company value is essential because it reflects the company's performance which can affect investors' views of a company. The company's goal is basically to maximize the value of the company as reflected in the company's stock price (Fama, 1978). Each company strives to survive and win against the competition by increasing the value of its own company. Therefore, every company needs to be able to maintain and increase the value of its company. In the current era of globalization, competition between businesses has become very tight. Advances in technology make companies grow and show their competitive advantages to increase the value of their companies and gain public trust. Technological advances also require companies to be able to manage and manage their companies optimally in order to compete with other companies. To be able to deal with this, companies are required to be able to increase the value of the company which is one of the goals of every company to be able to prosper the interested parties. The value of the company is important because it reflects the company's performance which can affect investors' views of a company.

The value of the company is important as a reference for investors in considering investing their funds in a company. High company value can reflect good company performance so that it can attract investors to invest in the company (Sunariyah, 2011). Capital structure is one of the factors that can affect the value of the company. The optimal capital structure is able to increase the company's profits by managing the balance between the risk and return of shareholders for the welfare of shareholders by maximizing share prices through increasing company value (Farah Margaretha (2004). Competition between companies is also seen in the level of profit earned. In addition, profitability reflects the effectiveness of the company's management. Profitability is also often used to measure the accuracy of the use of company resources by comparing profits and capital used in the company's operational activities (Sawir, 2009).

According to Jensen and Meckling (1976), the existence of managerial ownership is assumed to be able to align the potential differences in goals or interests between shareholders and managers because theoretically low managerial ownership has a high probability of managerial opportunistic behavior. Based on this perception, conflicts in agency problems can be avoided

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

by making managers shareholders. If the manager is also a shareholder then the interests and goals between the manager and the shareholders will be the same. Shareholders will also feel safe entrusting their invested funds to company managers because they have the same interests and managers will act with caution in making decisions.

Based on the background and phenomena described above, the authors are interested and motivated to find out the role of managerial ownership as mediating variable in the relationship between capital structure, firm size, and profitability toward the firm of public companies in Indonesia.

2. LITERATURE REVIEWS

2.1. Theoretical Reviews

Capital structure is the use of various sources of funds to finance the company's operational activities to achieve the strategic goals set (Suardi and Noor, 2015). The capital structure is defined as the mix of various financial sources of a company, represented by equity capital, preferred stock, and debt. In addition, capital structure is the structure of financing the general operations and growth of the company, which involves a certain mix of retained earnings, short-term debt, long-term debt, equity capital, and preferred stock (Awais et al., 2016; Wu, 2019)

Most companies fail as a result of the challenges managers and owners face in financing decisions. Most companies and organizations fail or perform poorly because of the various challenges that managers or owners face regarding financing decisions (Migliori et al., 2018). The MM theory without taxes was considered unrealistic and then in 1963 Modigliani and Miller incorporated the tax factor into their theory. The Capital Structure Theory from Modigliani and Miller (1963), states that with the company tax, the funding decision becomes relevant, which will increase the value of the company. MM theory with taxes reveals that if debt increases then it increases the value of the company because debt can help companies save taxes. Interest costs owned by debt reduce the tax costs paid by the company so that the cash outflow is less and the company's income is getting bigger where the income is part of the shareholders.

Information asymmetry also can affect the market value and company value in the stock market. This happens because information asymmetry causes investors to make wrong financial decisions with investment losses and the value of the company's shares. The stock market price information is the basis for investor consideration in making investment decisions and determining investment policies. In making investment decisions, precise and accurate information is very important. Thus, knowledge of the information is assumed for an efficient market. However, most occurrences of information are asymmetric versus information efficiency. In pecking order theory which shows that companies prefer to use debt financing sources rather than equity to reduce information risk (Myers & Majluf, 1984). The pecking order theory specifically suggests that company management has better information about the actual firm value than shareholders. Therefore, adverse selection costs arising from information asymmetry led to a priority of debt financing over equity financing (Myers & Majluf, 1984).

The Peking Order Theory also demonstrates the cost consequences of firm value due to financing decisions through debt or equity in an asymmetric information environment. Capital structure and profitability are believed to contribute to influencing the company's stock. Issuance of debt in the presence of excess cash flow can provide a positive signal to the market which is replicated with an increase in firm value. In addition, Company size tends to be closely related to the perspective on the financial condition or performance of a company.

According to the trade-off theory, firms trade off the advantages of debt financing or preferential treatment of corporate tax for high interest rates and bankruptcy costs. In trade-off approach, the company leveraged value equals the unleveraged value plus any side effects value, such as tax and expense protection owing to financial difficulty. According to the trade-off hypothesis, the debt must be used optimally so that it does not have a detrimental influence on firm value.

Corporate governance is a concept based upon agency theory that operates as a tool capable of providing confidence to shareholders or investors that they will obtain a return on their capital investment. In other words, corporate governance has a concept of investor and shareholder trust. Watt (2003) reveals that corporate governance is a system or business that can be used to monitor and regulate contractual issues and limit opportunistic management behavior. The existence of managerial ownership is assumed to be able to align the potential differences in goals or interests between shareholders and managers (Jensen and Meckling, 1976).

2.2. Relationship between Variables and Hypothesis statements

2.2.1. The relationship between Capital Structure and Managerial Ownership

Capital structure is important because the good or bad capital structure will directly affect the company's financial position. Therefore, an optimal capital structure is needed to fund company financing. The optimal capital structure is a condition where

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

the company can use the ideal combination of debt and equity.. Companies that have difficulty paying debts until they go bankrupt reflect the importance of policies in managing the company's capital structure. According to Susanto (2016), good capital structure management can prevent companies from having difficulty paying debt and interest installments so that the company will not go bankrupt. Agency theory explains that managerial ownership is used to reduce agency costs (Nuswandari, 2013). Companies need a large capital to generate high profits, so they need external funds. Based on the trade-off theory, the company will use debt to finance the company. Debt is not only used to meet funding needs but also to get profits or tax reductions (Nia and Linda, 2018). This is relevant to the research of Alipour, Mohammadi, & Derakhshan (2015) and Tarus & Ayabei (2016) where optimal leverage and ownership structures can be used to minimize total agency costs, and the creation of capital structures can affect corporate governance.

Based on the description above, the following research hypothesis can be proposed. H1: Capital Structure has a significant effect on Managerial Ownership

2.2.2. The relationship between Firm size and Managerial Ownership

Company size indicates the performance of a company. According to Machfoedz (1999), the size of the company is divided into three categories, namely large companies, medium companies, and small companies. The size of the company can affect the ability of management to operate the company in various situations and conditions it faces. According to Nurul (2013), large companies usually have greater certainty and returns than relatively small companies, thereby reducing uncertainty or risk regarding the company's prospects in the future, so that it can help investors predict the risks that might occur if investors invest in the company. The size of the company can determine the number of shares owned by the company manager. In the concept of good corporate governance where managerial ownership is used to reduce conflicts that will be formed between shareholders and company managers due to distrust of shareholders towards company managers in managing company finances.

Based on the description above, the following research hypothesis can be proposed.

H2: Firm Size has a significant effect on Managerial Ownership

2.2.3. The relationship between Profitability and Managerial Ownership

The profitability of a company is necessary for investors as one of the considerations in investing, investors assume that companies that have high profitability will also provide enormous returns (Rita & Irham, 2018). Managerial ownership is a manifestation of the good corporate governance mechanism which is believed to reduce agency conflicts so conflicts that will be formed between shareholders and company managers will affect the company's performance in achieving company goals. This condition will arise is due to the control of company managers and shareholders. With managerial ownership, company managers will be motivated and will try their best to maximize the company's performance to achieve maximum profits to prosper shareholders. This is relevant to research conducted by Almalia and Silvy (2006), Taswan (2003), and Kartika (2010) proving the positive influence of profitability on managerial ownership where the greater the profitability of the company, the managers have the potential to increase managerial ownership, because they are motivated by profits as shareholders. share. Meanwhile, based on research by Kartika (2010), proves that profitability does not affect managerial ownership whereas in the case companies that have low profitability tend to distribute dividends in small amounts so that the returns received by shareholders have decreased which in turn has an impact on share ownership in low quantity.

Based on the description above, the following research hypothesis can be proposed.

H3: Profitability has a significant effect on Managerial Ownership.

2.2.4. The relationship between Capital Structure and Firm Value

Capital structure is crucial for the company. Capital structure is related to a company's long-term expenditure as measured by the ratio of long-term debt to its capital (Dede, Leo, and Fransisca, 2020). The company will choose the optimal capital structure with a low cost of capital and generate high profits and firm value. Understanding the capital structure is the company's way of measuring the company's financing from the comparison between users of own capital and debt. By managing an exemplary capital structure, the company will reduce taxes and bankruptcy costs, which means it can increase the value of the company (Jensen & Meckling, 1976). According to the Trade-off Theory, long-term debt management will reduce taxes. Tax reduction will increase the profit earned by the company, and with high profits, investors will be tempted to invest. The company's stock price will also increase if many investors invest so that a high capital structure will increase the value of the company. The trade-off theory model assumes that an increase in the proportion of long-term debt will save taxes and bankruptcy costs, which means an increase in firm value (Jensen & Meckling, 1976). This is relevant to research conducted by Jesica Br Sitorus (2021), Wenjuan Ruan, Gary Tian, Shiguang Ma (2009), and Apriliyanti, Hermi, & Herawaty (2019), as well as Dede, Leo, and Fransisca (2020) which states

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

that the higher the capital structure of the company, the value of the company will increase. A high capital structure indicates that the company is able to manage to fund using long-term debt.

Based on the description above, the following research hypothesis can be proposed.

H4: Capital Structure has a significant effect on Firm Value

2.2.5. The relationship between Firm Size and Firm Value

Company size is a reflection of the company's valuation with the company's total assets used to operate the company's activities. According to Jensen (1979), company size can affect the value of a company. The larger the company, the easier it is to obtain funds from internal and external sources. Large companies are defined as having a good capacity to run a business therefore investors will be more interested in investing their capital in the company. Based on signaling theory, company size is interpreted as a positive signal that can be received by investors, which means that the company has good prospects. Large companies are more in demand by investors because they are considered to have good prospects and it leads to an increase in stock prices and high company value (Hidayah, 2014). This is relevant to research conducted by Graceta, Ali, Bambang, and Lukmanul (2020), Chabachib, Hersugondo, Erna, and Imang (2020), and Nurliza, Erlina, and Rina (2019) stated that the total assets or size company, the value of the company will increase. This is in accordance with the signaling theory where an increase in company reliability is interpreted as a positive signal for investors that the company has good prospects in the future. Increased investor confidence and interest will result in an increase in stock prices which in turn increases the value of the company. Meanwhile, research by Graceta, Ali, & Lukmanul (2020) which proves that company size has a negative and significant effect on firm value.

Based on the description above, the following research hypothesis can be proposed. H5: Firm Size has a significant effect on Firm Value

2.2.6. The relationship between Profitability and Firm Value

The success of the company can be measured by the level of profitability generated by company. The higher the level of profitability, it reflects the company's performance in managing its resources is successful by being oriented toward maximum results and is profitable for the company. A large profit is a success in managing company finances and this can increase the value of the company (Panji, 2018). One of the company's goals is to achieve maximum profit, achieving these goals can simultaneously increase the value of the company. A high level of company profitability can indirectly provide guarantees and a strong attraction for investors to invest their funds in the company, this condition will certainly have an impact on increasing the value of the company. This happens because companies whose profits continue to increase, reflecting that the company has good performance becomes a positive signal for investors. This is relevant to research by Rita and Irham (2018), Febri (2018), Afi, Apriani, and Robiyanto (2019), Christine, Khaira, and Narumondang (2018), and Putu (2016), which state that high profitability indicates good company prospects thus triggering the demand for shares by investors. The positive response of investors will increase stock prices and will increase the value of the company.

Based on the description above, the following research hypothesis can be proposed. H6: Profitability has a significant effect on Firm Value

2.3. Conceptual Framework

One of the keys to a company's success is reflected in the value of the company and its stock price. According to Suffah and Riduwan (2016), the value of the company will be considered by investors in deciding to invest their capital. Firm value is an investor's view where the value of the company is often associated with the price of the shares traded (Puspita, 2011). For companies whose shares have been traded on the stock market, the share price will reflect the value of the company. The higher the stock price, the higher the value of the company. Therefore, the increase in the firm's value has a positive effect on the company in terms of increasing the value of the company is reflected by the stock price will increase public confidence and the company's prospects in the future.

To increase the value of the company, there are several factors that influence it. In this study, capital structure, firm size, and profitability are used as independent variables to test their effect on firm value. This study also uses intervening or mediating variables to determine whether managerial ownership plays a role in mediating the effect of capital structure, firm size, and profitability on firm value. Based on the theoretical review and previous research that has been described in this study, the framework used in this study explains the effect of capital structure, firm size, and profitability on firm value in technology companies listed on the Indonesia Stock Exchange in 2019-2021 with managerial ownership as intervening variable. To help understand the concepts in this study, the framework of thought in this study is described as follows.

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

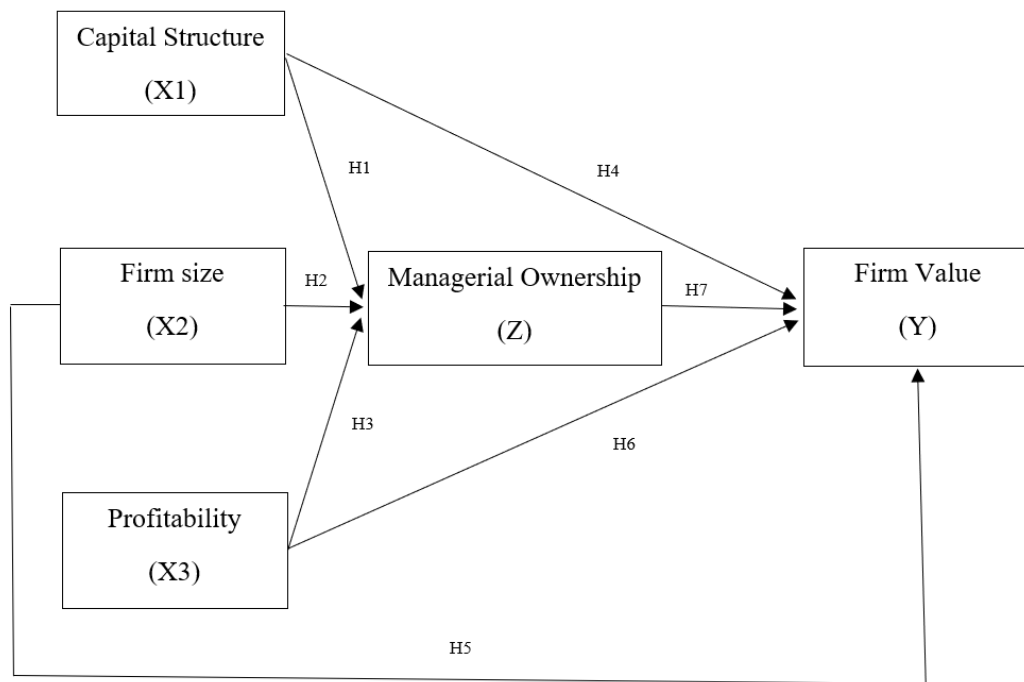


Figure 1.1 Conceptual Framework

3. RESEARCH METHODOLOGY

3.1. Source of Data and Sample Size

The data sources used in this study are annual report data and financial statements of technology, heavy construction and civil engineering companies listed on the Indonesia Stock Exchange for the 2015-2021 period. The research sample in this study was selected using purposive sampling. Purposive sampling is a non-probability sampling approach used to collect samples by assigning certain features based on research aims intended to answer research problems.

Table 1. Number of Study Samples

Population:	
Technology companies listed on the IDX period 2021	22
Heavy construction and civil engineering companies listed on the IDX period 2021	23
Total Population	45
Criteria:	
Technology company that are listed on the IDX consecutively during the period 2015-2021	4
Heavy construction and civil engineering company that are listed on the IDX consecutively during the period 2015-2021	11
Technology companies that are not published the annual reports, financial reports and data needed in research for the period 2015-2021	(0)
Heavy construction and civil engineering companies that are not published the annual reports, financial reports and data needed in research for the period 2015-2021	(0)
Number of companies to use as sample	15
Year of observation	7
Number of observation data	105

Based on the sample selection criteria table above, the number of technology companies obtained is 4 companies and the number of heavy construction and civil engineering companies obtained is 11 companies. The following is a list of technology, heavy construction and civil engineering companies that were used as the sample in this study.

3.2. Measurement of the Variables

This study comprises three variables, which are:

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

3.2.1. Dependent Variable

The dependent variable in this study is Firm Value as measured by Price to Book Value (PBV). Firm value is the company's performance as reflected in the stock price, which is determined by the capital market's demand and supply and reflects the public's evaluation of the company's performance. (Harmono, 2009:233). The formula used to calculate Price to Book Value ratio is as follows:

$$PBV = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}$$

3.2.2. Independent Variable

3.2.2.1. Capital Structure

Capital structure is the ratio between total debt and total equity (Halim, 2015:81). In this study, Capital Structure is proxied by Debt to Equity (DER). The formula used to calculate the Debt to Equity ratio is as follows:

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100$$

3.2.2.2. Firm Size

There are many ways to define the size or scale of a company, namely by using various criteria such as asset value, number of employees, and sales volume (Longenecker, 2001). The formula used to calculate the Firm Size is as follows:

$$SIZE = \ln(\text{Total Employees})$$

3.2.2.3. Profitability

Profitability demonstrates how effectively a company uses its assets to generate profits and value for its shareholders (Irawati, 2006). In this study, Profitability is proxied by Return on Assets (ROA). The formula used to calculate the Return on Assets ratio is as follows:

$$ROA = \frac{\text{Net Income}}{\text{Total Asset}} \times 100$$

3.2.3. Intervening Variable

The dependent variable in this study is Managerial Ownership. Managerial ownership is the percentage of share ownership owned by directors, managers, and commissioners (Efendi, 2013). The formula used to calculate Managerial Ownership is as follows:

$$MO = \frac{\text{Share ownership of the Managerial}}{\text{Number of Share Outstanding}}$$

3.3. Model Specification

Two multiple regression models have been used in this study, the first model is to estimate the effect of capital structure, firm size, and profitability on managerial ownership and the second model is to estimate the effect of capital structure, firm size, profitability, and managerial ownership on firm value. The following are models estimated based on empirical studies (Forte, Barros, & Nakamura, 2013; Rouf & Abdur, 2015; Vo, 2017; Albart et al., 2020):

Model I

$$MO_{it} = \alpha_0 + \alpha_1 DER_{it} + \alpha_2 SIZE_{it} + \alpha_3 ROA_{it} + \epsilon_{it}$$

Model II

$$PBV_{it} = \alpha_0 + \alpha_1 DER_{it} + \alpha_2 SIZE_{it} + \alpha_3 ROA_{it} + \alpha_4 MO_{it} + \epsilon_{it}$$

Where, PBV_{it} : price to book value of a company i at time t ; DER_{it} : debt to equity of a company i at time t ; $SIZE_{it}$: log natural of a total employee of a company i at time t ; ROA_{it} : profitability of a company i at time t ; MO_{it} : managerial ownership of a company i at time t ; α_0 : constants; $\alpha_1 \dots \alpha_4$: parameters; i : company; t : period; ϵ : error term

4. RESULT AND DISCUSSION

4.1. Descriptive Statistic

The descriptive statistical analysis above shows Capital Structure which is proxied by the debt to equity ratio (DER), which has a mean value of 1.632839 from 105 observation data, a maximum value, and a minimum value of 8.267360 and 0.133640 with a standard deviation of 1.441097. Firm Size which is proxied by the natural logarithm (LN) of total employees having a mean value of 3.189998 from 105 observation data, maximum value, and minimum value of 3.812710 and 2.245510 with a standard deviation of 0.340998. Profitability proxied by return on assets (ROA) having a mean value of 0.028923 from 105 observation data, maximum and minimum values of 0.207900 and -0.253290 with a standard deviation of 0.073284. Managerial ownership has a mean value

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

of 0.126080 from 105 observation data, a maximum value and a minimum value of 0.873590 and 0.000000 with a standard deviation of 0.225381. Firm Value proxied by price to book ratio has a mean value of 1.780994 from 105 observation data, maximum value, and minimum value of 30.22596 and 0.144977 with a standard deviation of 3.290661.

Table 2. Descriptive Statistics

	DER	SIZE	ROA	MO	PBV
Mean	1.632839	3.189998	0.028923	0.126000	1.780994
Median	0.990900	3.277840	0.036790	0.018250	0.897964
Maximum	8.267360	3.812710	0.207900	0.873590	30.22596
Minimum	0.133640	2.245510	-0.253290	0.000000	0.144977
Std. Dev.	1.441097	0.340998	0.073284	0.225424	3.290661

4.2. Correlation Matrix

The correlation matrix result presented in Table 3 shows that firm size proxied by SIZE and managerial ownership proxied by MO have a negative correlation. It indicates that every time the firm value increases, the capital structure, and firm size will decrease. Meanwhile, capital structure proxied by DER and profitability proxied by ROA has a positive correlation. This indicates that every time there is an increase in firm value, company capital structure and profitability will also increase because increased profitability will increase the firm value which is reflected through increased company prices caused by good signals received by investors on the profits achieved by the company and investors become interested in investing. From the perspective of corporate governance mechanisms, capital structure proxied by DER, firm size proxied by SIZE, and profitability proxied ROA has a negative correlation with managerial ownership. This indicates that an increase in managerial ownership will reduce the value of the capital structure, company size, and company profitability.

Table 3. Correlation Matrix

Variables	PBV	DER	SIZE	ROA	MO
PBV	1.000000				
DER	0.329777	1.000000			
SIZE	-0.151377	0.269171	1.000000		
ROA	0.235248	-0.097020	-0.089356	1.000000	
MO	-0.005539	-0.339842	-0.181775	-0.164355	1.000000

4.3. Regression Test Result

This study employs three estimation models to estimate the model with panel data namely, the common effect model (CEM), the fixed effect model (FEM), and the random effect model (REM). The following describes the third test results of the regression models used in the research.

4.3.1. Model I

The t-test statistics for model I are shown in the table below. The tests result in Table 4 shows that Capital Structure (DER) and Profitability (ROA) have a positive and significant effect on Managerial Ownership (MO) at a significance of 0.05. Meanwhile Firm Size (SIZE) has a positive and insignificant effect on Managerial Ownership.

Table 4. Regression Test Result Model I

Variable	Model Estimation		
	CEM	FEM	REM
C	3.9948 (0.1373)	-4.1746*** (0.0002)	-0.6879 (0.7930)
LOG_DER	-1.4341*** (0.0001)	0.2192** (0.0110)	0.1070 (0.6718)
LOG_SIZE	-4.5552** (0.0498)	0.5906 (0.3285)	-1.5807 (0.4809)
LOG_ROA	0.8714*** (0.0019)	0.2086** (0.0176)	0.5356*** (0.0003)

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

F-statistic	19.4942*** (0.0000)	110.2652*** (0.0000)	4.3729*** (0.0071)
R-squared	0.4588	0.9667	0.1598
<hr/>			
Chow Test		122.7582*** (0.0000)	
Hausman Test			13.9871*** (0.0029)
LM Test			

Notes: the dependent variable is LOG_MO; *p<0.10; **p<0.05; ***p<0.00; number of observations is 73.

From the result of regression testing above, the estimation model follows the Fixed Effect Model (FEM) because the result of Chow test and Hausman test is smaller than α (0.05). The probability value of the F statistic is 0.0000, which is less than 0.05 indicates that the independent variables (Capital Structure, Firm Size, and Profitability) have an effect on the intervening variable of Managerial Ownership at the same time. The ability of the independent variables to explain the dependent variable is very high with an R-Squared value of 0.9667 or 96.7%. It means that in this study, the independent variables (Capital Structure, Firm Size, and Profitability) can explain 96.7% of the influence on the intervening variable, Managerial Ownership, while the remaining 3.3% is explained by other variables.

4.3.2. Model II

The following is the regression result of substructural II. The appropriate estimation model for substructural II is Random Effect Model based on the model fit test. As shown in the table below, Capital Structure (DER) and Profitability (ROA) have a significant positive effect on Firm Value (PBV) at a significance of 0.05. Managerial Ownership (MO) has a positive but insignificant effect on Firm Value and Firm Size (SIZE) has a significant negative effect on Firm Value.

Table 5. Regression Test Result Model II

Variable	Model Estimation		
	CEM	FEM	REM
C	4.6441*** (0.0001)	3.4111** (0.0230)	4.2250*** (0.0082)
LOG_DER	0.4485*** (0.0063)	0.9319*** (0.0000)	0.5776** (0.0005)
LOG_SIZE	-2.9370*** (0.0043)	-2.2925* (0.0541)	-2.7276** (0.0469)
LOG_ROA	0.2238* (0.0720)	0.3391*** (0.0054)	0.2521** (0.0137)
LOG_MO	0.0956* (0.0652)	-0.1024 (0.2136)	0.0234 (0.7138)
<hr/>			
F-statistic	6.3764*** (0.0002)	33.7067*** (0.0000)	5.8783*** (0.0004)
R-squared	0.2728	0.9059	0.2569
<hr/>			
Chow Test		26.6415*** (0.0000)	
Hausman Test			4.1972 (0.3800)
LM Test			73.4097*** (0.0000)

Notes: the dependent variable is LOG_PBV; *p<0.10; **p<0.05; ***p<0.00; number of observations is 73.

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

From the regression test result above, the F statistic is 0.0004, which is less than 0.05, indicating that the independent variables of Capital Structure, Firm Size, and Profitability, as well as the intervening variable of Managerial Ownership, affect the dependent variable of Firm Value at the same time. Besides, the R-Squared value is relatively low (0.2569 or 25.7%). It means that the independent variables in this study, Capital Structure, Firm Size, and Profitability, as well as the intervening variable, Managerial Ownership, can explain 25.7% of the effect on the dependent variable, Firm Value. In comparison, other variables explain the remaining 74.3%.

5. CONCLUSION AND SUGGESTION

The following conclusions can be drawn as the final result of this research based on the results of the data analysis and discussion that has been described. This study tested the effect of capital structure, firm size, and profitability, on firm value and managerial ownership as an intervening variable. Totaled 15 companies of technology, heavy construction, and civil engineering were used as samples during the period of 2015-2021. The result of testing the Model I showed that Capital Structure and Profitability have a significant positive effect on Managerial Ownership, whereas Firm Size has an insignificant positive effect on Managerial Ownership. The result of testing the Model II showed Capital Structure and Profitability have a significant positive effect on Firm Value, Managerial Ownership has an insignificant positive effect on Firm Value, and Firm Size has a negative and significant effect on Firm Value. While the Sobel analysis proves that Managerial Ownership does not mediate the independent variables of Capital Structure, Firm Size, and Profitability on the dependent variable of Firm Value.

Based on the data analysis of the two models in this study, the following are some suggestions given. As the research results which prove that Capital Structure, Profitability, and Managerial Ownership have a positive influence on Firm Value, companies must pay more attention to optimizing the capital structure and managerial ownership. Although financing companies using debt has a higher risk, if the company can manage and control debt properly, using debt financing sources will not be a problem because financing using debt can reduce taxes to increase profitability. In addition, considering that this study is used small sample size, it is recommended for further research to increase the research period and research samples to expand sample size and research period. Further research is also recommended develop this research by adding other variables that have the potential to affect firm value.

REFERENCES

- 1) Albart, N., Sinaga, B. M., Santosa, P. W., & Andati, T. (2020). The Effect of Corporate Characteristics on Capital Structure in Indonesia. *Journal of Economics, Business, & Accountancy: Ventura*, 23(1), 46-56.
- 2) Alipour, M., Mohammadi, M. F. S., & Derakhshan, H. (2015). Determinants of capital structure: an empirical study of firms in Iran. *International Journal of Law and Management*.
- 3) Awais, M., Laber, M. F., Rasheed, N., & Khurshed, A. (2016). Impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(1), 73-79.
- 4) Efendi, A.S. 2013. Analisis Pengaruh Struktur Kepemilikan, Kebijakan Dividen dan Kebijakan hutang Terhadap Nilai Perusahaan Dengan Variabel Kontrol Ukuran Perusahaan, Pertumbuhan Perusahaan dan Kinerja perusahaan (Studi Pada Perusahaan Manufaktur Yang Terdaftar di BEI Periode 2009-2011). Semarang: Universitas Diponegoro.
- 5) Fama, E. F. (1978). The effects of a firm's investment and financing decisions on the welfare of its security holders. *The American Economic Review*, 68(3), 272-284.
- 6) Forte, D., Barros, L. A., & Nakamura, W. T. (2013). Determinants of the capital structure of small and medium sized Brazilian enterprises. *BAR-Brazilian Administration Review*, 10, 347-369.
- 7) Halim, A. (2015). *Manajemen Keuangan Bisnis*. Jakarta: Mitra Wacana Media.
- 8) Harmono. 2009. *Manajemen Keuangan Berbasis Balanced Scorecard (Pendekatan Teori, Kasus, dan Riset Bisnis)*. Bumi Aksara, Jakarta.
- 9) Hidayah, N. (2014). The effect of company characteristic toward firm value in the property and real estate company in indonesia stock exchange. *International Journal of Business, Economics and Law*, 5(1), 1-8.
- 10) Irawati, S. (2006). *Manajemen keuangan*. Bandung: Pustaka
- 11) Jensen, M. C., & Meckling, W. H. (1979). Rights and production functions: An application to labor-managed firms and codetermination. *Journal of business*, 469-506.
- 12) Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.

The Role of Managerial Ownership as an Intervening Variable in the Relationship between Capital Structure, Asset Size and Profitability on Firm Value in Technology Companies of Indonesia

- 13) Longenecker, C. O., & Simonetti, J. L. (2001). *Getting results: Five absolutes for high performance* (Vol. 7). John Wiley & Sons.
- 14) Machfoedz, M. (1999). Pengaruh Krisis Moneter Pada Efisiensi Perusahaan Publik di Bursa Efek Jakarta. *Jurnal Ekonomi Dan Bisnis Indonesia*, 14(1).
- 15) Margaretha, F. (2007). *Manajemen keuangan bagi industri jasa*. Jakarta: Grasindo.
- 16) Migliori, S., Maturo, F., & Paolone, F. (2018). Capital structure determinants in family firms: An empirical analysis in context of crisis. *International Business Research*, 11(4), 65.
- 17) Miller, M. H., & Modigliani, F. (1963). Dividend policy and market valuation: a reply. *The Journal of Business*, 36(1), 116-119.
- 18) Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, 13(2), 187-221.
- 19) Nuswandari, C. (2013). Determinan struktur modal dalam perspektif pecking order theory dan agency theory. *Dinamika Akuntansi Keuangan dan Perbankan*, 2(1).
- 20) Rouf, D., & Abdur, M. (2015). Capital structure and firm performance of listed non-financial companies in Bangladesh. *The International Journal of Applied Economics and Finance*, 9(1), 25-32.
- 21) Ruan, W., Tian, G., & Ma, S. (2011). Managerial ownership, capital structure and firm value: Evidence from China's civilian-run firms. *Australasian Accounting, Business and Finance Journal*, 5(3), 73-92.
- 22) Sawir, A. *Analisa Kinerja Keuangan dan Perencanaan keuangan Perusahaan*, PT. Gramedia Pustaka Utama, Jakarta.
- 23) Sitorus, J. (2021). Pengaruh Capital Structure, Corporate Social Responsibility, Return on Assets, Firm Size dan Good Corporate Governance terhadap Firm Value pada Perusahaan Transportasi yang Terdaftar di Bursa Efek Indonesia Periode 2015-2019.
- 24) Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, 13, 290-312
- 25) Suardi, I., & Noor, K. D. (2015). The impact of capital structure on financial performance of the listed agriculture companies in Indonesia. *Global Journal of Business and Social Science Review*, 3(1), 9-17
- 26) Susanto, E. (2016). Pengaruh profitabilitas, kepemilikan manajerial, dan pertumbuhan perusahaan (Growth) terhadap struktur modal dan nilai perusahaan. *Jurnal STIE Semarang*, 8(3).
- 27) Taswan, S. (2003). Analisis Pengaruh Insider Ownership, Kebijakan Hutang dan Deviden Terhadap nilai Perusahaan serta Faktor-faktor yang Mempengaruhinya. *Jurnal Ekonomi Dan Bisnis*, 10(2), 162-181.
- 28) Wu, C. (2019). *The Relationship between Capital Structure and Profitability of US Manufacturing Companies: An Empirical Analysis* (Doctoral dissertation, Morehead State University).



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0 (<https://creativecommons.org/licenses/by-nc/4.0/>)), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.