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Capital Structure and Investment Decisions on Firm Value with Profitability as a Moderator

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ABSTRACT
This study aims to examine the effect of capital structure and investment decisions on firm value with profitability as a moderating variable. Capital structure is measured by debt to equity ratio, investment decisions are measured by price-earnings ratio, profitability is measured by Return on Assets and firm value is measured by Tobin's Q. The analytical tool used is multiple linear regression analysis to test the direct effect between variables and the Moderated Regression Analysis is used to test the effect of moderating variables. The sampling method uses the purposive sampling technique. The research sample amounted to 18 LQ45 non-financial sector companies listed on the Indonesia Stock Exchange from 2013 to 2017. The results of the study prove that capital structure, investment decisions, and profitability have a significant positive effect on firm value. Profitability is proven to be able to moderate the influence of capital structure and investment decisions on firm value. The implications of this study indicate that profitability has an important role in realizing the dimensions of the company's growth prospects that have an impact on increasing corporate value.

INTRODUCTION

This study aims to examine the effect of capital structure and investment decisions on firm value by using profitability as a moderating variable. Capital structure is measured by the proxy debt to equity ratio (DER), whereas investment decisions are measured by the proxy of price to earnings ratio (PER). Firm value in this study is measured by proxy Tobin's Q. Profitability is measured by proxy Return On Assets (ROA).

The phenomenon as the basis of this research is the decline in the performance of the 45 most liquid stocks (LQ45) in the Indonesian stock exchange during the first nine months of this year which had been consistently staying in the red zone. Until the end of September, the LQ45 index was recorded to have corrected 12.34%, plunged compared to the performance of the Composite Stock Price Index (IHSG) in the same period. Of the 45 stocks, only nine were observed to have positive performance since the beginning of last year. Meanwhile, 36 other stocks still recorded negative performance (www.cnbcindonesia.com, 2018). If the decline in firm value is not corrected, it will reduce the company's credibility before investors because investors will predict that the company is incapable of providing the return expected by investors on the investment they have invested.

Optimization of firm value can be achieved through the implementation of financial management functions. Financial management functions that involve making important decisions by companies include profitability, capital structure, and investment decisions. An optimal combination of these three factors will optimize firm value which will further add profits to shareholders (Purnama, 2016).

Since Modigliani and Miller (1958) pioneered research on the value relationship between capital structure and firm value, researchers have been following their footsteps to develop theories explaining capital structure decisions; including Xu (2012), Faccio and Xu (2015), Fauver and McDonald (2015) and Serfling (2016). Kao et al. (2019) succeeded in proving the effect of ownership structure, capital structure on firm value. Besides, several studies have examined the relationship between non-financial factors and firm value (Margolis and Walsh, 2003; Jo and Harjoto, 2011; Servaes and Tamayo, 2013; Flammer, 2015; Buchanan et al., 2018). In Indonesia, several studies have been conducted on the factors influencing firm value. Syamsudin et al. (2017) discovered that gender diversity in the Board of Commissioners and Directors had an effect on firm value. Setiany et al. (2018) revealed that firm value was influenced by corporate governance and the level of transparency of company disclosures.

One of the company's efforts to improve and maintain company performance is to measure the ability of the capital structure to influence the level of profitability and firm value. The capital structure relates to the amount of debt and own capital used to finance company assets. An optimal capital structure can create a strong and stable financial condition (Yando, 2018).

The capital structure is essential for the company, it affects the amount of risk borne by shareholders and the expected rate of return or profit. With the right capital structure, the main goal of the company to increase firm value can be achieved (Utomo & Christy, 2017).

Another step to increase firm value is to make investment decisions (Setiani, 2013). Prasetyo (2013) states that investment decisions are closely related to investment activities performed by companies. Investment decisions can affect the firm value as a good investment composition can lure investors to invest in the company.

Another important factor in influencing firm value is the level of profit (profitability). Utomo & Christy (2017) state that profitability shows the level of a company's ability to generate returns on the management of company assets, sales, total assets, and own capital. The higher the profitability of the company, the higher the efficiency of the company in utilizing company facilities to generate profits and create higher firm value.

Based on this explanation, the researchers assumed that profitability can moderate the effect of capital structure and investment decisions on firm value. It is based on the ground that the higher the company's capital structure, the higher the return that investors may obtain. Thus, it will encourage investors to invest (investment decisions). The higher the level of investment, the higher the firm value will be. Meanwhile, profitability is a management effort in maintaining the level of investment and the company's capital structure.

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These research benefits are: (1) providing an overview of the level of investment in companies in Indonesia, (2) providing an overview of the level of the company's capital structure, (3) as reference material for further research. In general, this research was conducted in a different context from previous studies, with the research object coming from a developing country. The novelty of this research lies in testing the moderation of profitability on the effect of capital structure and investment decisions on firm value.

LITERATURE REVIEW

Signaling Theory

Signaling theory is departing from the idea that insiders generally have better information about the company than outsiders. Managers do not have knowledge about the stock market price and interest rates that will be applied in the future but understand and know about the company's prospects. If managers alone understand the prospect of the company while investors and analysis do not, then this situation has led to information asymmetry (Wiyono & Kusuma, 2017).

The emergence of this information asymmetry problem causes investors to have an undervalue view of the company's shares, resulting in a tendency to pooling equilibrium, which is a condition where good quality and poor quality companies are put together in the same assessment. Therefore, companies with good performance quality will try to provide incentives as signals to investors that are difficult to approach or those who cannot be imitated by other companies with poor performance. Finally, there is rational thinking from investors so that they can distinguish which companies are adequate and which are inadequate, this different assessment is known as separating equilibrium (Wiyono & Kusuma, 2017: 28).

Firm Value

Firm value is a certain condition accomplished by a company as a reflection of public trust in the company (Setiadi, 2016). Firm value is an important concept for investors since it is an indicator of the market to assess the company as a unity. Several theories that underlie firm value include Signaling Theory, Efficient Market Theory (Efficient Market Hypothesis / EMH), Asymmetric Information Theory, and Agency Theory (Sundari and Utami, 2013).

According to Wiyono & Kusuma (2017: 69), firm value describes how a good or poor company's management manages its wealth. Firm value is the investor's perception of the company's success rate in managing company resources (Apriadi & Suardikha, 2016).

This study used Tobin's Q as a variable of firm value. Tobin's Q explains that firm value is the combined value of tangible assets with intangible assets. This ratio is considered to provide the best information because Tobins Q includes not only all elements of the company's debt and share capital, but also all company assets (Asmawati & Amanah, 2013).

Capital Structure

The capital structure is a combination of debt and equity (preferred stock and common stock). To obtain the required capital, a company needs to consider the balance between debt and capital. In this case, a company must make the most optimal capital decisions so as to produce a combination of debt and capital that will produce maximum returns (Wiyono & Kusuma, 2017: 173).

According to Dhani & Utama (2017), capital structure is the proportion of financing to corporate debt. A company with large business development will require a large source of funds, so additional funds from external parties are entailed in an effort to increase the need for funds in the business development process. A company with a good level of business development in the long term will provide high returns to investors. As a result, it will have an impact on increasing firm value.

The results of previous studies have shown inconsistent results. Research conducted by Yando (2018), Pantow et al. (2015), and Moniaga (2013) discovered that capital structure had a positive and significant effect on firm value. Research by Dewi and Wirajaya (2013) shows that capital structure had a negative and significant effect on firm value. While the research by Dhani and Utama (2017), Purnama (2016), Apriada and Suardikha (2016), Ustiani (2015), Prasetia et al. (2014), Dewi et al. (2014), Utomo and Christy (2013), Rakhimsyah and Gunawan (2011) disclosed that capital structure had no effect on firm value. Researchers assumed that a high capital structure followed by good management can increase profits and high returns which will affect the increasing firm value. Based on the aforementioned previous studies and the arguments, the research hypothesis formulated is as follows.

H1: Capital structure has a positive effect on firm value

Investment Decision

According to Ustiani (2015), investment is a commitment of a number of funds or other resources carried out at the time being, with the aim of obtaining various benefits in the future. Investment is expected to provide a level of return (internal rate of return) that is higher than the cost of capital. The higher the level of profit generated from the company's investment activities, the higher the company's stock price will be. Higher stock prices have an impact on increasing firm value (Sartini & Purbawangsa, 2014).

Yet, the results of previous studies have shown inconsistent results. Wulandari et al. (2018), Ustiani (2015), and Setiani (2013) discovered that the effect of investment decisions had no effect on firm value. It is in contrast to the research by Purnama (2016), Sartini and Purbawangsa (2014), Pamungkas and Puspaningsih (2013), Prasetyo et al. (2013), Asmawati and Amanah (2013), and Rakhimsyah and Gunawan (2011) that investment decisions had a positive and significant effect on firm value. Researchers assumed that the high firm value will encourage investors to buy shares which leads to the increasing of the share price. A high share price is an indicator of a positive signal of healthy company growth for investors that affects firm value. Given previous studies and the arguments above, the research hypothesis formulated is as follows.

H2: Investment decisions have a positive effect on firm value

Profitability

According to Utomo & Christy (2017), profitability can be used as a description of management performance seen from the profits obtained by the company. The higher the profit the company earns, the higher investor confidence in the company will be. Higher investor confidence will increase the share price as well as firm value.

High profitability reflects the company's ability to generate high returns for shareholders. The greater the profit obtained, the greater the company's ability to pay its dividends. Besides, it has an impact on increasing firm value. With a high profitability ratio of the company, it will provide a signal for investors to invest in the company (Dewi & Wirajaya, 2013).

The results of previous research indicate that the interaction between profitability and capital structure affects firm value (Yando, 2018). Researchers assumed that the higher the profits earned by the company and the profits are not distributed in the form of dividends to investors, the more profits will be retained earnings which will empower the company's internal capital structure. The higher the profit, the bigger the chance of the company to use its own debt and capital for business operations and increase its profit again. The research hypothesis formulated is:

H3: Profitability strengthens the effect of capital structure on firm value.

Profitability is synonymous with managerial performance in managing the company, as well as an illustration of the success of the institutional party in exercising managerial control in the process of managing the company. The increase in profitability, obviously, affects the company's internal financing sources. Sufficient internal financing sources will reduce excess debt levels as well as become a company's reserve financing in investment. Indeed, high profitability will have an impact on the company's dividend policy due to the increase in a dividend that will be obtained by the company owner or shareholders. The interactions arising from the relationships above will certainly affect firm value so it is predicted that profitability will strengthen the effect of investment decisions on firm value (Asmawati and Amanah, 2013).

The results of the research by Wulandari et al. (2018), Asmawati and Amanah (2013) show that the incapability of profitability to moderate investment decisions will affect the company's internal financing sources. An excess of internal financing sources, as well as a company's reserve financing in investment, will have an impact on providing a positive signal for investors to make

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investment decisions so as to increase firm value. Based on previous researches and the arguments above, the hypothesis proposed in this study is as follows:

H4: Profitability strengthens the effect of investment decisions on firm value.

METHODS

This study was conducted on non-financial sector companies listed on the LQ45 index on the Indonesia Stock Exchange (IDX) which were listed in the period 2013 -2017. The data collection techniques in this study used secondary data, which are in the form of annual reports of listed manufacturing companies on the Indonesia Stock Exchange. Secondary data were obtained from the website www.idx.co.id and websites of each sample company.

The dependent variable in this study is firm value as proxied by Tobin's Q.\

$$Tobin's\ Q = \frac{(MVE + Debt)}{Total\ Assets}$$

Q = Firm value.
MVS = Market Value of all outstanding shares.
Debt = Payable.

The independent variable in this study is the capital structure as measured by the debt to equity ratio (DER).

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

Another independent variable is investment decisions that are measured using the price-earnings ratio (PER).

$$PER = \frac{Market\ Value\ per\ Share}{Earnings\ per\ Share}$$

The moderating variable in this study is profitability as measured using the proxy Return on Assets (ROA).

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

RESULTS OF HYPOTHESIS TESTING AND DISCUSSION

Table 1 provides descriptive statistics of each variable, especially the minimum, maximum, mean, standard deviation, and a number of observations.

Table 1. Descriptive Statistics

Variable	Min	Max	Mean	Std Deviation
Tobins Q	0,67	23,29	3,0997	4,04382
DER	15,35	331,35	82,2503	61,89391
PER	4,81	65,79	21,9562	11,09742
ROA	1,51	42,14	11,5328	8,12370

1. **Classical Assumption Test**
This study has fulfilled all the elements of the classical assumption test; possesses normal data, no multicollinearity between independent variables, no heteroscedasticity, and no autocorrelation symptoms.

2. **Hypothesis Testing**
The coefficient of determination (R^2) test results in Table 2 show the coefficient of determination (Adjusted R2) is 0.173 or 17.3%, meaning that the independent variable influenced the dependent variable by 17.3%. The results of the F test in Table 2 show that all independent variables simultaneously affected the dependent variable.

Table 2. Direct Test Results

Variable	*Predicted Sign*	*Coefficient*	*p-value*	
Intercept		-15,323	0,000	
DER	+	6,684	**0,000**	***
PER	+	7,981	**0,000**	***
ROA	+	22,230	**0,000**	***
Adj. R^2		0,919		
F-Statistic		339,478		
Prob (F-statistic)		**0,000**	***	

Variable	*Predicted Sign*	*Coefficient*	*p-value*
N		90	

*, **, *** show significant coefficient at 0,1; 0,05; 0,01
Variable Information:
DER : *Debt to Equity Rasio*
PER : *Price Earnings Rasio*
ROA : *Return on Assets*

Based on Table 2, the capital structure variable had a regression coefficient value of 6.684 with a significance of 0.000 <0.05, thus hypothesis 1 is accepted. These results are in line with research conducted by Yando (2018), Pantow et al. (2015), and Moniaga (2013). It proves that a company that can generate profits tends to increase the amount of debt. The more successful a company is, the more likely it will add up debt. This company can use additional interest to reduce the tax on higher corporate profits. The safer the company is in terms of financing, the additional debt only slightly increases the risk of bankruptcy. In other words, a rational company will add up debt if the additional debt can increase the company's profit.

A rational investor will perceive that the increase in firm value comes from high debt. Thus, investors may offer a higher share price after the company issues debt to buy back outstanding shares. In other words, investors view debt as a positive signal of firm value.

Based on Table 2, the investment decision variable had a regression coefficient of 7.981 with a significance of 0.000 <0.05, thus hypothesis 2 is accepted. These results are consistent with research by Sartini and Purbawangsa (2014), Pamungkas and Puspaningsih (2013), Prasetyo et al. (2013), Asmawati, and Amanah (2013), and Rakhimsyah and Gunawan (2011) that investment decisions had a positive and significant effect on firm value. A high PER value indicates a good company investment and good company growth prospects so that investors will be interested. The high demand for shares will make investors appreciate the value of the shares more than the value recorded on the company's balance sheet. Hence, a higher stock price implies that the firm value also increases. That being said, the greater the investment is invested in the company, the higher the return or profit the company earns, making a high number of investors to invest in the company and will increase firm value.

Table 3. Test Results for Moderation Variables

Variable	*Predicted Sign*	Direct Test			Moderation Test					
		Coef	*p-value*		*Coef*	*p-value*		*Coef*	*p-value*	
Intercept		-15,323	0,000		1,007	0,317		5,567	0,000	
DER	+	6,684	**0,000**	***	-1,274	0,206				
PER	+	7,981	**0,000**	***				-5,512	**0,000**	***
ROA	+	22,230	**0,000**	***	2,545	**0,013**	**	-3,427	**0,001**	**
DER * ROA					8,131	**0,000**	***			
PER * ROA								20,989	**0,000**	***

*, **, *** show significant coefficient at 0,1; 0,05; 0,01
Variable Information:
DER : *Debt to Equity Rasio*
PER : *Price Earnings Rasio*
ROA : *Return on Assets*

Based on Table 3, the DER * ROA variable had a regression coefficient value of 8.131 with a significance of 0.000 <0.05, hence hypothesis 3 is accepted. The results of this study are following research conducted by Yando (2018) that profitability could strengthen the effect of capital structure on firm value. These results indicate that higher profit generated from debt and equity

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financing sources will stimulate management to increase the amount of debt if the debt and internal capital of the company are managed effectively and optimally so that it will significantly increase profits which will affect the increasing of firm value.

Based on Table 3, the PER * ROA variable had a regression coefficient value of 20.989 with a significance of 0.000 <0.05, so hypothesis 4 is accepted. The results of this study are inconsistent with the research by Asmawati and Amanah (2013). These results indicate that the return is the profit obtained by the company due to the use of assets or investments. The stability of the company in obtaining profits is pivotal to reduce the risk if there is a decrease in profits. A company with profit stability can assure investors to make investment decisions and signal the quality of their profits.

CONCLUSION, LIMITATIONS AND SUGGESTIONS

Based on the results of the analysis that has been conducted, it can be summarized that the capital structure and investment decisions had a positive effect on firm value. Profitability could strengthen the influence of capital structure and investment decisions on firm value. The limitation of this study is the small number of samples used. For further research, it is expected that the research can use a larger sample so that all information regarding the capital structure and investment decisions can be traced and can provide a comprehensive picture of the condition of the capital structure and investment decisions of companies in Indonesia.

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