

THE EFFECT OF CAPITAL STRUCTURE AND COMPANY GROWTH ON THE VALUE OF INFRASTRUCTURE SECTORS IN THE IDX

Khilyatin Ikhsani (Universitas Mercu Buana, Indonesia)

Muliana (Universitas Mercu Buana, Indonesia)

Email: muliana.pasca@gmail.com

Abstract—*The Indonesian government is aware of the importance of improving the condition of the infrastructure so that the investment and business climate becomes more attractive. This government effort has created fierce competition among infrastructure companies. Industry competitors are increasingly improving to achieve company's goals, namely good corporate value. Furthermore, growth in this context is defined as the growth of a company where the total of the past sales reflects future profitability and future growth. This study aims to analyze the effect of capital structure on company value partially, the effect of growth on company value partially, and the effect of capital structure and growth on company value simultaneously. The subjects of this study include financial reports of infrastructure, energy, toll road, airport, port, telecommunications, non-building construction and transportation sectors listed on the Indonesia Stock Exchange on the IDX in 2017. The sampling method used is purposive sampling, with the criteria for the companies in this study. A quantitative analysis method using a multiple linear regression analysis is utilized, followed by determination analysis (R Square), partial hypothesis testing (t-test) and simultaneous (F-test) with alpha 5 percent (0,05). Prior to further analysis, data quality and classical assumption tests are carried out. An analytical tool using SPSS version 23.0 for Windows is also used. The result of this research shows that capital structure has a partial influence on company value, growth has a partial influence on company value, and capital structure and growth simultaneously influence company value.*

Keywords—*capital structure, growth, company value, infrastructure, IDX*

I. INTRODUCTION

The Indonesian government is aware of the importance of improving the conditions of the infrastructure so that investment and business climates become more attractive. At present, there are not

enough roads, ports, airports, or bridges in Indonesia (the largest economy in Southeast Asia), while the quality of existing infrastructure is inadequate. However, Indonesia's infrastructure development (both hard and soft infrastructure) is not an easy task. The archipelago consists of around 17,000 islands, although many of these islands have no inhabitants and do not show economic activity. There is a higher complexity and cost to improving connectivity of islands, but there is a need to focus on maritime infrastructure.

The government is currently working to build infrastructure in various regions. The government focus is not only on the island of Java, but also on other areas in regard to the construction of infrastructure projects. To build this infrastructure, large funds must be made available within the next few years. As these funds cannot be fully provided by the government, companies must identify alternate sources to provide funds for operational activities. One alternate source for providing capital needs is in the capital market. This government effort has created fierce competition between infrastructure companies, and competition in this industry improves performance to achieve company goals, namely good corporate value.

Furthermore, growth in this context is defined as the growth of the company where the total sales of the past reflect future profitability and future growth. Sales growth illustrates the growth of the company in regard to the profitability of companies who believe that the percentage change in sales is a better indicator to measure company growth.

This research is focused on explaining the factors that influence the company value for infrastructure companies in IDX. Based on the background and problems, the objectives of this research are:

- Analyze the effect of capital structure on company value partially.
- Analyze the effect of growth on company value partially.
- Analyze the influence of capital structure and growth on company value simultaneously.

II. LITERATURE REVIEW

A. Capital Structure

Capital structure is a balance or comparison between the amount of long-term debt with own capital. The capital structure proxy in this study is measured by the debt to equity ratio (DER). DER is a ratio used to measure the level of leverage (use of debt) to the total shareholder's equity held by the company (Hamidy, 2014, p. 26).

The ratio formulated by Robert (2015) is as follows:

$$DER = \frac{\text{TotalDebt}}{\text{TotalEquity}} \times 100\% \quad (1)$$

Robert (2015) explained that total debt is total liabilities (both short-term and long-term debt) while total shareholder's equity is the total equity (total paid-up capital and retained earnings) owned by the company. This ratio shows the composition (or capital structure) of the total loan (debt) to the total capital owned by the company. A high DER shows that the composition of the total debt (short and long term) is greater than the total capital itself so that the impact on external parties is greater (creditors).

B. Company Growth

According to Machfoedz quoted by Safitri (2015, p. 4), growth is related to a company's perception of its position in the overall economic system for the relevant industry. The growth of the company has an influence on the value of the company. A company with high growth indicates development. If an investment is done properly, the company's growth will bring in future profits. The growth of the company is expected to be directly proportional to the movement of company value (Safitri, 2015, p. 4).

Safitri (2015, p. 2) cited Tawan who explained that growth is expressed as the total sales growth, and past sales growth will describe future profitability and future growth. Furthermore, Saidi explains in Safitri (2015, p. 2) that growth is a change (decrease or increase) in sales owned by the company. Sales growth is calculated as the percentage change in sales at a given time against the previous year. Based on the definition above, it can be explained that growth is the change in total sales in the form of an increase or decrease experienced by the company for one period (one year).

C. Company value

According to Brigham and Houston (2006), there are several approaches to ratio analysis in market value assessment, consisting of the approach of price earnings ratio (PER), price book value ratio (PBV), market book ratio (MBR), yield ratio dividend, and dividend payout ratio (DPR). PBV is used to measure company value and the proxy used in this study is PBV. The ratio of stock prices to a company's book value (PBV) displays the ability of a company to create

relative value to the amount of capital invested. A high PBV reflects a high share price compared to the value of a share. The higher the stock price, the more successful the company and the higher the value for shareholders. The success of the company provides confidence for shareholders in the form of greater profits (Hamidy, 2014). Hamidy (2014) also states that price to book value (PBV) is the market ratio used to measure market price performance shares against the value of the book.

D. Conceptual Framework

Based on the above explanation, the conceptual framework can be described through the framework of research models such as that of Figure 1 below:

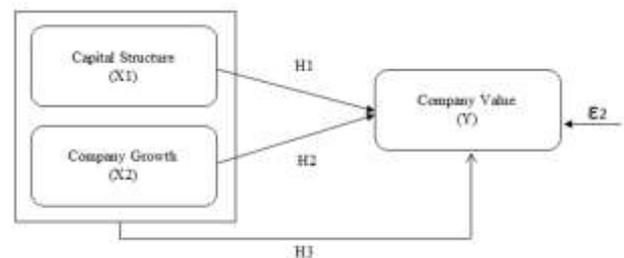


Fig. 1. Conceptual Framework

E. Research Hypothesis

The research hypotheses for this study are:

- 1) H1. Capital Structure affects partial Company Value.
- 2) H2. Growth affects partial Company Value.
- 3) H3. Capital Structure and Growth together affect Company Value simultaneously.

III. METHODS

The units of analysis used in this study are the financial reports of infrastructure, energy, toll road, airport, port, telecommunications, non-building construction and transportation sectors listed on the Indonesia Stock Exchange on the IDX in 2017. The sampling technique in the research is the accidental sampling method and will still meet the criteria that has been determined. The sampling technique is purposive sampling. The criteria for the companies in this study are that they must be engaged in the infrastructure, utilities, and transportation sector in 2017, must have actively traded for one year at least 300 times, and must have issued financial reports in 2017.

To obtain more accurate results in the multiple regression analysis, we then tested with the classical assumption to ensure the results obtained are a regression equation with the properties associated with Best Linear Unbiased Estimator (BLUE). Testing the violation of classical assumptions is the basis of multiple linear regression models performed prior to testing of the hypothesis. The classical assumptions used in this research prior to using multiple linear

regression as a tool to analyze the influence of variables studied consisted of a normality test, multicollinearity, and heteroscedasticity.

The normality test aims to test whether the intruder or residual variable in the regression model has a normal distribution as it is well known that t and F assume that the residual values follow the normal distribution (Ghozali, 2012). Basic decision-making can be carried out based on probability (Asymptotic Significance), shown as follows:

- If probability is >0.05 then the distribution of the population is normal.
- If the probability is <0.05 then the distribution of the population is not normal.

The multicollinearity test aims to assess whether the regression model found a correlation between the independent variables. A good regression model should not be correlated between independent variables. A common way to detect the presence or absence of multicollinearity is to use Variance Inflation Factors (VIF), where if the VIF value is below 10, there is no Multicollinearity in the data.

The heteroscedasticity test aims to assess whether there is a variance inequality of the residual observation with another observation in the regression model. A good regression model has homoscedasticity or lacks heteroscedasticity. According to Ghozali (2012), the basic analysis to detect the presence or absence of heteroscedasticity is as follows:

- If there is a certain pattern in the points (wavy and widened then narrowed) there is heteroscedasticity.
- If there is no clear pattern and the points spread
- Above and below the zero on the Y axis, there is no heteroscedasticity.

This study uses multiple linear regression analysis of the equation $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \epsilon$, where Y is the company value variable, variable coefficient capital structure (X1), and growth (X2). The SPSS version 23.0 program data analysis tool is used. The analysis is continued with the determination analysis test (R Square), partial hypothesis testing (t-test) and simultaneous (F-test) with 5 percent error tolerance level.

IV. RESULTS AND DISCUSSION

A good multiple linear regression equation model to be passed on to the next analysis is that which has met the requirements of classical assumptions, includes all normally distributed data, is free of heteroscedasticity, and shows no correlation between independent variables. The following will explain the results of the classical assumption test. All data in the research has met the requirements of classical assumptions and can be passed on to the next analysis.

From the results of the test conducted using SPSS 23.0, it has been found that the data shows a normal

distribution. This is proved from the result of significance value (Asymp Sig. 2- tailed) which is greater than 0.05.

The results of multicollinearity test have shown that the results of Tolerance value calculation show no independent variable with a Tolerance value less than 0.10. This means there is no correlation between the independent variables. In addition, the calculation of Variance Inflation Factor (VIF) shows the same result for an independent variable that has a VIF value more than 10. Therefore, it can be concluded that there is no multicollinearity among independent variables in the regression model.

Furthermore, the scatterplots created from the results of heteroscedasticity test show points spread both above and below the number 0 on the axis Y. From this, it can be concluded that there is no heteroscedasticity on the regression model and therefore the regression model is worthy for prediction of the use of accommodation services based on the input variable independent. To conclude, based on the testing of several assumptions, it is proved that the equation model proposed in this study has met the requirements of the classical assumption. The equation model in this study is considered good.

Multiple linear regression analysis is used to test the partial and simultaneous hypothesis of independent variables on the dependent variable. Based on the multiple linear regression coefficients and using the SPSS 23.0 program, results were obtained as shown in Table 1 below:

TABLE 1. COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.338	.442		.766	.449
DER	.788	.202	.532	3.892	.000
GROWTH	.541	1.044	.071	.518	.608

a. Dependent Variable: PBV

From Table 1 we have the result of the multiple linear regression equation, as follows: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e = 0.338 + 0.788.X_1 + 0.541.X_2 + e$. Description: Y = Company Value; X1 = Capital Structure, X2 = Growth. From this equation the following conclusions can be interpreted: 1) Variables of capital structure and growth have a positive coefficient direction on company value. 2) Constant value shows the effect of variables X1 and X2, when the variable X1.

A. Partial Effect Test Result (t-test) and Simultaneous Influence (F-test)

Hypothesis testing aims to explain the characteristics of particular relationships or differences between groups or the independence of two or more factors in a situation. The partial effect test aims to test

whether each independent variable significantly influences the partially bound variable with $\alpha = 0.05$ as well as the acceptance or rejection of the hypothesis. The partial test (t-test) is carried out to answer hypotheses one and two of this study.

TABLE 2. TEST RESULT (T TEST)

Model		t	Sig.
1	(Constant)	.766	.449
	DER	3.892	.000
	GROWTH	.518	.608

The results that answer the third hypothesis which postulates that capital structure and growth affect company value simultaneously can be seen in Table 3 below:

TABLE 3. SIMULTANEOUS INFLUENCE (F TEST)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	77.836	2	38.918	7.936	.001 ^b
	Residual	186.355	38	4.904		
	Total	264.191	40			

From Table 3 above (ANOVA table) is obtained a F-count of 7,936 with a significant value of 0.001, smaller than 0.05 ($0.001 < 0.05$). Then, the hypothesis zero (H_0) is rejected and the hypothesis alternative (H_1) is accepted, meaning there is a positive and significant influence where capital structure and growth add to the company value simultaneously for infrastructure companies in the IDX. Therefore, the third hypothesis is acceptable.

Variables of capital structure and growth affect company value. This shows that if the capital structure and growth of an infrastructure company is good, the rise of value of an infrastructure company is affected.

V. CONCLUSION AND SUGGESTION

Based on the results and the conclusion of this research, it can be stated that capital structure has a positive and significant effect on company value partially. Growth has a positive and significant effect on company value partially and capital structure and growth have a positive and significant effect on company value simultaneously.

For a company, to optimize the influence of the capital structure to determine the value of the company, a period capital structure policy should be implemented for the useful life of five to twenty years. This is for the use of long-term debt every year in buying assets to allow a company's operations to run according to the company's wishes to achieve profits that will improve the value of the company. Therefore, determining the policy period of the capital structure can be done.

Based on the results of this study, there is a significant effect of the variables of capital structure

and growth simultaneously on firm value. It is expected of the subjects in this study and companies outside of this research to pay attention to several of these factors to optimize the value of the company. Financial managers can increase profits to increase company value, but management must be careful when determining the company's capital structure to optimize the value of the company. Management of infrastructure companies should manage their capital structure well by placing their funds into profitable investments.

REFERENCES

- [1] Amyulianthy, Rafrinidan Asriyal. 2013. Empirical Efficient Market Hypothesis Testing (EMH) and Capital Asset Pricing Model (CAPM). *Jurnal Liquidity*, 2(1) 21-33.
- [2] Ayako, Aloys dan Wamalwa, Fidelis. 2015. Determinant of Firm Value in Kenya: Case of Commercial Banks Listed at the Nairobi Securities Exchange. *Applied Finance and Accounting*, 1(2) 129-142.
- [3] Brigham F., dan J. Houston. 2006. *Fundamentals of Financial Management*. Translator Ali Akbar Yulianto Indonesia version (10th ed). Jakarta, Salemba Empat.
- [4] Ghazali, Imam. 2013. *Application of Multivariate Analysis with IBM SPSS 23 Program* (8th ed). Semarang, Universitas Diponegoro.
- [5] Hamidy, Rusdi, R. 2014. Effect of Capital Structure on Company Values with Profitability As Intervening Variables in Property and Real Estate Companies on the Indonesia Stock Exchange. *Thesis*, Management Study Program, Postgraduate Program Universitas Udayana. Bali.
- [6] Idode, Patrick E., Adeleke, Toyoin M., Ogunlowore, Akindele J., Samuel Ashogbon Oyekan S. 2014. Influence of Capital Structure on Profitability: Empirical Evidence from listed Nigerian Banks. *IOSR Journal of Business and Management (IOOSR-JBM)*, 16(11) Ver. IV:22-28.
- [7] Indrawan, I Made. 2016. Analysis of the Effect of EPS, DER, Firm Size on DPR with ROA as an Intervening variable in Manufacturing Sector Companies on the IDX in 2010-2015. *Thesis*, Management Study Program, Postgraduate Program Universitas Mercu Buana. Jakarta.
- [8] Kartikasari, Dwidan Marisa, Merianti. 2016. The Effect Of Leverage and Firm Size to Profitability of Public Manufacturing Companies In Indonesia. *International Journal of Economics and Financial Issues*, 6(2) 409-413.
- [9] Mule, Robert K., Suleiman M., Mukras, Nzioka, Mutunga O. 2015. Corporate Size, Profitability and Market Value: an Econometric Panel Analysis of

- listed firms in Kenya. *European Scientific Journal edition*, 11(13) ISSN: 1857 – 7881: 376-396.
- [10] Munawaroh, Aisyatul dan Priyadi, Maswar Patuh. 2014. Effect of Profitability on Company Values with Corporate Social Responsibility as a Moderating Variable. *Journal of Accounting Science & Research*, 3(4) 1-17.
- [11] Nasimi, Assad Naim. 2016. Effect of Capital Structure of Firm Profitability (An Empirical Evidence from London, UK). *Global Journal of Management and Business Research: C Finance*, 16(4) Version 1.0: 1-13.
- [12] Niresh, J. Aloy dan Velnampy, T. 2014. Firm Size and Profitability: A Study of Listed Manufacturing Firms in Sri Lanka. *International Journal of Business and Management*, 9(4) 57-64.
- [13] Ramadan, Imad Zeyad. 2016. Panel Data Approach of the Firm's Value Determinants: Evidence from the Jordanian Industrial Firms. *Modern Applied Science*, 10(5) 163-169.
- [14] Regina R., Maryam M., dan Jacky SB. 2015. The Influence of Capital Structure, Company Size and Company Risk on Company Values in the Plastic and Packaging Sub Sector on the IDX. *Jurnal EMBA 159*, 3(3) 159-169.
- [15] Safitri, Hazlin dan Suwitho. 2015. Size Influence, Growth, with Dividend Policy As Moderating Variables Against Company Values. *Journal of Science and Management Research*, 4(6) 1-15.
- [16] Sari, Putu Indah Purnamadan Abundanti, Nyoman. 2014. The Effect of Company Growth and Leverage on Profitability and Corporate Value. *E-Journal of Management at Udayana University*. 3(5) 1427-1439.
- [17] Sarwono, Jonathan. 2006. *Quantitative and Qualitative Research Methods*. Yogyakarta, Graha Ilmu.
- [18] Shinta M., Suhandak, dan Nila F. 2014. The Influence Of Capital Structure on Profitability and Firm Value (A Study On Food And Beverage Companies Listed In Indonesia Stock Exchange 2010-2012 Period). *Journal of Business Administration (JAB)*, 7(2) 1-8.
- [19] Uke M., Suhadak, Siti H., dan Solimun. 2014. The Influence of Company Size and Capital Structure towards Liquidity, Corporate Performance and Firm Value, for Large and Small Group Companies. *European Journal of Business and Management*, 6(18) 148-157.
- [20] Winarto, Jacinta. 2015. The Determinants of Manufacturer Firm Value in Indonesia Stock Exchange. *International Journal of Information, Business and Management*, 7(4) 323-350.
- [21] Yuanita M., Budiyanto, dan Slamet R. 2016. Influence of Capital Structure, Size and Growth on Profitability and Corporate Value. *International Journal of business and finance management research. Blue print journal*, 4 80-101.