

Conference Paper

The Influence of Capital Structure to the Firm Value with Profitability As Intervening Variables

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Abstract

The shareholders have the interest to increase the firm value in order to maximize its wealth. This study aims to find out the profitability ability in mediating the influence of capital structure with firm value. The population of this study is the pharmaceutical company listed in Indonesia Stock Exchange (IDX). Census study method is used as sampling method by utilizing eight pharmaceutical companies. Data analysis tool used in this study is the panel data regression with 5% of significance level. The result of this study shows that profitability is able to mediate the influence of capital structure on firm value because the debt will increase the firm value, and the increase of firm value will be bigger if debt can increase the profitability of the company. The samples of this study have not reached the optimum point on their debt level, thus the addition of debt proportion that can increase the profitability can be used in order to achieve higher firm value.

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1. Introduction

Pharmaceutical company and the current economic condition have create a competition between companies, the competition makes every company trying to improve their performance in order to achieve their goal of earning a high profit. The effort to anticipate this condition is the financial manager of the company has to be careful in determining the capital structure of the company. With a careful plan of determining the capital structure, the company is expected to improve the firm value and be more superior in facing the business competition. One of the efforts to improve and maintain the company performance is by measuring the ability of the capital structure in influencing the company profitability level.

Along with the increasing knowledge of the public in the field of capital market and the availability of fund from potential investors who are interested in investing their capital, capital structure has become an essential consideration factor of investment.

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It is related with the risk and the revenue that will be received by the investor. The investor needs information such as the financial statement to observe the capital structure of the company. The investor will conduct various analysis, in relation with the decision to invest their capital in the company, through information, one of which is the financial statement of the company.

The capital structure theory explains the effect of the capital structure change on the firm value, this theory describes that the company funding policy in determining the ratio between debt and equity is aimed to maximize the firm value. The capital structure theory is a theory to explain the company funding policy of debt and equity to maximize the firm value. The capital structure in a company is only a part of its financial structure. A capital structure that will maximize the firm value is an optimal capital structure by optimizing the balance between the risk and the return rate, hence maximizing the stock price of the company.

A high firm value is the desire of every company owner, because a high value shows the prosperity of the shareholder is also high. The firm value can be seen from the book value, which is the ratio of the stock price to the book value per share. The firm value can be improved through the debt policy, the amount of debt used by the company is a policy related to the capital structure. The debt policy is determination of the amount of debt that will be used by the company in funding its asset, indicated by the ratio of total debt to total asset. Debt policy is included in the company funding policy from external sources.

Aside from the capital structure, profitability is also affecting the firm value. Without profit, it is impossible for the company to acquire a capital from the external party. Profit is also an economic motive of the company. Economic motive is the desire of the company to exist and make it more prosperous and to avoid a big loss.

2. Research Method

2.1. Data type

The research type is quantitative research, which is a research conducted by analyzing data by utilizing equations or mathematical model. The data used in this research is secondary data. Secondary data is obtained indirectly through books, scientific journals, and media. Secondary data in this research are Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER), Equity to Asset Ratio (EAR), Return On Equity (ROE), and Price Book

Value (PBV), the data is sourced from the financial statements of the pharmaceutical companies listed on Indonesia Stock Exchange during the period of 2012–2016.

2.2. Sampling method

Sampling technique used in this study is census study method. Census study method is a technique of collecting samples when all members of a population are used as samples, this is often done if the population is relatively small, which is less than 30 people, or the study wants to make a generalization with a small error, where all members of population are used as samples. So the sample is taken with a specific reason, not randomly.

From the sampling process, the population is 53 companies. The population used as samples are pharmaceutical companies listed in Indonesia Stock Exchange during 2012–2016, these companies have the complete audited financial statement during the period of 2012–2016, and the data in the financial statement is complete and in accordance to the studied variables. Therefore, the samples in this study are eight companies.

2.3. Data collection technique

Documentation technique is used in this study to collecting the data, by collecting all data needed to solve the problem formulated as the objectives of this study. The data used in this study is quantitative data, sourced from the secondary data, obtained by collecting the published data in Indonesia Stock Exchange (IDX) by downloading the data through www.idx.co.id.

2.4. Data analysis technique

Data analysis technique used in this study is quantitative. Quantitative approach is decision model using numbers. Numbers have an important role in the making, using, and solving quantitative model. With this approach, it is possible to reveal and provide an overview as a fact on The Influence of The Capital Structure on The Firm Value with Profitability as Intervening Variable in Pharmaceutical Companies listed in Indonesia Stock Exchange (IDX).

The analysis tool used in this study is path analysis. Path analysis is a statistic analysis technique used in quantitative study. Path analysis is usually uses the term direct

and indirect influence, due to the existence of intermediaries/intervening/mediating variable.

3. Result

TABLE 1: Descriptive statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
DAR	40	0.20	1.03	0.4108	0.23426
EAR	40	-0.03	0.80	0.6038	0.21904
DER	40	-31.04	70.83	2.5680	12.95909
PBV	40	-108.76	25.80	1.5495	18.43677
ROE	40	-1.17	1.42	0.1503	0.39845
Valid N (listwise)	40				

The capital structure is measured using DAR (Debt to Asset Ratio), EAR (Equity to Asset Ratio) and DER (Debt to Equity Ratio). DAR is the ratio of total debt to total asset. The average value of DAR on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is 0.4108, with a standard deviation of 0.23426, thus it can be said the fluctuation of DAR value on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is small, seen from the standard deviation value is smaller than the average value. The minimum value of DAR is 0.20 and the maximum value is 1.03, with average value of 0.4108, stating that most of the sample companies have smaller debts than the asset value of the company.

EAR (Equity to Asset Ratio) is the ratio of total equity to total asset. The average value of EAR on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is 0.6038, with a standard deviation of 0.21904, therefore, it can be said the fluctuation of EAR value on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is small, seen from the standard deviation value is smaller than the average value. The minimum value of EAR is -0.03 and the maximum value is 0.80, with average value of 0.6038 stating that most of the sample companies have smaller equity value than the asset value of the company.

DER (Debt to Equity Ratio) is the ratio of total debt to equity. The average value of DER on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is 2.5680, with a standard deviation of 12.95909 therefore, it can be

said the fluctuation of DER value on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is big, seen from the standard deviation value is bigger than the average value. The minimum value of DER is -31.04 and the maximum value is 70.83 , with average value of 2.5680 stating that most of the sample companies have bigger debt than the equity value of the company or the small interest of the company owner on the company property.

Firm value is measured with PBV (Price Book Value), which is the ratio of the share price per share to the book value per share. The average value of firm value on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is 1.5495 , with a standard deviation of 18.43677 , with the standard deviation value bigger than the average value of the company it can be concluded there is a big fluctuation of firm value on pharmaceutical companies listed in Indonesia Stock Exchange during the period of 2012–2016. The minimum value of firm value is -108.76 and the maximum value is 25.80 .

Profitability is measured with ROE (Return on Equity), which is the ratio of net profit to own capital. The average value of ROE on pharmaceutical company listed in Indonesia Stock Exchange during the period of 2012–2016 is 0.1503 , with a standard deviation of 0.39845 , with the standard deviation value bigger than the average value of the company it can be concluded there is a big fluctuation of profitability on pharmaceutical companies listed in Indonesia Stock Exchange during the period of 2012–2016. The minimum value of firm value is -1.17 and the maximum value is 1.42 , with the average value of 0.1503 , stating that most of the pharmaceutical companies listed in Indonesia Stock Exchange during the period of 2012–2016 have smaller net profit than their own capital.

3.1. Path analysis

Path analysis technique is one of the statistical analysis technique used in quantitative research. Path analysis usually use the term direct influence and indirect influence because there are variables intermediaries/intervening/mediation variables.

The output of equation 1 gives a standardized beta value of DAR 1.537 and significant at 0.000 which means DAR affects ROE, then the EAR of 1.305 and significant at 0.000 which means EAR affects ROE and DER of 0.809 and significant at 0.000 which means DER does not affect ROE. The value of standardized beta coefficient is the path value or path p_2 .

TABLE 2: The result of equation analysis 1.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.294	0.296		-7.750	0.000
	DAR	2.615	0.289	1.537	9.058	0.000
	EAR	2.375	0.304	1.305	7.806	0.000
	DER	-0.025	0.002	-0.809	-11.068	0.000

TABLE 3: The result of equation analysis 2.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-84.380	31.031		-2.719	0.010
	DAR	60.348	33.554	0.767	1.799	0.081
	EAR	108.926	32.040	1.294	3.400	0.002
	DER	0.161	0.303	0.113	0.532	0.598
	ROE	-33.513	10.697	-0.724	-3.133	0.003

At regression equation output 2 standardized beta value of DAR at regression equation 2 equal to 0.767 EAR equal to 1.294 and DER equal to 0.113 are all significant while ROE equal to -0.724 is not significant. The standardized beta value represents path value p1 and the standardized value of beta ROE of -0.724 represents path value p3.

3.2. F-Test

F-test is performed to test whether if independent variable (X) is simultaneously has a significant relationship or not to dependent variable (Y). If the probability value (F-statistic) < 0.05 (significance level 5%) then H₀ is rejected and H₁ is accepted, meaning variable X is simultaneously has significant effect on variable Y. But, if the probability value (F-statistic) > 0.05 (significance level 5%) then H₀ is accepted and H₁ is rejected, meaning variable X is simultaneously does not have significant effect on variable Y.

In Table 3, it can be seen the probability value (F-statistic) is 0.000007 < 0.05 then H₀ is rejected and H₁ is accepted, which means Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER), and Equity to Asset Ratio (EAR) are significantly affecting Price Book Value (PBV).

TABLE 4: Data Panel Regression Analysis result.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-13.17614	27.70673	-0.475557	0.6380
DAR	-33.23936	45.94758	-0.723419	0.4752
DER	1.080287	0.151743	7.119203	0.0000
EAR	42.40915	20.87234	2.031835	0.0514
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.727434	Mean dependent var.	1.549500	
Adjusted R-squared	0.633446	S.D. dependent var.	18.43677	
S.E. of regression	11.16231	Akaike info criterion	7.891378	
Sum squared resid.	3613.315	Schwarz criterion	8.355820	
Log likelihood	-146.8276	Hannan-Quinn criter.	8.059306	
F-statistic	7.739630	Durbin-Watson stat.	1.516684	
Prob(F-statistic)	0.000007			

Source: Eviews 10 Output Result (2018).

4. Discussion

The analysis of this study result is analysis on the appropriateness of theory, opinion, and previous studies that have been put forward, as well as the behavior pattern that must be carried out to overcome it.

4.1. The influence of capital structure on firm value

In accord to the hypothesis result, it can be explained capital structure, which is measured with Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER), and Equity to Asset Ratio (EAR), simultaneously has significant effect on firm value, which is measure with Price Book Value (PBV), of pharmaceutical companies listed in Indonesia Stock Exchange during the period of 2012–2016.

This hypothesis result can also be interpreted the addition of debt done by the company to expand the business will increase the share price of the company, hence the firm value pharmaceutical companies on Indonesia Stock Exchange during the period of 2012–2016 is significantly increasing. The result underlines capital structure of pharmaceutical sub sector companies in Indonesia Stock Exchange have not reached their optimum point, this is in line with Modigliani Miller (MM) theory, which stated if capital structure is under the optimum point then every addition of debt will improve the firm value, this is being explained by the trade-off theory where the benefit from

the increase in debt is still bigger than the expense spent, therefore directly the benefit of debt use increases the firm value.

Determining the target of capital structure is one of the main tasks of the company management. Capital structure is the key to productivity and company performance improvement from the ratio of total debt to equity. The improvement in firm value because of the increase of total debt (debt is still under its optimum point) is caused by the company management is using debt to expand the business.

This study result is in line with a study by Hamidy (2014) and Antwi et al. (2012), who stated capital structure is positively and significantly affecting firm value.

4.2. The influence of capital structure on firm value with profitability as intervening variable

v/The indirect effect of capital structure, represented by Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER), Equity to Asset Ratio (EAR), on firm value, represented by Price Book Value (PBV), through profitability as intervening variable, represented by Return on Equity (ROE), is -2.643324 . Hence, the direct coefficient is bigger than the indirect coefficient, then it can be concluded the actual relationship is direct. So it can be stated profitability acts as intervening variable in the influence of capital structure on firm value on pharmaceutical company in Indonesia Stock Exchange during the period of 2012–2016.

5. Conclusion

From the hypothesis result performed on the study problem shows that:

1. Capital structure has positive and significant effect on firm value. This study result shows the addition of debt performed by the company will increase the share price of the company, because the debt of sampled companies is still under their optimum point.
2. Capital structure, measured by Debt to Asset Ratio (DAR), does not have significant effect on firm value, measured by Price Book Value (PBV). This result is not in line with a study by Santoso, who stated capital structure, measured by Debt to Asset Ratio (DAR), have significant effect on firm value, measured by Price Book Value (PBV).

3. Capital structure, measured by Debt to Equity Ratio (DER), have significant effect on firm value, measured by Price Book Value (PBV). This result is line with a study result by Hamidy (2014), who postulated capital structure, measured by Debt to Equity Ratio (DER), have significant effect on firm value, measured by Price Book Value (PBV).
4. Capital structure, measured by *Equity to Asset Ratio* (EAR), does not have significant effect on firm value, measured by Price Book Value (PBV). This result is not in line with a study by Safrida, who stated capital structure, measured by *Equity to Asset Ratio* (EAR), have significant effect on firm value, measured by Price Book Value (PBV).
5. Profitability is able to mediate the influence of capital structure on firm value. This result shows debt can increase the share price and in the end will result in the improvement of the firm value, if the debt can beforehand increase the net income of the company which will increase the profitability of the company. This result is in line with the study result of Hamidy (2014), who stated profitability can act as intervening variable in the influence of the capital structure on firm value. Moreover, it is found if the indirect influence of capital structure is bigger than the direct influence, the companies can improve the firm value by increasing the debt, whereas the increment of debt can increase the firm value as well. On the contrary, a study by Pratama and Wiksuana expressed profitability is unable to mediate the influence of capital structure on firm value. This means with the addition of profitability or the ability to obtain profit does not affect the influence of capital structure on firm value.

6. Suggestion

1. The pharmacy companies in Indonesia Stock Exchange have yet to reached the optimum point on their debt level, hence it is recommended to increase the debt proportion to a certain point (under the optimum point), because with the addition of debt will significantly improve the firm value. The improvement of firm value will be bigger if the debt of the company can also increase the profitability of the company, with a note that the debt does not exceed the optimum point.
2. The study about variables that can improve firm value through one or more intervening variable can be conducted again. This study is using profitability as intervening variable on the influence of capital structure on firm value. The

development of this study is suggested, by adding the proxy of profitability or adding/changing the intervening variable that can influence the firm value, such as dividend policy.

3. For the potential investors, in predicting the growth of profit the investors should consider other factors, such as company size, capital, and asset structure, as well as paying attention to the influential social, politic, and economic condition.

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