

The Effect of Capital Structure on Firm Value with Profitability as a Moderating Variable

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Background: *This study aims to examine the effect of capital structure on firm value with profitability as a moderating variable.*

Materials and methods: *The data used in this study are secondary data from financial statements of companies listed on the Indonesia Stock Exchange in the Food and Beverage Industry sub-sector in 2015 - 2018. By using purposive sampling, this study obtained 15 company samples. The analytical method used in this study is moderated regression analysis (MRA).*

Results: *The results showed that the capital structure had a significant positive effect on firm value. In addition this study shows that profitability cannot strengthen the effect of capital structure on firm value.*

Conclusion: *Research carried out currently uses a single measuring instrument, therefore for subsequent research using more complete measurements and further expanded researches populations are not only limited to the food and beverage industry sub-sector*

Keywords: *Capital Structure, Profitability, Firm Value*

Date of Submission: 08-04-2020

Date of Acceptance: 23-04-2020

I. Introduction

The company's goals are both long-term goals, namely by increasing the value of the company and the welfare of shareholders, as well as short-term goals, namely by maximizing corporate profits. Companies that have gone public attract the attention of investors and tend to increase the value of the company (Pramana and Mustanda, 2016). Company value is the price a prospective buyer is willing to pay if the company is sold. The higher the value of the company, the greater the prosperity that will be received by the owner of the company. For companies that issue shares in the capital market, the price of shares traded on the stock exchange is an indicator of company value (Wiagustini, 2014) and (Budiharjo, 2019)..

Capital Structure is one of the factors that influence a company's value. Solvency or Capital Structure is a measure of the extent to which companies are financed with debt (Wiagustini, 2014). Companies can use Capital Structure to obtain capital to get higher profits (Suwardika and Mustanda, 2017). The existence of tax protection makes managing Capital Structure very important because the high use of Capital Structure can increase company value (Setiadewi and Purbawangsa, 2015). Capital Structure significantly has a positive effect on firm value, this is consistent with the results of research conducted by Suwardika and Mustanda (2017). The opposite results obtained by Rahmadani and Rahayu (2017) obtained the result that Capital Structure has a significant negative effect on firm value, but research conducted by Cheryta et al. (2017) found the results that significantly Capital Structure has no effect on firm value.

Profitability shows the ability of the company to make a profit or measure the effectiveness of the company's management. The ability to make a profit can be measured from its own capital or from all funds invested into the company (Wiagustini, 2014). An increase in earnings will give a positive signal to investors that the company is profitable and is expected to be able to provide welfare to shareholders through high stock returns (Pramana and Mustanda, 2016). Research conducted by Sucuahi and Cambarihan (2016) found that profitability had a significant positive effect on firm value.

Based on the results of previous studies still show inconsistent results related to the influence of Capital Structure on firm value, so it is indicated that there are other variables that affect the relationship between the two variables on company value. In this study profitability is used as a mediating variable because Capital Structure and profitability affect the value of the company and at the same time Capital Structure and company size affect profitability.

Based on the background description above, the authors are interested in raising this issue as scientific writing material with the title: "The Effect of Capital Structure on Firm Value with Profitability as a Moderating Variable"

Based on the background that has been described above, the author determines the formulation of the problem as follows:

1. Does capital structure affect the value of the company?

2. Does profitability affect the value of the company?
3. Can ROE moderate the capital structure of Company Value?

II. Literature Reviews

Agency Theory

According to Jensen and Meckling (1976) agency theory is a contract in which one or more people (principals) govern other people (agents) to perform a service on behalf of the principal and authorize the agent to make the best decision for the principal. Agency theory is often referred to as theory which underlies the application of good corporate governance because it explains the relationship between management and the owner. According to Aryani&Budhiarta (2014) Conflicts of interest between principals and agents are called agency problems

Firm Value

Company value is very important because high company value will be followed by high shareholder prosperity (Brigham and Houston, 2014). The higher the stock price the higher the company's value. High company value is the desire of the owners of the company, because with high value shows the prosperity of shareholders is also high. The wealth of shareholders and companies is presented by the market price of shares which is a reflection of investment decisions, financing (financing), and asset management. Dependent variable in this study is the value of the company measured using Tobin's Q.

According to Smithers and Wright (2007) Tobin's Q is calculated by comparing the ratio of the market value of the company's shares with the book value of the company's equity.

Financial performance

Company profitability is measured using profitability ratios, one of which can use Return On Equity (ROE). ROE is a net to equity ratio that measures the rate of return on shareholders (Brigham & Houston, 2014)

$$ROE = \frac{\text{Net Income}}{\text{Equity}}$$

Capital Structure

According to (Brigham and Houston, 2014) this ratio measures how far the company uses funding through debt. By using debt, investors can maintain control of the company. On the other hand creditors will see equity as a security limitation, so the higher the equity the less creditor risk. In this study the Capital Structure ratio used is Debt to Equity Ratio (DER).

According to Dewi and Wirajaya, (2013) the determination of capital structure using debt at a certain level (as far as greater benefits, additional debt is still permitted) as a source of funding can increase profitability and firm value. The higher the DER, the greater the risk faced and investors will ask for a higher level of profit. The ratio is stated in the formula :

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

Research Model

Based on the literature review and the results of previous studies and the problems that have been raised, there may be a relationship between the Capital Structure and Financial Performance to Firm Value as a basis for making hypotheses then formulated with the following framework of thought:

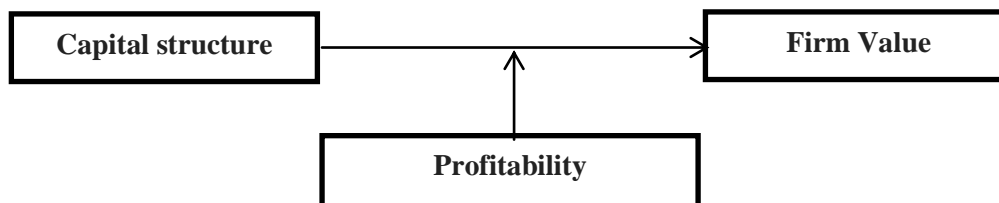


Figure 1: Research Model

Source: the results of the author's processing

Hypotheses

Based on the existing problems and objectives to be achieved, the authors draw three hypotheses, namely:

- H₁ = Effect of Capital Structure on Firm Value
- H₂ = Effect of Return On Equity on Firm Value

H₃= Profitability moderates the effect of Capital Structure on Firm Value.

III. Methodology

The population of this study is companies manufacturing basic and food and beverages industrial sectors in Indonesia which are listed on the Indonesia Stock Exchange (IDX) in 2015 – 2018. From the existing population a certain number of samples were taken by using the Purposive random sampling technique, which is a sampling technique with certain considerations (Suliyanto, 2005). The sample used in this study was selected based on the following criteria:

1. Companies manufacturing basic and chemical industry sectors were listed on the Indonesia Stock Exchange in 2015-2018
2. The company owned data is complete and in accordance with the variables studied

IV. Results and Discussion

Descriptive statistics include minimum, maximum, mean and standard deviation. The research variable data includes the dependent variable Company Value and independent variables include Capital Structure and Return On Equity. The results of the descriptive statistical analysis are shown in table 1:

1. The value of the company has an average value of 4.0973. While the standard deviation is 6.78336. This indicates that the variable value of the company is not normally distributed, because the standard deviation is greater than the average value of the variable.
2. Capital Structure has an average value of 0.9007. While the standard deviation is 0.48984. This indicates that the Institutional Ownership variable is normally distributed, because the standard deviation value is smaller than the average value of the variable.
3. Return on Equity (ROE) has an average value of 8.5428. While the standard deviation is 10.56673. This indicates that the ROE variable is not normally distributed.

Table 1, Descriptive Statistic Results
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DER	60	,17	2,12	,9007	,48984
ROE	60	-24,71	124,15	16,3885	25,95385
FV	60	,10	32,70	4,0973	6,78336
Valid N (listwise)	60				

Source : Secondary data processed 2020

1. Classic assumption test

A model is declared good for predictors if it has the best liner unbiased estimator properties (Gujarati, 2013). Besides that, a regression model is said to be quite good and can be used to predict if it passes a series of econometric assumptions that underlie it.

The classic assumption test is carried out to determine the condition of existing data in order to determine the most appropriate analysis model to use. The classic assumption test used in this study consisted of autocorrelation tests using Durbin-Watson statistics, multicollinearity test using Variance Inflation Factors (VIF) and heteroscedasticity test using the Glejser test.

2. Multicollinearity Test

This test aims to test whether the regression model found a correlation between independent variables. A good regression model should not have a correlation between the independent variables. This test is done by using correlations between the independent variables used in the regression equation. If some or all of the independent variables are strongly correlated, multicollinearity occurs.

Table 2, Uji Multikolenearitas.
Coefficients^a

Model	Before Moderasi		After Moderasi	
	Tolerance	VIF	Tolerance	VIF
1 (Constant)				
DER	,958	1,043	,905	1,105

ROE	,958	1,043	,958	1,044
DER*ROE			,939	1,065

a. Dependent Variable: FV

Source : Secondary data processed 2020

The method that can be used to test the presence of multicollinearity is by testing the tolerance value or Variance Inflation Factor (VIF) value. The tolerance value limit is 0.10 and Variant Inflation Factor (VIF) is 10 (Hair et al., 1998; 48). The results of the multicollinearity test show that there are no variables that have a tolerance value of less than 0.10 and there are no variables that have a VIF value of less than 10. So it can be concluded that there is no multicollinearity in the regression model.

3. Autocorrelation Test

The autocorrelation test aims to test whether in the regression model there is a correlation between the confounding errors in period t and the interfering errors in the t-1 period (before). The consequence of autocorrelation in a regression model is that the sample variant does not describe the population variant. Furthermore, the resulting regression model cannot be used to estimate the value of the dependent variable on the value of certain independent variables.

Table 3, Autocorelation Test
Model Summary^b

Model	Durbin-Watson
Before Moderasi	2,002
After Moderasi	1,998

a. Predictors: (Constant), DER, ROE, DER*ROE

b. Dependent Variable: FV

Source : Secondary data processed 2020

From the table above we get the value of Durbin-Watson of 2.002 for before moderation and after moderation of 1.998 so it can be concluded that there is no autocorrelation in this regression model

4. Heteroscedasticity Test

Heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. In this study tested using uji glestser.

Table 4, Heteroscedasticity Test Results
Coefficients^a

	Before	After
	Moderasi	Moderasi
(Constant)		
DER	,158	,140
ROE	,195	,091
DER*ROE		,194

Source : Secondary data processed 2020

5. Normality test

The normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution. Data normality was tested using one sample kolmogorov-smirnov with a level of significant 0.05. The results of the normality test from this study are presented in Table 5.

Table 5, Normality Test Results
One-Sample Kolmogorov-Smirnov Test

	Asymp. Sig. (2-tailed)
Residuals Before Moderasi	,989
Residuals After Moderasi	,970

Source : Secondary data processed 2020

Based on the results of the normality test shown in table 5 shows that the residual regression models before and after moderation have asymp values. $\text{sig.} > \alpha = 0.05$. Thus, it is interpreted that the residual values in all regression models before and after moderation are stated to be normally distributed.

6. Determination Coefficient Test (R^2)

This test shows the percentage of the ability of independent variables to explain the variation of the dependent variable. The magnitude of the coefficient of determination from 0 to 1. The closer to zero the magnitude of the coefficient of determination the smaller the influence of the independent variable, on the contrary the closer to a magnitude of the coefficient of determination the greater the influence of independent variables. The test results are seen in the table.

Table 6, Determination Coefficient Test

Model Summary ^b			
Model	R	R Square	Adjusted R Square
Before Moderasi	,925 ^a	,856	,851
After Moderasi	,926 ^a	,857	,849

Source : Secondary data processed 2020

Based on the table it can be seen that the determination coefficient of Adjusted R Square has a value of 0.856, so it can be stated that the ability of independent variables (DER and ROE) in explaining the dependent variable variation (Firm Value) is not approaches 0.

The value of R Square (R^2) is changed to the form of percent, meaning the percentage contribution of the independent variable to the dependent variable. Value R^2 The first hypothesis is 0.857, which means the percentage contribution of environmental performance variables to financial performance variables is 85,7% while the rest ($100\% - 85,7\% = 11,3\%$) is influenced by other variables outside the model.

7. Simultaneous Significance Test (Test Statistic F)

Simultaneous significance test (F test) is used to show whether all the independent variables included in the model have a joint influence on the dependent variable. (Ghozali, 2018). If the analysis using the F test shows that all independent variables simultaneously are explanations of the significance of the dependent variable.

Table 7, Simultaneous Significance Test

ANOVA ^a		
Model	F	Sig.
Before Moderasi	169,664	,000 ^b
After Moderasi	111,676	,000 ^b

Source : Secondary data processed 2020

8. Multiple Liner Regression

In accordance with the results of the research hypothesis which states that between variables have a significant relationship to the dependent variable, multiple linear regression is needed to model the analysis.

Table 8, Statistical Test Result t Coefficients^a

Model	Before Moderasi				After Moderasi			
	B	Std. Error	t	Sig.	B	Std. Error	t	Sig.
1 (Constant)	-2,457	,717	-3,425	,001	3,877	,566	6,853	,000
DER	3,240	,711	4,561	,000	1,546	,361	4,286	,000
ROE	,222	,013	16,542	,000	5,753	,351	16,413	,000
DER*ROE					,223	,457	,488	,628

a. Dependent Variable: FV

Source : Secondary data processed 2020

Effect of Capital structure on Firm Value

The results of the regression coefficients in table 8 show that the Debt to equity ratio has a positive t count of 4.286 with a probability of 0,000. This shows that p value (0,000) <level of significance (0.05), so that H1 can be accepted, it means that the Capital Structure proxied by debt to equity ratio has a significant effect on the firm value.

These results are in line with research conducted by Badruddien et al. (2017) and Suwardika and Mustanda (2017) who find that Capital Structure has a significant positive effect on firm value. In a tax situation, the value of the company for companies that use debt will be greater than the value of companies that do not use debt. In general, the interest paid can be used to reduce income subject to tax.

Effect Return On Equity on Firm Value

The results of the regression coefficients in table 8 show that the return on equity ratio has a positive sign t count of 16,413 with a probability of 0,000. This shows that p value (0,000) <level of significance (0.05), so that H2 can be accepted, meaning that profitability which is proxied by return on equity ratio has a significant effect on firm value.

These results are in line with research conducted by Musabbihan and Purnawati (2018) and Sucuahi and Cambarihan (2016) who find that profitability has a significant positive effect on firm value.

The high profitability of a company will also reflect the higher efficiency of the company, so that it appears that the company's performance is good. High profitability can increase company value (Suwardika and Mustanda, 2017).

Profitability moderates the effect capital structure on firm value

The results of the regression coefficients in table 8 show that the return on equity ratio has a positive sign t count of 0.488 with a probability of 0.628. This shows that p value (0.628) > significance level (0.05), so that H3 is not accepted, meaning that profitability proxied by return on equity ratio has insignificant effect on accommodating capital structure to firm value.

These results are in line with research conducted by Nugroho and Abdani (2017) who found that profitability was not significantly positive effect on firm value. Partial profitability in the results of this study found that profitability had no significant effect on firm value. Profitability in this study contradicts the theory because the profits obtained by the company are not stable from year to year and tend to fluctuate so that investors are not sure of the results the company will get in the future.

V. Conclusion and Recommendation

Conclusion

Based on the results of the study it can be seen that:

1. Capital structure and Profitability have a positive and significant effect on Firm Value.
2. Profitability which is proxied by the return on equity ratio has no significant effect on accommodating capital structure to firm value.

Recommendation

Research carried out currently uses a single measuring instrument, therefore for subsequent research using more complete measurements and further expanded researches populations are not only limited to the food and beverage industry sub-sector.

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Roy Budiharjo. "The Effect of Capital Structure on Firm Value with Profitability as a Moderating Variable." *IOSR Journal of Business and Management (IOSR-JBM)*, 22(4), 2020, pp. 27-33.