

## **ANALYSIS OF FACTORS THAT INFLUENCE THE CAPITAL STRUCTURE**

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**Abstract.**The industry that has been increasingly needed in recent time is the automotive and spare parts company. Based on the consideration of the importance of establishing a capital structure for the continuity of the company, it encourages researcher to conduct research on the factors that affect the capital structure of automotive and spare parts company on the Indonesia Stock Exchange. This study aims to test whether the capital structure, ROA, company size and the growth of the sales affect the capital structure of automotive and spare parts company on the Indonesia Stock Exchange. The analysis in this study used multiple linear regression. The sampling method that is used in this study is the purposive sampling method. The data is taken from the company's annual financial statements on the Indonesia Stock Exchange from 2011 to 2017. The result of this study indicate that the asset structure has a positive effect on capital structure, ROA does not affect the company's value, the size of the company negatively affects the capital structure and sales growth does not affect the capital structure.

**Keywords :** Asset structure, Profitability, Firm Size, Sales Growth

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## INTRODUCTION

An increase in the number of investors investing in Indonesia from year to year is increasing. The purpose why investors want to invest on a company is to get a profit. To reach that purpose, the company must pay attention on some activities, one of them is financing activity. The financial manager itself is influenced by financial decision including financing and funding. Financing activities are method used in a company to get money in order to pay the company's needs (Subramanyam. K. R and John J. Wild. 2014). The company's main goal is to maximize shareholder wealth. Nowadays financial experts developed the new concept as a value-based measure of performance in the creation of shareholder value (Rio and Hersugondo, 2016).

The industry that has been increasingly needed in recent time is the automotive and spare parts company. The Ministry of Industry stated, "The automotive industry in Indonesia still has a big chance. It was recorded that the number of car sales in 2018 was 1,3 million units or valued at USD 13,7 billion, and the number of export was 346.000 units or valued at USD 4,78 billion. The automotive sector is one of the mainstay sectors of Indonesia 4.0," said the Ministry of Industry.

This phenomenon is caused by the effect of increasing population, community activities and various other types of services. This is the reason for the increasing specialization of these activity. Considering the importance of automotive companies in Indonesia, so as a company they must be able to establish the optimal capital structure. Based on the consideration of the importance of establishing a capital structure for the continuity of the company, it encourages researcher to conduct research on the factors that affect the capital structure of automotive and spare parts company on the Indonesia Stock Exchange.

The first factor is asset structure. Asset structure is a balance or comparison between fixed assets and total assets (J.Fred Weston and Eugene F. Brigham, 2005:175). A company with a high asset structure can use its fixed assets as collateral in debt, so that later the company will get low debt costs and can improve its capital structure (Jensen dan Meckling, 1976). In the study of Bokpin et al. (2009) it was found that there was a positive relation between asset structure and capital structure while in the study of Quan and Xin (2013), it was found that there was a negative relation between asset structure and capital structure.

The second factor is profitability. Profitability is the net result of a series of policies and decisions (Brigham and Houston, 2006:107). Profitability in this study is measured by Return on Assets (ROA) ratio. On the pecking order theory, a company that has a high profitability tend to use the internal financing resources that the external financing resources. (Husain and Pudjiastuti, 2006:276). This statement is in line with the study of Lim and Cheng (2012), this study explain that profitability has a positive effect on the capital structure of a company while the study of Bayrakdaroglu, et al (2013) and Cortez, (2012) it was found that there was a negative relation between profitability with the capital structure of a company.

The third factor is the company's size. The size of a company has a positive and significant effect on the capital structure of consumer goods company in IDX, this was stated by Widjaja and Kasenda (2008), this statement is in line with Dimas Lusangaji (2012), he stated that the size of a company, sales growth and profitability positively affect the capital structure.

The forth factor is sales growth. Brigham and Houston (2001:39) stated that a company with a stable sales could be safer to get more loan and bore higher fixed charges as compared to a company with unstable sales. Sales growth affects industrial sectors in Johannesburg Stock Exchange (Vries, 2019). Serrasqueiro (2011) found a positive connection between the sales growth with current liabilities related with the capital structure in non-financial company in Portuguese. The next study that was supported by Javed and Akhtar (2012) found that sales growth had positive and significant effect on the capital structure in industrial sector company Karachi Stock Exchange in Pakistan.

### The Research Hypothesis

1. Asset structure affects the DER of the automotive and spare parts industry that is listed on IDX.
2. ROA affects the DER of the automotive and spare parts industry that is listed on IDX.
3. The size of a company affects the DER of the automotive and spare parts industry that is listed on IDX.

4. Sales growth affects the DER of the automotive and spare parts industry that is listed on IDX.

#### **Research Purposes**

This study aims to determine the effect of :

1. Asset structure on the DER of the automotive and spare parts industry that is listed on IDX.
2. ROA on the DER of the automotive and spare parts industry that is listed on IDX..
3. The size of a company on the DER of the automotive and spare parts industry that is listed on IDX.
4. Sales growth on the DER of the automotive and spare parts industry that is listed on IDX.

### **LITERATURE REVIEW**

#### **Capital Structure**

The composition of a capital structure becomes a very important information for foreign parties who want to invest their capital (investor) and those who want to lend funds (creditor). Capital structure is an independent variable and is proxied by DER (debt to equity ratio). Brigham and Houston (2001:5) stated that the capital structure policy involves a trade off between the risk and the rate of return as follows :

- a. Using more liabilities means increasing the risk borne by shareholders,
- b. Using more liabilities also increase the expected rate of return.

#### **Pecking Order Theory**

Pecking Order Theory suggests that a company tends to use its internal financing resources (retained earning) as much as possible to fund projects within the company. Debt becomes the second choice after internal financing resources, then convertible bond, preferred stock and in the end, if the company still needs funds, the company will issue common stock (external equity). This happens because of the transaction cost in getting funds from external parties. Pecking Order Theory explains why highly profitable companies have fewer debts. This happens not because those companies have a low debt ratio target, but because those companies do not need external funding (Brealey and Myer 1995).

#### **Asset Structure**

A company with a high asset structure can use its fixed assets as collateral in debt, so that later the company will get low debt costs and can improve its capital structure (Jensen and Meckling, 1976). Asset structure or Fixed Asset Ratio (FAR) and is also known as tangible assets is a ratio of the company's fixed assets to total assets.

#### **Profitability**

Profitability in this study is measured by Return on Assets ratio (ROA). In Pecking Order Theory, a company with high profitability tends to use its internal financing resources than external financing resources (Husnan dan Pudjiastuti, 2006:276). ROA is a company's financial ratio related to the potential profit of measuring the strength of the company resulting in profits or profits at the level of income, assets and also specific stock capital.

#### **Company Size**

Asset size is used to measure the size of a company, the size of the asset is measured as the logarithm of total assets. The total value of assets is usually bigger compared to other financial variables, for which the asset variable is refined into a Log Asset or Ln Total Asset.

#### **Sales Growth**

Brigham and Houston (2001:39) stated that a company with a stable sales could be safer to get more loan and bore higher fixed charges as compared to a company with unstable sales.

#### **Previous Research**

In the study of Bokpin et al. (2009) it was found that there was a positive relation between asset structure and capital structure while in the study of Quan and Xin (2013), it was found that there was a negative relation between asset structure and capital structure.

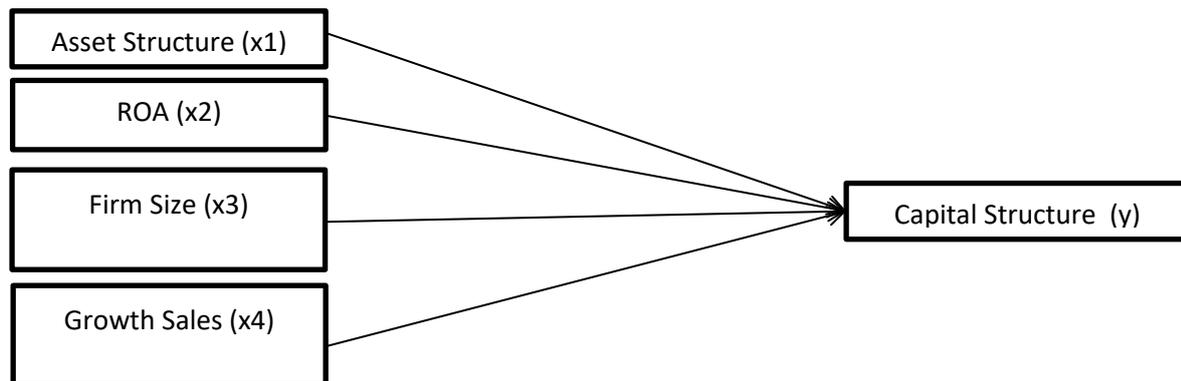
Sumani and Rahmawati's research (2012) states that profitability had a positive effect on the company's capital structure while in the study of Bayrakdaroglu, et al (2013) and Cortez, (2012) it was found that there was a negative relation between profitability with the capital structure of a company.

The research that was conducted by Dimas Lusangaji (2012) states that the size of the company, sales growth and profitability positively affect the capital structure. In line with the research that was conducted by Finky, Liliana and Ernawati (2015) stated that the size of the company had a significant and positive effect on the capital structure.

Research by Vries (2010) disclosed growth affect industrial sector in Johannesburg Stock Exchange. Serrasqueiro (2011) found a positive connection between the sales growth with current liabilities related with the capital structure in non-financial company in Portuguese. The next study that was supported by Javed and Akhtar (2012) found that sales growth had positive and significant effect on the capital structure in industrial sector company Karachi Stock Exchange in Pakistan.

### Research Model

Based on literature review, research model could be portrayed :



## METHOD OF RESEARCH

### Type of research

The type of this research is associative research. Associative research is a study that aims to find out the relation between two or more variables (Sugiyono, 2007:5). This study was conducted to find out and prove the effect of asset structure, ROA, the size of a company and sales growth as independent variables on capital structure as a dependent variable.

### Population and Sample

Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics that are applied by researchers to be studied and conclusions drawn later (Sugiyono, 2007:115). The population that is used in this study is an automotive company that has been listed on the Indonesia Stock Exchange from 2011 to 2017, which consist of 13 companies. Sample is a part of the number and characteristic of the population. Based on sample criteria, the sample of this research consist of 10 companies (Sugiyono, 2007:116).

### Method of Collecting Data

The data that is used in this research uses secondary data that is taken in the financial statement of a company that has been listed on the Indonesia Stock Exchange and can be accessed on [www.idx.co.id](http://www.idx.co.id). The secondary data that is needed is the financial information from a company's financial statement included in the sample according to the variables studied.

### Research Variable

#### Capital Structure

The formula to get debt to equity ratio can be used as a comparison of the total debt with total equity as follows (Kasmir, 2014:158):

$$\text{Debt to equity ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

#### Asset Structure

The formulation of the asset structure is as follows (J.Fred Weston and Eugene F.Brigham translated by Alfonsus Sirait, 2005:175) :

$$\text{Asset Structure} = \frac{\text{Fixed Assets}}{\text{Total Assets}}$$

## ROA

The way to measure ROA is as follows (Hanafi and Halim 2003:27) :

$$ROA = \frac{\text{Net income after tax}}{\text{Total Assets}}$$

The Size of a Company

Company size measurement is as follows Jogiyanto (2007:282) :

$$\text{Size of a company} = \text{Ln} (\text{Total Assets})$$

## Sales Growth

Sales growth measurement is as follows Kasmir (2012:107) :

$$\text{Sales growth} = \frac{\text{Sales in year}_t - \text{Sales in year}_{t-1}}{\text{Sales in year}_{t-1}}$$

## Empirical Test

### Classical Assumption Test

The classical assumption test was conducted in order to obtain regression results that could be accounted for and had unbiased result or we could call it Best Linear Unbiased Estimator (BLUE). The classical assumption tests that were used such as (Wibowo 2012:61) multicollinearity test, heteroscedasticity test, normality test and autocorrelation test.

### Analysis of Multiple Linear Regression

Multiple regression analysis is intended to examine the extent and how the direction of independent variables influence the dependent variable. The equation used in multiple linear regression analysis in the automotive and spare parts industry is as follows (Suliyanto, 2011):

$$Y_1 = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \varepsilon$$

Explanation :

- $Y_1$  : DER
- $\alpha$  : Constants
- $X_1$  : Assets Structure
- $X_2$  : ROA
- $X_3$  : The size of a company
- $X_4$  : Sales growth
- $b_i$  : Coefficient
- $e$  : Error

## RESULTS OF THE RESEARCH

### Multicollinearity Test

**Table 1. The result of Multicollinearity Test**

Variabel Bebas	VIF	Keterangan
<i>Assets structure</i>	1.212	Non Multikolinieritas
<i>Return on Assets</i>	1.035	Non Multikolinieritas
<i>Firm Size</i>	1.161	Non Multikolinieritas
<i>Growth Sales</i>	1.078	Non Multikolinieritas

Source : secondary data that has been processed

**Heteroscedasticity Test**

**Table 2. The result of Heteroscedasticity Test**

Variabel Bebas	Sig.	Keterangan
<i>Assets structure</i>	0.371	Bebas Heteroskedastisitas
<i>Return on Assets</i>	0.538	Bebas Heteroskedastisitas
<i>Firm Size</i>	0.181	Bebas Heteroskedastisitas
<i>Growth Sales</i>	0.840	Bebas Heteroskedastisitas

*Source : secondary data that has been processed*

**Normality Test**

**Table 3. The result of Normality Test**

		Standardized Residual
N		70
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	.97058178
	Most Extreme Differences	
	Absolute	.077
	Positive	.077
	Negative	-.041
Test Statistic		.077
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

*Source : secondary data that has been processed*

Based on the output above, it can be seen that the sig. (2-tailed) value is 0,200>0,05, therefore Ho cannot be rejected. This means that the standardized residual value is normally spread.

**Autocorrelation Test**

**Table 4. The result of Autocorrelation Test**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.709 <sup>a</sup>	.503	.473	.59737	1.652

*Source : secondary data that has been processed*

Autocorrelation test in this research used the Durbin-Watson test. Based on the Durbin-Watson table with n=70 and k=5, the value of dL= 1,467 and dU= 1,7683, so that 4-dU= 2,2317

**The Multiple Linear Regression Equation**

**Table 5. Equation of regression**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.219	.477		.459	.648
SA	.051	.007	.726	7.733	.000
ROA	.015	.013	.111	1.181	.242
UP	-.059	.014	-.384	-4.110	.000
PP	-.009	.010	-.082	-.870	.387

Source : secondary data that has been processed

Based on the table above the regression equation is written as follows:

$$Y = 0.219 + 0,051 X1 + 0,015 X2 - 0.059 X3 - 0.09 X4$$

From the table , it can be seen that the asset structure coefficient issued is 0.51 with a significance of 0,000 smaller than the alpha value (0.05), so Ho is rejected and Ha is accepted. This means structure compared to capital structure, this is contrary to the research of Bokpin et al. (2009) which says there is a positive relationship between the structure received and the capital structure. Most of the assets that can be purchased must be increased. In general, companies that have collateral for debt will find it easier to get loans from companies that have no collateral (Brigham and Gapenski, 1996: 190) This theory also supports Luke Setia Atmaja (1999: 56) which is used as collateral for debt using relatively large debt. Companies with structures that can make fixed assets as collateral in the company, so that companies get low costs and can improve their capital structure (Jensen and Meckling, 1976). Thus the Activation Structure focuses on capital structure.

The coefficient of ROA is 0.15 with a significance value of 0.242 which means that Ho is accepted and Ha is rejected. This means that ROA is not interested in capital structure. With the existence of high returns does not require relatively large internal funds accumulated as profits must. Profitability also does not guarantee repayment of loans and high profits. This is supported by research by Vina Ratna and Saifudin (2012) which states that Profitability does not approve the Capital Structure. The coefficient of company size is -0.59 with a significance level of 0,000, this means that Ho is rejected and Ha is accepted.

The size of the company turned negative to the capital structure, this can be interpreted as the size of the company's effect is inversely proportional to debt, large companies increase the level of sales and produce a large level of profit. The need for large funds is needed by using internal funding sources. The results of this study support Cole (2008), Manan (2010), Aulia (2009) which states that firm size supports negatively the capital structure. The findings of this study support the pecking order theory (Myers, 1984: 9-10), which explains that companies will implement selection strategies based on preference in choosing funding sources.

The Value of Sales Growth Coefficient is -0.09 with a significance of 0.387 Accepted and Declined, which means Sales Denied does not conflict with the capital structure. Companies that have high sales growth, companies have the potential to get big profits, and profits will increase. Require companies to need internal funds to meet their capital needs. This is contrary to the research of Nissak and Ardiansari (2016) and Liwang (2011) who say sales growth does not conflict with the capital structure.

**The result of the coefficient of determination**

**F test**

**Tabel 6. The Result of F test**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.503	4	5.876	16.466	.000 <sup>b</sup>
	Residual	23.195	65	.357		
	Total	46.699	69			

Source : secondary data that has been processed

The calculated F value is 16,466 and F table 2.5, so that the variable partially affects DER.

**Partial Test**

**Tabel 7. The Result of t Test**

Model		t	Sig.
1	(Constant)	.459	.648
	SA	7.733	.000
	ROA	1.181	.242
	UP	-4.110	.000
	PP	-.870	.387

Based on the table above that if the  $t_{count} > t_{table}$  where the  $t_{count}$  value of asset structure variable is 7.733 which is greater than the value of  $t_{table}$  which is 1.99714, therefore it can be concluded that the asset structure variable positively affects DER. ROA variable has a value of  $t_{count}$  of 1.181 smaller than  $t_{table}$  of 1.99714, therefore it can be concluded that the ROA variable does not affect DER. The company size variable has a  $t_{count}$  of -4.110 less than -1.99714, therefore it can be concluded that the company size variable negatively affects DER. Sales growth variable has a  $t_{count}$  of -0.870 more than -1.99714, therefore it can be concluded that the sales growth variable does not affect DER.

**CONCLUSION**

**Conclusion**

Based on the results of the analysis and discussion that have been done, it can be concluded as follows :

1. Asset structure positively affects the DER of automotive and spare parts industry that is listed on IDX.
2. ROA does not affect the DER of automotive and spare parts industry that is listed on IDX.
3. The size of a company negatively affects the DER of automotive and spare parts industry that is listed on IDX.
4. Sales growth does not affect the DER of automotive and spare parts industry that is listed on IDX.

**Suggestion**

1. Further study can use other variables that might affect capital structure such as taxes and market conditions.
2. This study was only conducted on automotive sector companies registered at IDX. Further research can do research with different objects because each sector of the company has different characteristic.
3. This study is based on annual reports and is limited only to the period of 2010 to 2017, therefore it has not yet described the company's financial condition.

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