

## Conference Paper

# The Effect of Liquidity, Profitability and Size Ratios on Capital Structure and Implications for the Value of Manufacturing Industry Companies Listed on the IDX

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## Abstract

The purpose of this study was to analyze the effect of the company's Liquidity, Profitability, Size Ratio on Capital Structure and its implications on the value of the company in Manufacturing companies on the Indonesia Stock Exchange.

The study population was 8 manufacturing companies in LQ45 registered in the Jakarta Islamic Index (JII). Determination of the sample using non probability sampling technique that is purposive sampling obtained as many as 5 companies registered in the period 2012-2016. The analytical method used is path analysis with the trimming model. The results showed that current ratio (CR) has a direct effect on debt to equity ratio (DER), return on asset (ROA) has a direct effect on debt to equity ratio (DER), Size does not affect debt to equity ratio (DER), current ratio (CR) does not directly affect earning per share, return on asset (ROA) directly affects earning per share (EPS), debt to equity ratio (DER) direct effect on earning per share (EPS), current ratio (CR) indirect effect on earning per share (EPS) through debt to equity ratio (DER) and return on asset (ROA) indirect effect on earning per share (EPS) through debt to equity ratio (DER).

**Keywords:** current ratio, return on asset, size, debt to equity ratio and earning per share

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## 1. Introduction

So far, the Indonesian economy has been able to survive amid the fluctuating global economic turmoil. This makes investors see that Indonesia is a very good country to invest, of course this attraction is accompanied by a large population.

A manufacturing company is a company with a large scale of production or has a large trading volume and requires large capital or funds to develop its products so that it will affect the capital structure or funding of a company. The company has a long-term goal, namely to maximize the prosperity of shareholders or the value of the company. Competition in the manufacturing industry makes each manufacturing company increasingly improve performance so that the goal can still be achieved. One

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goal is to maximize shareholder prosperity (Sartono, 2010: 8). According to Suharli (2006), the value of the company is very important because it reflects the company's performance which can affect investors' perceptions of the company. One of them, the view of corporate value for creditors. According to Oka (2011), firm value is the market value of a company's equity coupled with debt market value. Corporate value is determined by the value of equity and debt value (Hasugian, 2008). The use of financial information provided by a company is usually an analyst or investor will calculate its financial ratios which include liquidity ratios, leverage, profitability, activities, and the company's market for basic considerations in investment decisions (Riyanto, 2001). Thus, the addition of the company's equity to the company's debt can reflect the value of the company. A company always needs capital both for business opening and business development. Capital or funding has various problems, one of the funding problems is how much the company's ability to meet the funding needs that will be used to operate and expand its business. Brigham and Houston (2011) state that developing companies need capital that can come from debt or equity. According to Keown (2010) companies must understand the main components of the capital structure. The optimal capital structure is the capital structure of the company that will maximize its stock price. Too much debt can hinder the development of the company which will also make shareholders think twice to keep investing. Own capital structure is the proportion of use between debt and equity. Management as a company manager must certainly be able to balance the use of debt and equity to achieve a capital structure optimal. In realizing an optimal capital structure, financial managers must consider many things that affect the capital structure. Several factors that influence the capital structure include liquidity, company size, profitability. This study uses the path analysis model. The company's capital structure is influenced by many factors. From several previous studies there are several factors that influence the capital structure such as profitability, business risk, insider ownership, growth opportunity, company size, asset structure, liquidity and so. Supporting theories about capital structure include agency theory, trade off theory, and pecking order theory. The variables used in this study are the liquidity, firm size, profitability, the effect on capital structure.

Liquidity is how much the company's ability to fulfill its short-term obligations. Liquidity is measured by one of the debt ratios, which is a ratio that measures the percentage of capital requirements spent on debt (Brigham and Houston, 2006). In accordance with the pecking order theory, companies will prioritize using internal funds. Companies with high liquidity will reduce their external funding because the source of their internal funds is high.

Researches related to capital structure include research conducted by Eka (2010), proving that simultaneously capital structure, managerial ownership and firm size have a significant effect on firm value. Partially the capital structure has a significant and positive influence on the value of the company. While the research by Safrida (2008), proves simultaneously the capital structure and growth of the company negatively and significantly affect the value of the company. Partially that the capital structure has a negative and significant effect on value company. According to Analysis (2011), company value can also be influenced by the size of the profitability generated by the company. Profitability is the ability of a company to generate profits for a certain period.

Profitability ratio is the ability of a company to earn profits in relation to sales, total assets and own capital (Sartono, 2010: 122). In this study profitability ratios are measured by return on equity (ROE). Return on equity (ROE) is a ratio that shows how much the company's ability to generate net income to return equity to shareholders. Research conducted by Nurmayasari (2012), variable profitability as measured by Return On Equity (ROE). The results of his research indicate that there is a positive and significant influence on the value of the company. Whereas research conducted by Noviyanto (2008) profitability as measured by Return On Equity (ROE), shows that ROE does not significantly influence the value of the company.

The size of the company is considered able to influence the value of the company. Because the larger the size or scale of the company, the easier it will be for the company to obtain funding sources both internal and external. Research conducted by Rachmawati, et al (2007) firm size was stated to be positively and significantly related to firm value. However, company size has a negative and significant value by Siallagan and Mas'ud (2006). The inconsistency of the results of the above studies provides motivation to re-examine the effect of capital structure, profitability and firm size, liquidity and capital structure on firm value at different time dimensions (2012-2016). Manufacturing companies are used in this study because the company is a company with a large scale of production or has a large trading volume and requires large capital or funds to develop its products so that it will affect the capital structure or funding of a company.

With so many things that affect the capital structure and company value, the researcher focuses on the study and discussion only on three fundamental factors that are considered to have a significant effect on company value with the indogeneous variable is Corporate Value, while the exogenous variables are Liquidity, profitability, Company Size and Capital Structure.

From the background above, the researchers chose the topic of Analysis of Determinants of Liquidity, Profitability and Size Ratios on Capital Structure and Implications for the Value of Manufacturing Industry Companies listed on the IDX.

## 2. Research Purpose

1. Analyzing the direct influence of liquidity ratios on capital structure in manufacturing Companies
2. Analyzing the direct influence of profitability on the capital structure of manufacturing companies
3. Analyzing the direct influence of company size on the capital structure of manufacturing companies
4. Analyzing the direct effect of liquidity ratios on the value of manufacturing companies
5. Analyzing the direct influence of profitability on the value of manufacturing companies.
6. Analyzing the direct influence of company size on the value of Manufacturing companies
7. Analyzing the direct influence of DER on EPS
8. Analyzing the indirect effect of liquidity ratios on firm value through the capital structure of manufacturing companies
9. Analyze the indirect effect of profitability on company value through the capital structure of manufacturing companies.
10. Analyze the indirect influence of company size on firm value through the capital structure of manufacturing companies.

## 3. Theoretical Basis

### 3.1. Agency Theory (Agency Theory)

*Agency Theory* was proposed by Michael C. Jensen and William H. Meckling in 1976. This theory is an agency relationship that is the relationship between shareholders (principals) with managers (agents) who are given the power to make decisions. Agency

relations can cause agency problems because of conflicts of interest and asymmetric information between the principal and the agent. Managers as agents are given a mandate by the shareholders (principals) to run a business in the interest of principals, namely increasing the value of the company and the prosperity of shareholders, while managers have their own interests, namely increasing the welfare of managers with salary and commission orientation. In this condition each party has its own interests. This is the basic problem in agency theory, namely the existence of a conflict of interest. Agency theory states that as an agent of shareholders, managers do not always act in the interests of shareholders. For that, the cost of supervision is needed through ways such as binding agents, checking financial statements, and limiting management decisions. Monitoring activities what is done requires agency costs. Agency costs are used to control all activities carried out by managers so that managers can act consistently in accordance with contractual agreements between creditors and shareholders (Jensen and Meckling, 1976). There are several alternatives to reduce agency cost, first by increasing share ownership by management. According to Jansen and Meckling (1976), the addition of managerial ownership has the advantage of aligning the interests of managers and shareholders. Second, increasing funding with debt (Wahidawati, 2002). Debtholders who have invested their funds in the company will automatically supervise the use of these funds. Third, 13 by increasing the dividend payout ratio, thus there is not enough free cash flow available and management is forced to seek outside funds to finance its investment activities.

### 3.2. Pecking Order Theory

Pecking order theory is an alternative theory that can explain why profitable companies borrow less amount of money. This theory is based on asymmetric assumptions where managers know more information about the profitability and prospects of a company than investors. This theory states that companies will prefer to make funding through internal sources and then the shortcomings are taken from external sources. Companies can fund with internal funds using retained earnings reinvested. But if external funding is needed, the lowest resistance path is debt. Debt issuance has a small impact on stock prices. The following is a description of the Pecking order theory (Brealey et al., 2008):

- 1) Companies like internal funding, because these funds are collected without sending a reverse signal that can reduce stock prices.

2) If external funds are needed, the company issues debt first and only issues equity as a last resort.

### 3.3. Trade-Off Theory

The capital structure theory states that companies exchange the tax benefits of debt financing with problems caused by potential bankruptcy. The trade-off theory estimates that the target debt ratio will vary between companies with each other. Companies with tangible and safe assets and abundant taxable profits that must be protected should have a high target ratio. Companies are not profitable with risky intangible assets that should depend on funding sourced from equity. The overall trade-off theory of capital structure has good purpose. This theory avoids extreme predictions and rationalizes moderate debt ratios

### 3.4. Capital Structure

According to Weston & Copeland (2002) capital structure is permanent financing consists of long-term debt, preferred stock, and shareholder capital. Capital structure is related to funding sources, both from within and outside the company. According to Riyanto (2001) internal sources are capital or funds that are formed or generated by themselves within the company, which means spending on "own strength". Internal funding sources come from funds collected from retained earnings from company activities and depreciation. While the source of external funding comes from the owner which is a component of own capital and funds originating from creditors who are loan capital or debt. According to Brigham and Houston (2011) there are four factors that influence capital structure decisions:

a. Business risk, or the level of risk inherent in a company's operations if the company does not use debt. The greater the business risk of the company, the lower the optimal debt ratio.

b. Company tax position. One of the main reasons for using debt because interest is a tax deduction, then decreases the cost of effective debt. However, if most of the profits of a company have been protected from taxes by tax protection that comes from depreciation, then the interest on debt that has not been repaid, or tax losses brought to the next period will result in a low tax rate. As a result, additional debt will not provide the same advantage compared to companies that have a higher effective tax rate.

c. Financial flexibility, or the ability to raise capital with reasonable terms, are in poor condition. A smooth supply of capital will affect the company's operations, which in turn has a very important meaning for long-term success.

d. Conservatism or managerial aggressiveness. Some managers are more aggressive than other managers, so managers are more willing to use debt as an effort to increase profits. This factor does not affect the actual optimal capital structure, or the capital structure that maximizes value, but will affect the target capital structure of the company automatically supervise the use of these funds. Third, 13 by increasing the dividend payout ratio, thus there is not enough free cash flow available and management is forced to seek outside funds to finance its investment activities.

### 3.5. Liquidity Ratios

Liquidity ratios are used to measure a company's ability to meet short-term (or current) short-term resources available to fulfill these obligations (Van Horne and Wachowicz, 2001). One of the liquidity ratios that will be used in this study is the current ratio (current ratio). According to Weston and Copeland (1997) current ratio (current ratio) is the ratio between current assets to current liabilities. The liquidity ratio shows the company's ability to pay its short-term liabilities using its current assets. Usually current assets consist of cash, securities, accounts receivable, and inventory; whereas current liabilities consist of cash, marketable securities, accounts receivable, and inventory; whereas current liabilities consist of short-term bank loans or other debt that has a period of less than one year. 17 There are several commonly used liquidity ratios, namely:

a. Current Ratio, which is a comparison between current assets and current debt which is the ability to pay debts that must immediately be met with current assets (Riyanto, 1995:). The higher the current ratio means the greater the company's ability to fulfill short-term financial obligations

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \times 100\%$$

b. Quick (acid test) Ratio, which is a comparison between liquid assets that are truly liquid only, namely current assets outside of inventory or reduced by inventory and compared to current debt. This ratio is a measuring tool to show the ability to pay debts which must immediately be met with more liquid current assets (Riyanto, 1995).

$$\text{Quick Ratio} = \frac{\text{Aktiva Lancar} - \text{Persediaan}}{\text{Hutang Lancar}} \times 100\%$$

### 3.6. Profitability

According to Munawir (2004) profitability shows the ability of companies to generate profits during a certain period. Profitability is the ability of a company to earn profits in a certain period (Riyanto, 2001). Where each measurement of profitability is related to sales, total assets, and own capital. Profitability ratio is a ratio that measures a company's ability to generate profits (profitability) at the level of sales, assets, and capital. There are three ratios that can be used in profitability ratios, namely:

- a. Net profit margin (NPM).

Net Profit Margin (NPM) is a ratio used to show the company's ability to generate net profits. How to calculate NPM, namely:

$$\text{Net Profit Margin} = \frac{\text{Earning After Tax}}{\text{Sales}} \times 100\%$$

- b. Return on assets (ROA)

The net income ratio to total assets measures the return on total assets (ROA) after interest and tax. Returns on total assets can be calculated as follows:

$$R \text{ Return on assets (ROA)}$$

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- c. Return on Equity (ROE)

The ratio of net income to common stock equity, measures the return on ordinary equity (ROE) or the rate of return on investment in shareholders. How to calculate ROE, namely:

$$\text{ROE} = \frac{\text{Earning After Tax}}{\text{Equity}} \times 100\%$$

Profitability is an important independent variable that has an influence on the capital structure. The higher the profit of a company, the lower the debt, the more internal funds available to fund investment (Brigham and Houston, 2001). Brigham and Houston (2001) say that companies with high returns on investment use relatively small debt. A high rate of return makes it possible to finance most of the funding needs with funds generated internally. The decision of the capital structure directly also affects the magnitude of the



risk borne by the shareholders and the magnitude of the rate of return or the level of expected profit.

## 4. Relevant Research

There are several previous studies regarding capital structure, including:

1. Research conducted by Rahmawardani (2007) about the analysis of the influence of liquidity aspects, profitability, business risk and sales growth on the company's capital structure. With the independent variables used, namely liquidity, profitability, business risk, and sales growth. Dependent variable capital structure. By using multiple regression analysis tools. With the results of research variables that have a positive effect, namely liquidity and sales growth, while the profitability and business risk variables have a negative effect.

2. Hadianto's (2010) Research on the Effects of Systematic Risk, Asset Structure, Profitability, and Company Types on Issuer's Capital Structure 21 Mining Sector: Testing the Static-Trade Off Hypothesis, shows the results that firm size has a negative and significant effect on capital structure, while profitability variables have a positive and significant effect on capital structure.

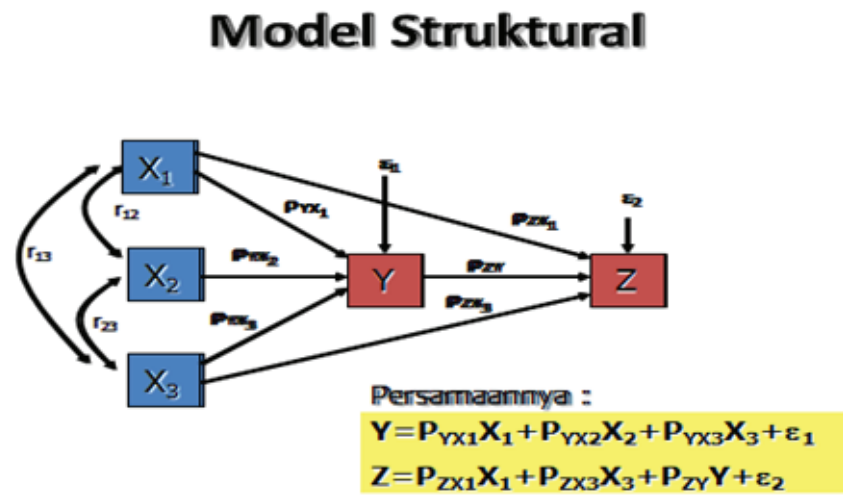
3. Indrajaya (2011) in his research entitled "The Effect of Asset Structure, Company Size, Growth Rate, Profitability, and Business Risk on Capital Structure". The results show that asset structure variables have a positive and significant influence on capital structure. Variable size of the company has a positive and significant influence on capital structure. Profitability variables have the strongest explanatory influence or strength compared to other variables, with negative and significant influence on capital structure..

4. Research conducted by Sari (2013) on the Effect of Profitability, Asset Growth, Company Size, Asset Structure and Liquidity on the Capital Structure of Manufacturing Companies on the Indonesia Stock Exchange in 2008-2010, concluded that asset structure variables did not affect the capital structure. Liquidity has a negative and significant effect on capital structure. Profitability proxied by ROE has a negative and significant effect on capital structure, and firm size has a positive and significant effect on capital structure.<sup>22</sup>

5. Research on Adiyana and Ardiana (2014) on the Effect of Firm Size, Business Risk, Asset Growth, Profitability, and Liquidity in Capital Structure prove that the variables of company size, profitability, and liquidity have a positive and significant effect on the capital structure. 5. Research on Adiyana and Ardiana (2014) on the Effect of Company Size, Business Risk, Asset Growth, Profitability, and Liquidity on Capital Structure proves

that variable firm size, profitability, and liquidity have a positive and significant effect on capital structure.

### 5. Research Paradigma



### 6. Research Hypotesis

The research hypotesis in this study is as follows;

Ha1: There is a direct influense of the company’s liquidity ratio on the capital structur of the company,

Ha2: There is a direct influense of the company’s profitability on the capital structur in manufacturing companies.

Ha3:There is a direct influense of the company’s of size on the capital structur in manufacturing companies.

Ha4: There is a direct influense of the company’s liquidity ratio on the value of the company, in manufacturing

Ha5 There is a direct influense of the company’s profitability on firm value of the in manufacturing company,

Ha6: There is a direct influense of company size on the value of manufacturing companies.

Ha7: There is a direct effect of capital structur on the value of manufacturing compa-nies.

Ha8: There is a direct influence on the ratio of liquidity to the company value through the company's capital structure of the manufacturing company,

Ha9: There is a direct profitability to the company's value through its capital structure at the manufacturing company

Ha10: There is a direct influence of company size on the company's value through its capital structure at the manufacturing company

## 7. Method Research

This research is based on the level of explanation and is classified as causal associative research, namely research aims to find out the relationship (correlation) cause and effect between one or more variables, namely in exogenous or endogenous variables on the exogenous variable or bound (Gujarati, 2003). While based on the type of data, this study is categorized as quantitative research, namely research to describe the state of the company carried out with analysis based on data obtained. In this study the endogenous variable is company value while the exogenous variables are liquidity, profitability, company size and capital structure.

### 7.1. Endogenous Variable

- Enterprise variable

The endogenous variable is a variable that is influenced by other variables (exogenous variable) in a model. The endogenous variable of this study is the value of the company proxied by earnings per share (EPS). The value of the company will be reflected in its stock price.

### 7.2. Exogenous Variable

Exogenous Variables are variables that are not affected by other variables. The independent variables in this study are proxied as follows:

- Liquidity ratio. Liquidity is a ratio to measure the ability of companies to meet short-term requirements by using fluency. This ratio corresponds to the current ratio.

- Profitability; Profitability in this study uses the return on assets ratio (ROA) which compares the net income with total assets.

- Company size; Company size According to Brigham and Houston (2011), the size of the company (size) is a picture of the size of a company. Large size of the company can be viewed from the field of business that is run. According to Nadeem and Wang (2011) in Lusangaji (2013) company size can be calculated by the formula:  $\text{Company size} = \text{Ln}(\text{total assets})$ .

- Capital Structure; It is a ratio to measure a company's ability to recover debt costs through its own capital which is measured through debt and total capital (Brigham and Houston, 2001). Capital structure can be proxied in several formulas, one of which is using debt to equity ratio (DER).

### 7.3. Population and Sample

The population in this study is a manufacturing company that is in the LQ 45 company which is also registered in the Jakarta Islamic Index (JII) which is still listed on the Indonesia Stock Exchange in the 2012-2016 period there are 8 companies. Determination of the sample using nonprobability sampling technique that is purposive sampling obtained as many as 5 companies registered in the period 2012-2016. The criteria are a) manufacturing companies that have been and are still listed on the Indonesia Stock Exchange for the period 2012-2016., b.) Manufacturing companies that publish financial statements during the period 2012-2016, c. Companies that have positive profits during the 2012-2016 period, d. Companies that have complete financial data to calculate variables in this study during the period 2012-2016. The analytical method used is path analysis (Path Analysis) with a trimming model.

### 7.4. Model Testing

Before the calculation is carried out in order to approve the quality model using path analysis, it is necessary to have research data that has been tested and meets all requirements. While the path analysis used in this study is the analysis of the trimming model path. Trimming model is a model used to improve a path analysis structure model by removing from a model variable whose path coefficient is not significant. Based on the test results of the path analysis, the trimming model is obtained as follows;

From table 1 company, company SIZE variable does not sign because sign  $0,160 > 0,05$ , so it does not the model. the model analysis as follow;

TABLE 1: Coefficients Sub Structure -1 (X1,X2,X3).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,832	1,940		-1,460	,159
	CR (X1)	2,083	,875	,576	2,381	,027
	ROA (X2)	1,437	,765	,339	1,880	,044
	SIZE (X3)	,244	,167	,338	1,457	,160

a. Dependent Variable: DER (Y)

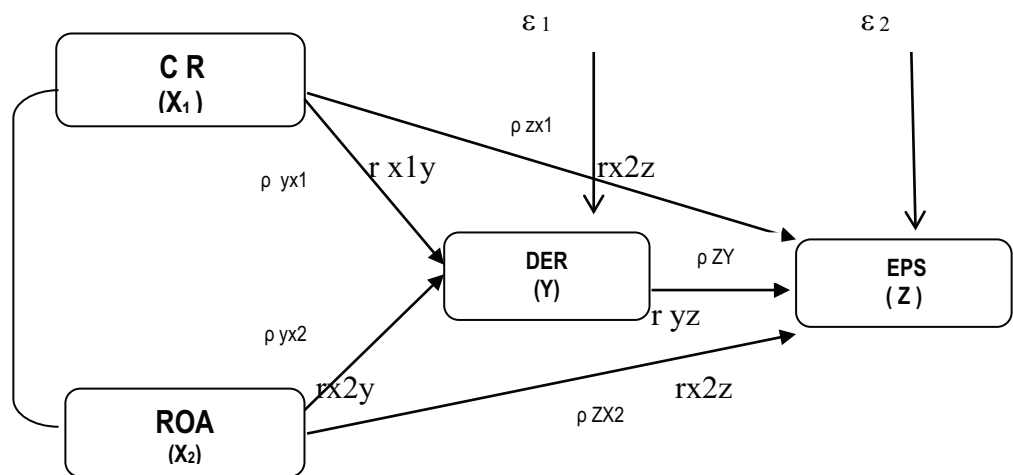


Figure 1: Diagram path Causal Relationship with X<sub>1</sub>X<sub>2</sub>Y to Z.

## 8. Coefficients Sub Structure -1

Cuefision counting at sub – structural 1

The model Struktural shows at table 1 consists of two stuktural 1 and stuktural two

TABLE 2: Coefficients Sub Structure -1 (x1,x2,x).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,033	,286		-,117	,908
	CR (X1)	1,203	,649	,333	1,853	,047
	ROA (X2)	1,703	,761	,401	2,236	,036

a. Dependent Variable: DER (Y)

TABLE 3: Model Summary Sub Structure 1 (X1,X2,Y).

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	,347	,288	,65182

a. Predictors: (Constant), ROA, CR

At table 3 the result there is equality sub- structural 1,  $Y = 0,333 x_1 + 0,401 X_2 + e$  where is all variable positive dan sign with value;

- a)  $P_{yx_1} = 0.333$  ( $t = 1,853$  dan sign  $= 0.047$ )
- b)  $P_{yx_2} = 0.401$  ( $t = 2,236$  dan sign  $= 0.036$ )

The results of the analysis shows that all there is significant line, suw the model at the table 4.1 does not have to be changed with the Trimming model and coefficient determinan or contribution  $X_1$  and  $X_2$  and  $R^2$   $Y_{x_1, x_2} = 0,347$  it means that 34,7% variaty DER (Y) can be explained with varirty CR and ROA.

The number coeffisien residu is 0,808, it is other variable bisides  $X_1$   $x_2$ , so the aquality at sub struktur 1 is  $Y = 0,333 X_1 + 0,401 X_2 + 0,808$  and at the diagram line 4.1. bellows;

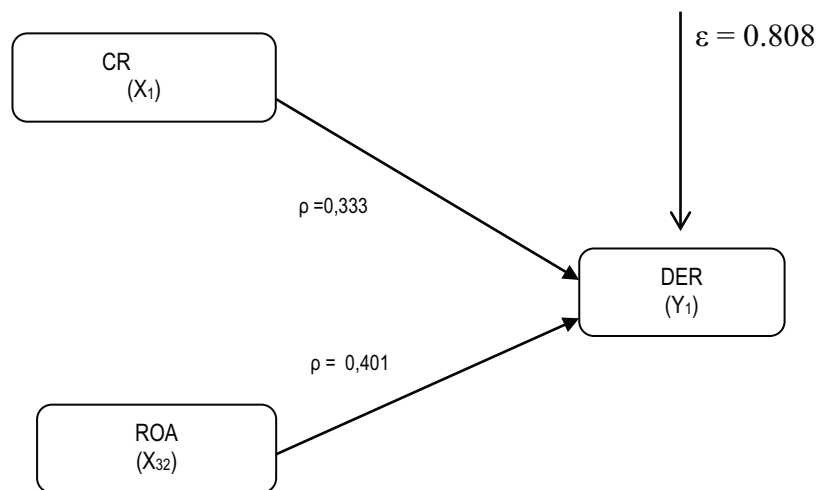


Figure 2: Diagram path Which State Causal Variable Relationship,  $X_1$   $X_2$ , and Y to Z.

## 9. Coefficients Sub Struktur -2

Calculation of path coefficients in Sub Structure 2

Figure 4.2 below consists of one endogenous variable, namely Z and three exogenous variables namely  $X_1$ ,  $X_2$  and Y.

The structural equation for sub-structure 2 is as follows

$$Z = p_{zx_1} X_1 + p_{zx_2} X_2 + p_{zy} Y + e.$$

$$Z = 0.420 X_1 + 0.021 X_2 - 0.213 Y + e.$$

The above equation shows the path coefficient of the DER variable ((Y) negative, which means that the DER has a negative effect on EPS, thus the greater the debt of the company the smaller the profit per share (EPS) obtained.

The results of processing data with SPSS version 23 are shown in table 4.14 below:

TABLE 4: Coefficients Model 1 –Sb-Structure 2 X1,X2, Y to Z.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	456,086	181,588		2,512	,020
	CR (X1)	822,462	443,695	,420	1,854	,078
	ROA (X2)	47,987	535,985	,021	,090	,030
	DER (Y)	-115,544	135,476	-,213	-,853	,040

a. Dependent Variable: EPS (Z)

TABLE 5: Model 1 –Sb-Structure 2.

Model Summary			
Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	,143	,020	414,19155

a. Predictors: (Constant), DER, CR, ROA

TABLE 6: ANOVA Model 1 – Sb-Structure 2.

Model		Sum of Squares	df	F	Sig.
1	Regression	600075,744	3	1,166	,034 <sup>b</sup>
	Residual	3602647,370	21		
	Total	4202723,114	24		

a. Dependent Variable: EPS  
b. Predictors: (Constant), DER, CR, ROA

In Table 4.4 the Sub-Structure coefficients - 2 each obtained a value:

- a)  $P z x^2 = 0.420$  (t = 1,854 and sign = 0.078)
- b)  $P z x^3 = 0.021$  (t = 0.090 and sign = 0.030)
- c)  $P z y = -.0213$  (t = 0.853 and sign = 0.030)

The results of the analysis prove that because there is an insignificant path coefficient, namely CR (X1).. The Sub-Structure 2 relationship, X1, and Y to Z variables need to be improved by the trimming method. The repairs made to Z need to be improved by the trimming method. Improvements are made by not including the CR variable (X1), because the results of the path coefficient are not significant ( $0.078 > 0.05$ ), so that the following picture 4.3 is obtained

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c)  $Pz y = -0.213$  ( $t = 0.853$  and  $sign = 0.030$ )

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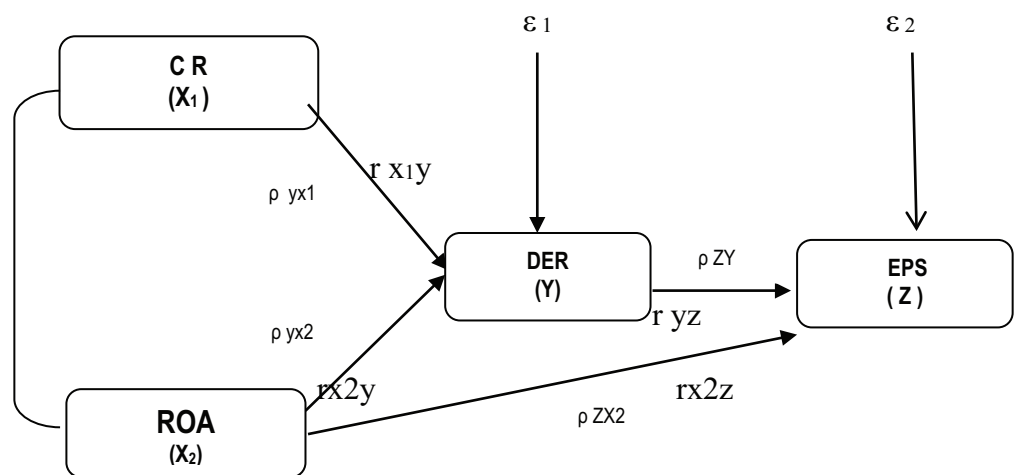


Figure 3: Sub-Structure causal relationship -2 Variable, X1 X2 and Y to Z.

The table below (4.7) is the results of retest without CR (X1) variable

TABLE 7: Coefficients<sup>a</sup> Sub-Structure 2- X2, Y to Z.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	669,063	148,199		4,515	,000
ROA (X2)	126,097	563,132	,055	,224	,025
DER (Y)	-23,278	132,794	-,043	-,175	,042

a. Dependent Variable: EPS

The table (4.7) is the result, coeffisien Sub-Structur- 2 with value:

a)  $Pz X2 = 0.055$  ( $t=0,224$ ) dan  $sign = 0.025$ )

b)  $Pz Y = -0.043$  ( $t= -0,175$  dan  $sign = 0.042$ )

Based on the results of the coefficients of parh in the sub –structure 1 and 2 there for, so it can picture at all causal between variable X1,X2 and Y to Z



TABLE 8: Sub-Structure 2 – X2, Y to Z.

Model Summary			
Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	,003	-,088	436,52148

a. Predictors: (Constant), DER, ROA

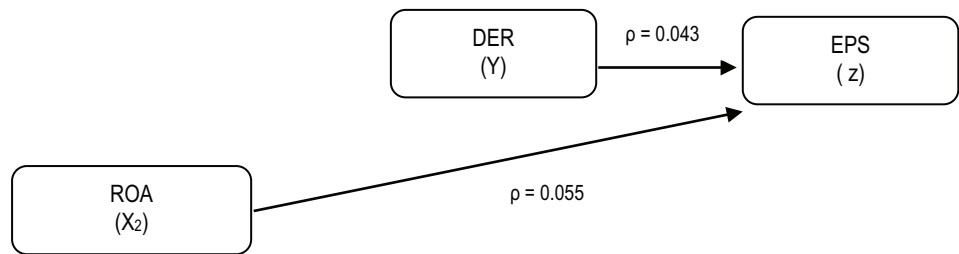


Figure 4: Sub-structure causal relationship -2 Variable, X2 and Y to Z.

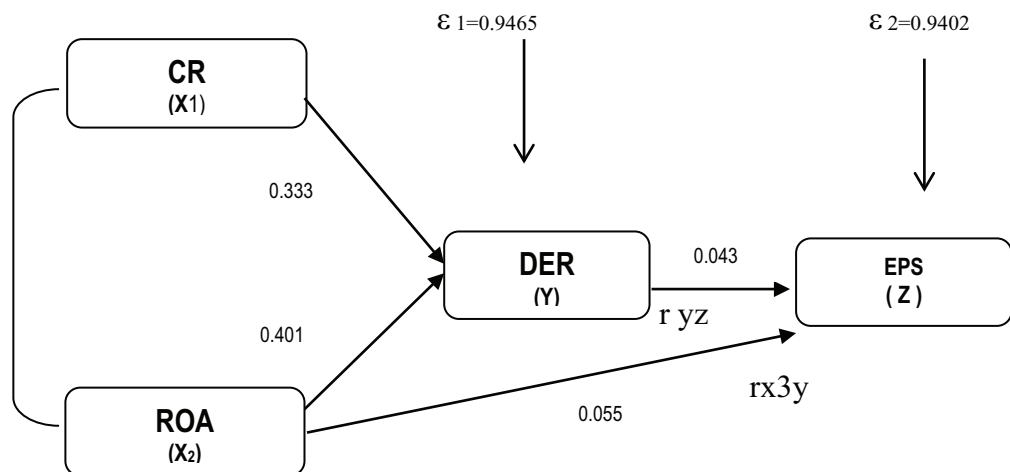


Figure 5: The Diagram Sub-structure causal relationship -2 Variable, X1, X2 and Y to Z.

The results of the path coefficients on sub-structural 1 and sub-structural 2, change to substructural equations as follows:

$$Y = \rho_{yx1} X1 + \rho_{yx2} X2 + \rho_y \epsilon_1 \text{ dan } R^2_{yx1x2}$$

$$Z = \rho_{zx2} X2 + \rho_{zy} Y + \rho_z \epsilon_2 \text{ dan } R^2_{zyx2}$$

$$Z = 0,041 X2 + 0.043 Y + 0.9402 \text{ dan } R^2_{zyx} = 0.9696$$

## 10. Hypothesis Testing

After testing the model, then testing the hypothesis to determine the direct and indirect effects of variables. The hypothesis proposed will be concluded by calculating the path

coefficient value and significance for each path studied on all hypotheses proposed as follows:

### 1. Direct Effect of CR on DER

CR (X1) has a direct effect on DER (Y) hypothesis testing to prove that CR (X1) affects DER (Y). The hypothesis is tested as follows:

$$H_0: \rho_{yx1} = 0$$

$$H_a: \rho_{yx1} > 0$$

From the calculation of table 4.1, the path coefficient value ( $\rho_{yx1}$ ) is 0.333 with  $t = 1.853$  at  $\alpha = 0.05$  and  $sign = 0.047$ , so that this finding can be interpreted that CR (X 1) has a direct effect on DER (Y).

### 2. Direct Influence (ROA) on DER

Testing the hypothesis to prove that ROA (X2) affects DER (Y). The hypothesis is tested as follows;

$$H_0: \rho_{yx2} = 0$$

$$H_a: \rho_{yx2} > 0$$

From the calculation of table 4.1, the value of the path coefficient ( $\rho_{yx2}$ ) is 0.041 with  $t = 2.236$  at  $\alpha = 0.05$  and  $sign = 0.036$ , so that these findings can be interpreted

So ROA (X2) influence to DER (Y).

### 3. Direct Influence CR to EPS.

CR (X) doesn't influence EPS (Z)

The results of hypotesis proved CR (X1) doesn't influence EPS (Z)

The test of hypotesis as follow;

$$H_0: \rho_{zx1} = 0 \quad H_a: \rho_{zx1} > 0$$

From the counting table 4.1 the coefficient ( $\rho_{zx1}$ ) at 0,042 with  $t = 1,854$  at  $\alpha = 0,05$  and  $sign = 0,078$ . the result is CR (X1) doesn't influence EPS (Z).

### 4. Direct Influence DER to EPS.

DER (Y) direct influence to EPS

The results of hypothesis proved DER(Y) influence to EPS (Z)

The test of hypothesis as follow

Ho:  $\rho_{Zy} = 0$

Ha:  $\rho_{Zy} > 0$

From the counting table 4.1 coefficient ( $\rho_{yx1}$ ) at -0,043 with  $t = 0,175$  at  $\alpha = 0,05$  and  $\text{sign} = 0,042$ . the result is DER (Y) influence EPS (Z).

## 5. Direct Influence ROA to EPS.

ROA (X2) direct influence gives to EPS

Ho:  $\rho_{Zx2} = 0$

Ha:  $\rho_{Zx2} > 0$

From the counting table 4.7 coefficient ( $\rho_{ZX2}$ ) at 0,055 with  $t = 0,224$  at  $\alpha = 0,05$  and  $\text{sign} = 0,025$ . the result is roa (X2) influence EPS (Z)

## 10.1. Calculation of Indirect Influence Between Variables

### 10.1.1. Exogenous and endogenous variables. sub-structure 1.

#### 1. Direct and indirect effects on CR (X1) on EPS (Z).

CR (X1) directly affects DER (Y) with a path coefficient of 0.333, but indirectly on EPS. CR (X1) can affect indirectly on EPS.

CR (X1) can be used indirectly on EPS (Z) with DER (Y) where the direct effect of CR (X1) on DER (X2) with the path coefficient 0.333 and direct competence DER (Y) on EPS (z) with path coefficient 0.043, is also indirect CR (X1) for EPS (Z) with a path coefficient of  $0.333 \times 0.043$  of 0.0143.

b. The direct and indirect influence of ROA (X2) on EPS (Z) ROA (X2) directly affects the DER (Y) with a path coefficient of 0.401 and directly affects 0.055.

With a path coefficient of 0.043. thus the indirect effect of ROA (X2) on EPS (Z) through a DER (Y) relationship with a path coefficient of  $0.401 \times 0.043$  of 0.0172.

## 11. Conclusion

Based on the results of the analyst and discussion, can be concluded as follows:

1. CR directly affects the capital structure of manufacturing companies,

2. ROA directly affects the capital structure of manufacturing companies,
3. size the company does not directly influence the capital structure of manufacturing companies,
4. CR has a direct effect on the value of the company in manufacturing companies
5. ROA has a direct effect on firm value in manufacturing companies.
6. Company size does not have a direct effect on firm value in manufacturing companies
7. Capital structure has a direct effect on firm value on manufacturing value
8. CR does not have a direct effect on firm value through DER
9. ROA has an indirect effect on firm value through DER in manufacturing Companies.
10. Company size does not directly affect the value of the company through DER in manufacturing companies.

## 12. Suggestion

Based on the above conclusions, the following are suggested:

1. With the direct influence of CR on the capital structure, the company should maintain a liquidity ratio at a safe limit of 2: 1.
2. In order for the Company to get profit, it should pay attention to its capital structure because if the company's debt is too large, the profit will decrease
3. company size affects the capital structure, but of course large companies have good capital structure, depending on the size of the debt
4. CR should be a concern for companies, Do not composition debt exceeding current assets
5. The company must maintain company profits so that the value of the company increases.

## References

- [1] Andi Kartika.(2009).”Factor-factor has influences capital structure at manufacture company Go Public di BEI”Jurnal Dinamica Finance dan Banking.Vol No.2 Page’s 105-122.

- [2] Basuki, Ismu, (2006). "Effect of Financial Ratios on Stock Returns of Manufacturing Companies Listed on the Jakarta Stock Exchange", Thesis, Postgraduate Program at the University of Indonesia, Jakarta. Brealey, et al (2008).
- [3] Fundamentals of Corporate Financial Management Volume 2 Fifth Edition. Jakarta: Erlangga publisher.
- [4] Brigham, Eugene F and Joel F. Huston, (2006). Fundamentals of Financial Management, Linguist Ali Akbar Yulianto, Book one, ten edition. Jakarta: PT. Salemba Empat.
- [5] Chen, Yingyong and Klaus Hammes.2002.Capital Structure.Theoris and Empirical Result-A Panel Data Analysis.Cergu S Project reports Cooper, DR and CW Emory, (1996). The fifth edition business research method, linguist widyono Soetjipto, Jakarta: Erlangga Copeland.
- [6] Thomas E. And Weston J Fred (2002). Financial management, ninth edition, Jakarta: Rineka Cipta.
- [7] Darmawan, Priyo (2008). Effect of corporate characteristics on capital structure (comparative analysis of the animal feed industry and cement industry in the Indonesian stock exchange. Thesis. Faculty of economists. Noble Mother University.
- [8] Dwilestari, Anita (2010), the effect of asset structure, growth, and liquidity on capital structure. Companies. Accounting and financial research journals. Vol.6, no. 2, 2010, pp. 153-165.67 68
- [9] Firnanti, Friska (2011). factors that affect the capital structure of manufacturing companies on the Indonesian stock exchange. Business and accounting journals. Vol 13, no. 2, 2011, pages 119-128.
- [10] Ghozali, Imam (2011). Application of Multivariate Analysis with SPSS 19. Fifth edition. Now: Diponegoro University Publishing Agency. Gitman, Lawrence (2003). Principles of managerial finance. Ten Edition. Addison Wesley world student series, Bosto, USA.
- [11] Gujarati, Damodar (2003). Basic econometrics, 4th edition, new York: MC Grawhill companies
- [12] Hadianto, Bram. (2010) Effect of Systematic Risk, asset structure, profitability, and type of company on the issuer's capital structure of the mining sector: static-trade off hypothesis testing. Journal of accounting. Vol 2 No 1, May 2010: 15-39.
- [13] Indrajaya, Glen.et all. (2011). Effect of asset structure, company size, growth rate, profitability and business risk on capital structure: empirical studies on mining sector companies listed on the Indonesian stock exchange in the period 2004-2007. Accurate scientific journal accounting vol.6.No2
- [14] J. Keown, et al (2010), financial management, ten-volume edition 2. Jakarta: index.

- [15] Jensen, M and W. meckling (1976). Thor of the firm: managerial behavior, agency cost, and ownership structure. *Journal of finance economics* 3: 305-350
- [16] Liwang, Florencia Paramitha (2011). Analysis of the factors that influence the capital structure of companies incorporated in LQ45 for the period 2006-2009. *Accounting journal*. ISBN 979-26-0255-0.2012.
- [17] Lusangaji, Dumas (2013) Effect of company size asset structure, company growth, and profitability on capital structure, *Brawijaya university journal*, vol 1 No 2 (January 8, 2015) 69.
- [18] Mas'ud, Masdar. (2008) Analysis of factors that influence the capital structure and its relationship to Corporate Values *Journal of Management and Business*; Vol 7. no. 1 pp 82-99.
- [19] Mayangsari, Sekar (2001). Analysis of factors that influence company funding decisions. Pecking order hypotesis testing ". *Accounting research, auditing and information media*, volume 1, number 3, December 2001.
- [20] Munawir. (2004), *Analysis of Financial Statements, Fourth Edition, Thirteenth Prints*, Yogyakarta: Liberty. Mutamimah (2003), "Analysis of capital structure in Non-Financial Companies that Go Public in the Indonesian Capital Market". *Business Journal Strategy*. vol July 11. PP 71-60
- [21] Ozkan, Aydin (2001). Determinants of capital structure and adjustment to long run. *journal of business finance and accounting* January - March.p: 175-196
- [22] Rachmawardani, Yulinda, (2007), "Analysis of the influence of liquidity aspects, business risk, profitability, and sales growth on capital structure (empirical studies in the financial and banking sectors on the JSX in 2000-2005), the thesis of the management master of Diponegoro University.
- [23] Riyanto, Bambang, (2001). the basics of corporate spending, 4th edition of the seventh print of the BPFU UGM, Yogyakarta.
- [24] Santika, Rista Bagus and Bambang Sudiyanto (2011). Determine the capital structure of a manufacturing company on the Indonesian stock exchange. *Financial and banking dynamics*. Vol.3, No 2, November 2011, pages 172-182, ISSN: 1979-4878.
- [25] Sari, Devi Verena. (2013) Effect of profitability, asset growth, company size, asset structure and liquidity on the capital structure of manufacturing companies in the Indonesia stock exchange in 2008-2010. *Diponegoro journal of management*. vol 2, number 3, 2013, page 1, ISSN (online) v 2337-3792. Sartono, Agus R (2001). *Financial management third edition*, BPFU: Yogyakarta.

- [26] Seftianne and Handayani, Ratih (2011). Factors that influence capital structure in public companies manufacturing sector. *Business journals and accounting* vol 13, No 1, April 2011, pages 39-56.70
- [27] Sugiyono (2006). *Bandung business research methods*: Alfabeta. Suwito, Edy and Herawati, Arleen (2005). Analysis of the effect of company characteristics on income smoothing actions carried out by companies listed on the Jakarta stock exchange. *National Accounting VIII symposium Solo*, September 16-17, pp. 136-146.
- [28] Van Horne, James C & Wachowich, John M (2001). *Fundamental of financial management*. new Jersey, Prentice Hall.
- [29] Van Horne, James C and Jhon M. wachowiz (2007). *Financial Management principles*, book two. Twelfth edition of Jakarta: Salemba Empat.
- [30] Agus (2009) *Introduction to econometrics and its applications*. Third edition, Yogyakarta: Ekonosia.
- [31] Wiwelda, Linda and Marlinah, Aan (2013). The variables that affect the capital structure in public companies are non-financial sectors. *Business media*, November special edition.
- [32] Weston, J.F and Copeland, T, E (1997) *financial management*, edition nine.jakarta: publishers in the form of letters.
- [33] Yuliati, Sri (2011) testing pecking order theory: analysis of factors that influence the capital structure of manufacturing industries on the IDX after the monetary crisis. *E-journal politama* vol 10 no 1