

# **THE EFFECT OF LIQUIDITY, PROFITABILITY, AND ASSET STRUCTURE ON CAPITAL STRUCTURE WITH COMPANY SIZE AS MODERATING VARIABLES IN TEXTILE AND GARMENT COMPANIES REGISTERED IN INDONESIA STOCK EXCHANGE 2014-2019**

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**Abstract** - This study aims to examine the effect of liquidity, profitability and asset structure on capital structure moderated by company size. The sample used in this research is Textile and Garment companies listed on the IDX in 2014-2019. Further research data were analyzed using panel regression analysis techniques with the help of the Eviews 9.0 program. The results of this study indicate that: (1) Liquidity has a positive and significant effect on capital structure; (2) Profitability has a negative and significant effect on capital structure; (3) Asset structure has no effect on capital structure; (4) Firm size moderates the effect of liquidity on capital structure; (5) Firm size moderates the effect of profitability on capital structure and (6) Firm size does not moderate the effect of asset structure on capital structure.

**Keywords:** Liquidity, Profitability, Asset Structure, Capital Structure, Company Size, Panel Regression

## **I Introduction**

The capital structure is very meaningful in financing industrial operational activities. The size of the capital structure is highly dependent on the composition of energy sources obtained from external or internal industry parties, in the form of debt and equity. The greater the paid-up capital by the shareholders, the more free it is for management for operational needs, because there are no obligations to creditors. The components of own capital or equity in the industry in the form of a Limited Liability Company (PT) include paid-in capital, additional paid-in capital, retained earnings and profit for the year. The willingness to create a maximum capital structure has attracted the attention of practitioners and academics. The ratio between sources of funds from third parties to equity is called the debt to equity ratio (DER). This ratio can show the level of risk in an industry where the DER continues to be large, so that it continues to be a large industry risk, because debt financing continues to be large. Investors tend to be more interested in certain DER levels which are less than one in magnitude, because if it is greater than one, it displays a greater industry risk (Sartono, 2012: 225).

The specific industrial policy is related to industrial funding which consists of the composition and form of funding that the industry intends to use (Husnan and Enny, 2012: 251). The financial manager of an industry is specifically expected to be able to decide the source and

amount of funds to be used for industrial operations so that these funds do not create an excessive burden on the industry. The impact of industrial financial stability will be directly affected if there are errors in the structuring of the capital structure. For Sartono (2012: 225) funding decisions that are reflected through the capital structure are related to the ratio of the amount of debt used by industry and equity for investment financing.

Capital structure decisions are very meaningful because they affect profitability and solvency (Owolabi and Inyang, 2013). Masnoon and Farrukh (2012) report that the maximum capital structure is a mixture of total debt and equity in such a way as to minimize industrial capital payments. Chadha and Anil (2015) state that the capital structure has 2 meaningful goals, the first is to optimize the value of the industry and the second is to minimize the payment for the totality of capital. Viewed from the industrial scale, the scope of small businesses is mostly self-financed. But this is what is able to make UKM able to survive in times of fluctuation. Large industries, especially those that include external capital in the form of foreign capital, have the potential to be affected by changes in financial conditions universally.

Sartono (2012: 225) defines capital structure as a balance of short-term debt with a permanent character, long-term debt, preferred stock and common stock. Benson et al. (2013) stated that the problem of capital structure has been identified as a significant reason for development or failure in business. The capital used for operations does not only come from the industry itself (retained earnings), but also often links capital from other parties (creditors) so that the industry can produce more optimally. On the other hand, the use of large long-term debt can create the risk of default on the interest charged. One of the levels of capital structure can be measured by the ratio of long-term debt to equity (LTDER), which is the amount of long-term debt compared to the total amount of own capital. The long-term debt to equity ratio is used because this ratio is able to measure the amount of one's own capital as a guarantor for the fulfillment of long-term debt.

The global economic crisis that was triggered by the economic crisis in Europe and the United States has affected the Textile and Garment zone due to the crisis. Most industries in the Textile and Garment industries face a tendency to shrink their net income and face losses. This case shows that the industry cannot make a profit. One of the triggers for the decline in profits is the reason for sales that continue to decline or decline. This matter, in conclusion, is to worsen the condition of the Textile and Garment industry, which is not closed, maybe it will face financial difficulties, especially failure in its business (Atika et al., 2013).

**Table 1:** Development of Long Term Debt to Equity Ratio (LTDER) in Textile and Garment Companies on the Indonesia Stock Exchange 2013-2016

Kode Perusahaan	Nama Perusahaan	LTDER (%)			
		2013	2014	2015	2016
ERTX	Eratex Djaja Tbk	164	109.3	85.3	78.7
INDR	indo Rama Syntetic Tbk	51	55.6	84.4	97.9
PBRX	Pan Brothers Tbk	85	43.1	65.2	83.1
RICY	Ricy Putra Globalindo Tbk	67	73.5	20	13.2
SRIL	Sri Rejeki Isman Tbk	45	174	158.8	148.8
STAR	Star Petrochem Tbk	7	4.8	2.3	1.4
TRIS	Trisula International Tbk	6	6.7	5.5	3.3
UNIT	Nusantara Inti Corpora Tbk	2	1.9	1.7	1.8

Source: www.idx.co.id, 2017 (Dewiningrat dan Mustanda, 2018)

Based on data on the phenomenon of the global economic crisis where the level of LTDER each period in the textile and garment industry faces fluctuations such as those shown

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in Table 1, where the highest LTDER is owned by Sri Rejeki Ismail Tbk in 2014, which is 174% and the lowest is owned by Star Petrochem Tbk in 2016 amounted to 1.4%. The LTDER comparison indicates that each industry has a different capital structure decision, moreover some of the Textile and Garment industries have an LTDER which is more than 100% in size. A large LTDER indicates that the industry has a larger proportion of long-term debt in its capital structure, meaning that the industry tends to depend on large external funds to finance industrial activities (Dewiningrat and Mustanda, 2018).

Bringham and Houston (2011: 188) report that there are factors that can influence capital structure, namely sales stability, asset structure, level of sales development, profitability, taxes, control and management behavior, lender behavior and rating agencies, market conditions, the internal state of the industry, and industry flexibility. Most of the empirical findings show different results related to the factors that influence the capital structure.

Several previous studies with similar themes need to be re-examined, because in some cases they experience differences in results due to differences in research time, number of samples studied, research locations etc. For example, the variables of liquidity, profitability, and asset structure still need to be tested again due to inconsistent results from several previous studies. Dewiningrat and Mustanda (2018) in their research said that capital structure is influenced by the level of liquidity. Dahlena Nst (2017) reports that liquidity does not affect the capital structure. Suherman et al (2019) in their research results said that profitability has a positive and insignificant effect on capital structure. Meanwhile, according to Sinaga (2019) and Lasut et al (2018), in their research, profitability does not have a significant effect on capital structure. Sinaga (2019) said in his research that asset structure has a negative and significant effect on capital structure. Then according to Dewiningrat and Mustanda (2018), the asset structure has a positive and significant effect on capital structure. It is believed that there are other variables that affect the relationship between liquidity, profitability, and asset structure and capital structure. This relationship is influenced by one factor, namely company size. Based on research from Suherman et al. (2019), company size is significant able to moderate the effect of asset structure and liquidity on capital structure. Then according to Safitri and Akhmadi (2017), company size is able to moderate the relationship between profitability and capital structure.

Based on the description above, this research is entitled "THE EFFECT OF LIQUIDITY, PROFITABILITY, AND ASSET STRUCTURE ON CAPITAL STRUCTURE USING COMPANY SIZE AS MODERATED VARIABLES OF TEXTILE AND GARMENT COMPANIES REGISTERED IN INDONESIA STOCK EXCHANGE 2014-2019".

## II Theoretical Frame Work and Hypothesis

**Liquidity.** According to Syafrida hani (2015: 121), the definition of liquidity is the ability of a company to meet all financial obligations that can be disbursed immediately or are due. Specifically, liquidity reflects the availability of funds owned by the company to meet all debts that will be due.

Liquidity Ratio measures the company's ability to meet its short-term liabilities, which is calculated by comparing the company's current assets with current liabilities. Liquidity ratios consist of Current Ratio and Acid Test. Current Ratio is used to determine the company's ability to meet its short-term liabilities by comparing all liquid assets owned by the company with current liabilities, while the Acid Test is used to measure the company's ability to meet short-term liabilities by using current assets that are more liquid, i.e. without including the element of inventory divided by current liabilities. The formula used to calculate the Current Ratio is:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liliability}} \times 100\%$$

**Profitability.** Susan Irawati (2006: 59) states that Return On Asset is the ability of a company

(company assets) with all the working capital in it to generate company operating profit (EBIT) or a comparison of operating profit with own capital and foreign capital used to generate profit and expressed as a percentage. Return On Assets is often referred to as Economic Profitability (RE) or Earning Power. Susan Irawati (2006: 59) states that Return On Asset is the distribution of Earning Before Interest and Tax to total assets. The formula used to calculate profitability is:

$$ROA = \frac{EBIT}{Total Aset} \times 100\%$$

**Asset Structure.** Assets are all resources and assets owned by the company for use in its operations. Syamsudin (2011: 9) asset structure is "Determining how much the allocation of funds for each asset component, both in current assets and in fixed assets." Weston and Brigham (2011: 175) asset structure is "a balance or comparison between fixed assets and total assets." Brigham and Houston (2012: 39) companies whose assets are suitable as credit guarantees tend to use more debt. Asset structure measurement is done by making a comparison between the company's total long-term debt and total assets owned. Measuring the asset structure can be done by looking at the proportion of the company's fixed assets to the company's total assets as a whole. The formula used to calculate the asset structure is:

$$Tangibility\ of\ Assets\ Ratio = \frac{Aset\ Tetap}{Tota\ Aset} \times 100\%$$

**Company Size.** Brigham and Houston (2011: 117-119), suggest that company size is a scale in which the size of the company can be classified according to various ways, including: total assets, log size, stock market value, and others. The size of the company is only divided into 3 categories, namely: "large companies (large firms), medium companies (medium size) and small companies (small firms)." This variable is measured by the average total value of assets owned by a company (total assets). The measurement scale used is the ratio scale. The size of the company can be measured by using the total assets, sales, or capital of the company. One measure that shows the size of the company is the size of the assets of the company. Large assets show that the company has reached the maturity stage where in this stage the company's cash flow is positive and is considered to have good prospects in a relatively long period of time, besides it also reflects that the company is relatively more stable and more able to generate profits than the company with total small assets. The formula used to measure the size of the company in This research is as follows:

$$Ukuran\ Perusahaan = Ln (Total\ Aset)$$

**Capital Structure.** Sartono (2012: 225) states, "The capital structure is a balance of short-term permanent debt, long-term debt, preferred stock and common stock." Meanwhile, according to Besley & Brigham (2012: 205), "capital structure is measured by comparing total debt to total assets, which reflects the amount of funding through debt, both current and long-term debt, to the assets as a whole."

Capital structure indicates how the company finances its operational activities or how the company finances its assets. Riyanto (2010: 15) says that "The financial structure reflects the way the company's assets are, thus the financial structure is reflected in the overall liabilities in the balance sheet. The financial structure also reflects the balance between total foreign capital (both short and long term) and the amount of capital. Own capital." "The capital structure is a comparison between debt (foreign capital) and equity (own capital). The formula used in this study is as follows:

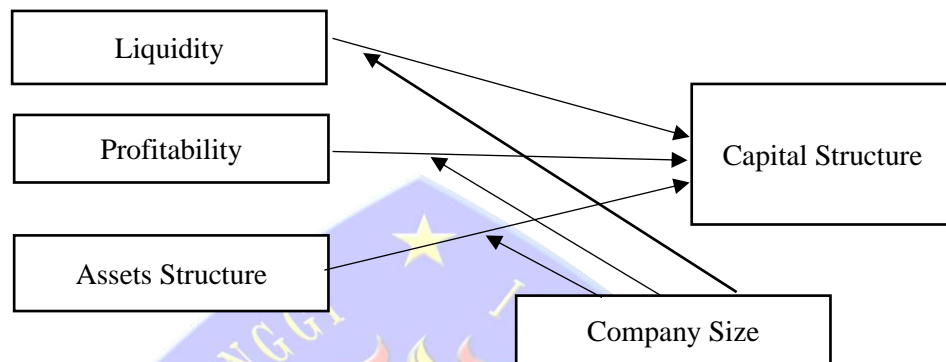
$$Lt\ DER = \frac{Hutang\ Jangka\ Panjang}{Modal\ Sendiri} \times 100$$



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## Frame Work

Within a company, the capital structure must be arranged in such a way as to ensure the company's financial stability, there is no definite measure of the amount and composition of capital of each company, but basically the regulation of the capital structure in the company must be oriented towards achieving financial stability and ensuring the survival of the company. The problem of capital structure is an important problem for every company, because the good or bad of the company's capital structure will have a direct effect on the company's financial position. The capital structure of a company is influenced by several factors. Based on this conceptual framework, the framework for this research model is:



Picture 1: Research Model Framework

## Hipotesis

- 1) Liquidity has a significant effect on capital structure
- 2) Profitability has a significant effect on capital structure
- 3) Asset structure has a significant effect on capital structure
- 4) Firm size can moderate the effect of liquidity on capital structure.
- 5) Firm size can moderate the effect of profitability on capital structure.
- 6) Firm size can moderate the effect of asset structure on capital structure.

## III Research Methodology

**Population and Sample.** The population in this study were textile and garment companies listed on the IDX. The samples used in this study were Textile and Garment companies listed on the IDX in 2014 - 2019 with criteria (1) included in the Textile and Garment sector based on classification on the web idx.co.id; (2) registered as a multi-industry sector company with the Textile and Garment sub-sector on the IDX in 2014-2019; (3) reports are presented in rupiah currency and (4) the company has a financial year as of December 31, 2014-2019. Based on these requirements, the samples in this company are as follows:

Table 2: Daftar Perusahaan Sampel

No	Kode	Nama Emiten
1	BELL	Trisula <i>Textile</i> Industries Tbk
2	HDTX	Panasia Indo Resources Tbk
3	MYTX	Asia Pacific Investama Tbk
4	RICY	Ricky Putra Globalindo Tbk

5	SSTM	Sunson <i>Textile Manufacture Tbk</i>
6	STAR	Star Petrochem Tbk
7	TRIS	Trisula International Tbk
8	UNIT	Nusantara Inti Corpora Tbk

**Data Analysis Method.** The data in this study were analyzed using descriptive analysis techniques and panel regression analysis. Descriptive analysis in this study was conducted to see a description of the sample company research variables during the period under study, namely by looking at the maximum, minimum, mean and standard deviation values. Furthermore, panel regression analysis will be used to test the influence between variables in accordance with the research hypothesis. The panel regression analysis technique was chosen because this study uses the dependent variable with a ratio scale and contains data which is a combination of time series and cross section.

#### IV Result

**Analisis Deskriptif. Descriptive Analysis.** In this study, descriptive analysis was used to describe the value of each research variable. Descriptive analysis was carried out by looking at the minimum, maximum, mean and standard deviation of each research variable. Based on the mean and standardization values, it can be seen that the distribution of data on each research variable. A low standard deviation value and lower than the mean value indicates that the variable data distribution is quite good and does not contain many fluctuations and is normally distributed.

**Table 3:** Result of Descriptive Analysis

Variabel	Mean	Median	Maximum	Minimum	Std. Dev.
Liquidity	0.771	0.135	7.850	-3.480	2.013
Profitability	1.350	1.265	6.450	0.090	1.005
Asets Structure	0.013	0.050	0.100	-0.460	0.093
Capital Structure	0.509	0.480	0.950	0.001	0.249
Company Size	27.530	27.190	29.220	26.620	0.777

Based on the results of the descriptive analysis in table 3 above, the results of the analysis show that the value of the Current Ratio variable as a proxy for the liquidity variable has a minimum value of -3,480 and a maximum of 7,850 with an average of 0.771 and a standard deviation of 2.013 and a median of 0.135. Furthermore, on the profitability variable which is proxied by ROA, the analysis results show that the value of the profitability variable has the lowest value of 0.090 and the highest is 6.450 with an average of 1.350 and a standard deviation of 1.005 and a median of 1.265. Furthermore, on the asset structure variable, the analysis results show that the value of the asset structure variable has the lowest value of -0.460 and the highest is 0.100 with an average of 0.013 and a standard deviation of 0.093 and a median of 0.050.

For the capital structure variable, the analysis results show that the value of the capital structure variable has the lowest value of 0.001 and the highest of 0.950 with an average of 0.509 and a standard deviation of 0.249 and a median of 0.480. Furthermore, for the company size variable, the analysis results show that the value of the firm size variable has the lowest value of 26.620 and the highest is 29.220 with an average of 27.530 and a standard deviation of 0.777 and a median of 27,190.

**Panel Regression Analysis.** In this study, the influence of liquidity variables, profitability, asset structure and company size will be analyzed using panel regression analysis. The stages in panel regression analysis include the classical assumption test stage, the panel regression model selection stage and the regression model test stage.

**(1) Classic Assumption Test**

The classical assumption test in panel regression analysis consists of normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

**Normality.** The normality test in panel data regression can be done by looking at the probability value of the regression residual normality test results. If the probability value obtained is  $> 0.05$ , it can be concluded that the residuals of the regression results are normally distributed, whereas if the probability value obtained is  $< 0.05$ , it is concluded that the residuals of the regression results are not normally distributed. The results of the normality test in Figure 2 show a probability value of  $0.0000 < 0.05$ , which indicates that the regression residual data is not normally distributed. This means that the panel data regression model has not met the normality assumption. However, this is not a problem because normality is one of the BLUE assumptions that must not be met in the panel regression model.

**Multicollinearity.** The multicollinearity test is carried out by looking at the correlation coefficient value between independent variables. The model is declared to contain multicollinearity if the correlation value between independent variables exceeds 0.9. The multicollinearity test results in table 2 show that there is no correlation between the independent variables that exceeds 0.9, this indicates that there is no multicollinearity in the regression model.

**Heteroscedasticity.** Heteroscedasticity test can be done using the Glacier test. In this test the model is stated to contain heteroscedasticity if the probability of Chi Square is  $< 0.05$ , while if the probability of Chi Square is  $> 0.05$ , it is stated that the model does not contain heteroscedasticity. The absence of heteroscedasticity in the regression model can also be seen from the significant value of all independent variables in the Glacier test, the model is declared not to experience heteroscedasticity if the probability value of all independent variables is not significant. The results of the heteroscedasticity test in table 3 show that the chi square probability value obtained is 0.0004, because the probability value obtained is  $< 0.05$ , it is concluded that heteroscedasticity occurs in the regression model.

**Autocorrelation.** Autocorrelation test can be done using the LM test. In this test, the regression model is declared not to contain autocorrelation if the probability value of the test results is  $> 0.05$ . The autocorrelation test results in table 4 show that the probability value obtained is 0.0515. Because the probability value obtained is  $> 0.05$ , it is concluded that there is no autocorrelation in the regression model.

**(2) Selection of Panel Regression Model**

In panel regression analysis, there are 3 regression model approaches, namely the Common effect Model (Pooled Least Square), Fixed Effect Model (FE) and the Random effect Model (RE). To determine the best regression model approach that fits the research data, several tests must be carried out, namely the Chow test, the Hausman test and the Lagrang Multiplier test.

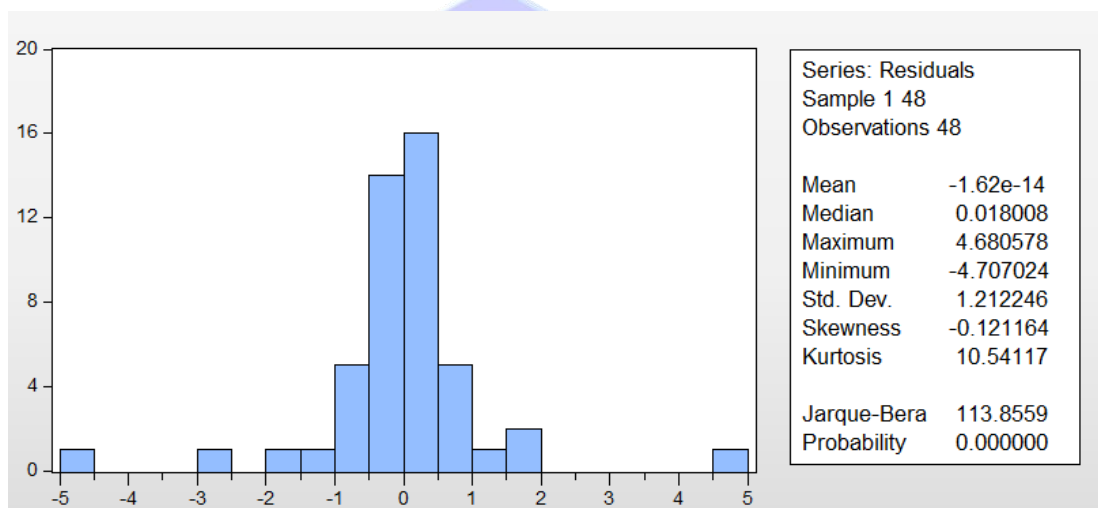
**Lagrange Multiplier Test (LM Test).** The LM test is used to test between the Common effect and Random effect models. The test is carried out by looking at the Chi Square probability value of the test results, if the probability value is  $> 0.05$  then it is concluded that the CE model is the best, whereas if the probability value is  $< 0.05$ , it is concluded that the RE model is the best. The LM test results in table 5 show the value The significance obtained is  $> 0.05$ , so  $H_0$  is accepted and it is concluded that between CE and RE, CE is the best.

**Chow test.** Chow test is used to determine the best model among the common effect and fixed effect models. The test is carried out by looking at the probability value of the cross section F of the test results, if the probability value is  $> 0.05$ , it is concluded that the PLS model is the best, whereas if the probability value is  $< 0.05$ , it is concluded that the FE model is the best. The results of the analysis in table 5 show the probability value of the

Chow test results of 0.0028. Because the probability value obtained is  $<0.05$ , it is concluded that the best regression model is the Fixed Effect (FE) mode

**Hausman Test.** The Hausman test is used to determine the best model among the Random effect and Foxxed effect models. The test is carried out by looking at the Chi Square probability value of the test results, if the probability value  $>0.05$ , it is concluded that the RE model is the best, whereas if the probability value  $<0.05$ , it is concluded that the FE model is the best. The Hausman test results in table 5 show that the Hausman test result probability value is 0.0002. Because the probability obtained is  $<0.05$ , it is concluded that among the FE and RE regression models, the FE regression model is the best.

Based on the results of the panel regression model selection above, it is concluded that the best model used to predict the effect of profitability, liquidity and asset structure on capital structure with company size as moderating is the Fixed Effect model, and because the assumption of heteroscedasticity is not met, the Fixed Effect is carried out. with standard deviation correction (PCSE estimation model).



Picture 2: Normality Test

Table 4: Multicollinearity Test

<i>Pair Correlation</i>				
	CR	ROA	SA	UP
CR	1.000000	0.324551	-0.671008	-0.337338
ROA	0.324551	1.000000	-0.619546	-0.258921
SA	-0.671008	-0.619546	1.000000	0.412917
UP	-0.337338	-0.258921	0.412917	1.000000

Table 5: Heteroscedasticity Test

<b>Heteroskedasticity Test: Glejser</b>			
F-statistic	7.103932	Prob. F(7,40)	0.0000
Obs*R-squared	26.60188	Prob. Chi-Square(7)	0.0004
Scaled explained SS	41.87808	Prob. Chi-Square(7)	0.0000



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**Table 6:** Autocorellation Test

<b>Breusch-Godfrey Serial Correlation LM Test:</b>		
F-statistic	3.211018	Prob. F(2,38)
Obs*R-squared	6.939298	Prob. Chi-Square(2)

**Table 7:** Result of Selection Model Test

<b>Pengujian</b>	<b>Probabilitas</b>	<b>Kesimpulan</b>
Uji LM	0,5258	Model terbaik yang digunakan adalah model Fixed Effect
Uji Chow	0,0028	
Uji Hausman	0,0002	

### (2) Result of Panel Regression

Based on the results of selecting the panel regression model in this study, it is found that the best model used to estimate this regression model is the Fixed Effect model, however, because the results of the classical assumption test show that the regression model has heteroscedasticity, the regression model in this study will be estimated using Fixed Effect model with standard deviation correction (PCSE).

The results of panel regression analysis include the results of the partial effect test (t test), the results of the simultaneous effect test (F test) and the calculation of the coefficient of determination. The following are the estimation results of the panel regression model using the Fixed Effect model:

Partial Effect Test. In panel data regression analysis, t test is used to partially test the effect of independent variables on the dependent variable. With a significant level of 0.05, the independent variable is declared to have an effect on the dependent variable if the probability value is  $<0.05$  and the independent variable is said to have no effect on the dependent variable is accepted if the probability value is  $>0.05$ .

Based on the results of the analysis in table 6, the following results were obtained:

- The probability value of the effect of liquidity (CR) on the capital structure is 0.0001 with a positive regression coefficient, because the probability value is  $<0.05$  and the regression coefficient is positive, so  $H_0$  is rejected and it is concluded that liquidity has a positive and significant effect on capital structure. This shows that the higher the company's liquidity, the higher the company's capital structure.
- The probability value of the effect of profitability (ROA) on capital structure is 0.0003 with a negative regression coefficient, because the probability value is  $<0.05$  and the regression coefficient is negative, so  $H_0$  is rejected and it is concluded that ROA has a negative and significant effect on capital structure. This shows that the higher the company's profitability, the lower the company's capital structure.
- The probability value of the effect of asset structure on capital structure is 0.9726, because the probability value is  $>0.05$ ,  $H_0$  is not rejected and it is concluded that the asset structure has no significant effect on the capital structure. This shows that the asset structure is not a factor that affects the company's capital structure
- The probability value of the effect of company size on capital structure is 0.0071 with a regression coefficient that is positive, because the probability value is  $<0.05$  and the regression coefficient is positive, so  $H_0$  is rejected and it is concluded that company size has a positive and significant effect on capital structure. This shows that the larger the company size, the higher the company's capital structure.

- e) The probability value of the role of company size in moderating the effect of liquidity on capital structure is 0.0001 with a negative regression coefficient. Because the probability  $<0.05$ ,  $H_0$  is rejected and it is concluded that company size can moderate the effect of liquidity on capital structure. The nature of moderation is to weaken, which means that if A and B are both sample companies with high liquidity, the capital structure must also be high, but if company A is large and company B is not that large, due to its weakening moderation, even though they are both A and B's capital structure is high, but B's capital structure will be larger than A's, because the size of company A is bigger than B, so the effect of liquidity on capital structure will be weakened.
- f) The probability value of the role of company size in moderating the effect of profitability on capital structure is 0.0003 with a positive regression coefficient. Because the probability  $<0.05$ ,  $H_0$  is rejected and it is concluded that firm size can moderate the effect of profitability on capital structure. Its moderating nature is strengthening, which means that companies with high size and high profitability tend to have a higher capital structure than companies with high profitability but only have small company sizes.
- g) The probability value of the role of company size in moderating the effect of asset structure on capital structure is 0.9601 with a negative regression coefficient. Therefore, the probability  $> 0.05$  means that  $H_0$  is not rejected and it is concluded that firm size cannot moderate the effect of asset structure on capital structure.

**Test of Simultant Effect (F Test).** The simultaneous effect test in panel data regression analysis is used to test the simultaneous effect of all independent variables on the dependent variable. With a significant level of 0.05, all independent variables are jointly declared as not having a significant effect on the dependent variable if the probability value of the F test results  $> 0.05$  and all independent variables collectively indicate a significant effect on the dependent variable k if the probability value of the F test results  $<0.05$ . The results of the F test in table 6 show that the probability value of the F test results obtained is 0.000000. Because the probability value obtained is  $<0.05$ ,  $H_0$  is rejected and it is concluded that all independent variables have a simultaneous effect on the company's capital structure.

**Determination Coefficient.** The coefficient of determination in the panel regression analysis is used to determine the contribution of the independent variable to the dependent variable. In regression, the coefficient of determination can be seen from the R square value if the number of independent variables is only 1, whereas if the number of independent variables exceeds 2 the coefficient of determination is seen from the adjusted R square value. The results of solid regression analysis in Table 8 show that the value of the R Squared model obtained is 0.8039 and the adjusted R squared is 0.7207, this indicates that the contribution made by the variable liquidity, profitability, asset structure and company size to the company's capital structure amounted to 80.39% while the remaining 19.61% variance of the company's capital structure was influenced by other factors outside of liquidity, profitability, asset structure and company size.

**Table 8 Panel Regression Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CR	241.3903	53.7387	4.4919	0.0001
ROA	-1464.0350	364.5232	-4.0163	0.0003
SA	2.9887	86.3344	0.0346	0.9726
UP	10.0723	3.5096	2.8700	0.0071
MOD_CR	-8.8947	1.9831	-4.4853	0.0001
MOD_ROA	53.9262	13.4088	4.0217	0.0003

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MOD_SA	0.1602	3.1813	0.0504	0.9601
C	-277.1647	95.4151	-2.9048	0.0065
Cross-section fixed (dummy variables)				
R-squared	0.8039	Mean dependent var		0.7710
Adjusted R-squared	0.7207	S.D. dependent var		2.0126
S.E. of regression	1.0637	Akaike info criterion		3.2116
Sum squared resid	37.3365	Schwarz criterion		3.7964
Log likelihood	-62.0795	Hannan-Quinn criter.		3.4326
F-statistic	9.6620	Durbin-Watson stat		1.5878
Prob(F-statistic)	0.0000			

### Testing Hypothesis Result

Hypothesis testing in this study was carried out based on the results of the t test on panel regression analysis. The following is a summary of the results of hypothesis testing based on the results of panel regression analysis:

**Table 9:** Result of Testing Hypthesis

Hypothesis	Statement	T Statistic	Probability	Result
H1	Likuiditas berpengaruh terhadap struktur modal	4.492	0.0001	accepted
H2	Profitabilitas berpengaruh terhadap struktur modal	-4.016	0.0003	accepted
H3	Struktur aset berpengaruh terhadap struktur modal	0.035	0.9726	rejected
H4	Ukuran perusahaan dapat memoderasi pengaruh likuiditas terhadap struktur modal	-4.485	0.0001	accepted
H5	Ukuran perusahaan dapat memoderasi pengaruh profitabilitas terhadap struktur modal	4.021713	0.0003	accepted
H6	Ukuran perusahaan dapat memoderasi pengaruh struktur aset terhadap struktur modal	0.050368	0.9601	rejected

### Discussion

#### Effect of Liquidity on Capital Structure

Hypothesis 1 in this study is proven and concluded that liquidity has a positive and significant effect on capital structure. This shows that the higher the company's liquidity, the higher the company's capital structure.

Liquidity indicates the ability of a company to meet short-term financial obligations on time (Sartono 2012: 116). The benefit of calculating the liquidity ratio is related to the anticipation of funding needs primarily for urgent needs.

The results of this study are not in line with the pecking order theory which explains that companies prefer to fund companies with internal funds, so there is a negative relationship between liquidity and capital structure. The results of this study indicate that liquidity has a positive and significant effect on the company's capital structure.

The results of this study are in line with the results of research by Susanty (2016), Umer (2014) and Keshtkar (2012) which state that the liquidity variable has a significant positive effect on capital structure. However, the results of this study are not in line with the results of research by

Dewiningrat and Mustanda (2018) which states that liquidity has a negative and significant effect on capital structure. So it is predicted that liquidity has a positive effect on capital structure.

#### **Effect of Profitability on Capital Structure**

Hypothesis 2 in this study is accepted and it is concluded that ROA has a negative and significant effect on capital structure. This shows that the higher the company's profitability, the lower the company's capital structure.

The results of this study are in line with the results of research by Dewiningrat and Mustanda (2018) which states that profitability has a negative and significant effect on capital structure. Then it is predicted that profitability has a negative and significant effect on the capital structure. Companies prefer to use internal funding which is reflected in retained earnings (according to the pecking order theory). Companies that have a high level of profitability will use small amounts of debt. Because the increase in the company's profitability is directly proportional to the increase in the amount of retained earnings. The greater the retained earnings, the negative effect on the company's debt decisions.

According to Sudana (2011: 22), "profitability ratio is a measure of the company's ability to generate profits by using the sources owned by the company, such as assets, capital or company sales". Profitability ratio is measured using ROA. ROA is a comparison of earnings before interest taxes with total assets. This study is not in accordance with Sudana's (2011: 22) theory, the greater the ROA, which means the more efficient use of company assets, or in other words, with the same number of assets, large profits can be generated and vice versa. In the results of this study, it occurs when profitability increases, the capital structure also tends to increase, because company managers will look for the cost of capital or the cheapest source of funding, when company profits are high, it turns out that the interest on debt is low or it can be said to be cheaper, the company prefers debt. According to Brigham and Houston (2011: 183), the trade-off theory explains that the benefits of debt are tax deductions from appropriate interest payments. Some companies will choose a high debt ratio if it can pay a high tax rate to reduce the tax burden, the higher the tax rate of a company, the greater the profit the company will get from the use of debt. In addition, there is a conflict of interest between company owners and company management. Where the cheapest cost of capital is to use debt, because external funds or debt are the main choice in fulfilling sources of financing for operational activities within the company. This result contradicts Sari and Oetomo (2016), Lessy (2016), and Bhawa, et al. (2015) which state that profitability has a negative effect on capital structure.

#### **Effect of asset structure on capital structure**

Hypothesis 3 in this study is not proven and it is concluded that the asset structure has no significant effect on capital structure. This shows that the asset structure is not a factor that affects the company's capital structure.

This positive relationship between asset structure and capital structure is in accordance with the opinion (Bringham and Houston, 2006) that companies whose assets are suitable as collateral for loans tend to use more long-term debt, meaning that lenders (such as banks) prefer to provide loan funds for companies. those who have more general types of fixed assets, because common types of fixed assets such as land and buildings are easier to take over and sell by the bank when the company is unable to pay off its debt. On the other hand, special types of fixed assets such as special machines are not suitable as collateral for loans by banks because special types of fixed assets are difficult to sell by the bank when the company is unable to pay off its debt. A positive relationship between asset structure, especially fixed assets and capital structure, is found in Bereźnicka's (2013) research on how asset structure correlates with capital structure in several types of industry in several European countries. The results of his research indicate that there is a positive and significant relationship between tangible fixed assets and long-term credit and debt. In this study, the results show that in almost all types of industries studied there is a positive but insignificant relationship between fixed assets and long-term debt. Other results show that in



## **The Effect of Liquidity, Profitability, and Asset Structure on Capital Structure with Company Size as Moderating Variables**

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the type of small industry there is a positive but insignificant relationship between tangible fixed assets and total debt ratio. Not different from Berežnicka's research, Muscettola's (2014) study shows that there is no relationship between fixed asset index and the level of company leverage as measured by the ratio of total debt to net worth. Previous research conducted by (Zaviera, 2010) regarding the capital structure that took samples of telecommunication companies listed on the Indonesia Stock Exchange for the period 2006-2009 concluded that the asset structure factor did not have a significant effect on capital structure. This is probably due to the fact that the special machines (fixed assets of special types) used in telecommunication companies are more in proportion than the proportion of general types of fixed assets.

The results of this study are not in line with the trade off theory, so the asset structure factor may not have a significant influence on the capital structure of textile and garment companies listed on the IDX for the period 2014-2019, although both have a positive relationship (unidirectional). This may be due to several things such as: the data obtained from the financial statements is incomplete, food and beverage companies use more special types of fixed assets so that lenders (banks) find it difficult to provide loans, and the possibility of companies using their own capital to finance their asset needs. However, this is different from research (Trianty, 2008) regarding the capital structure which took a sample of property and real estate companies listed on the Indonesia Stock Exchange for the period 2004-2007 in that the asset structure has a significant effect on capital structure. This is probably because property and real estate companies use more general types of fixed assets such as land and buildings rather than special types of fixed assets.

### **Moderation Effect of company size in the effect of liquidity on capital structure**

Hypothesis 4 in this study is accepted and it is concluded that company size can moderate the effect of liquidity on capital structure. This shows that the size of the company can weaken the effect of liquidity on the capital structure. Companies with large liquidity and company size will have a lower capital structure than companies with high liquidity but have small company sizes. The results of this study are not in line with the pecking order theory, a large company usually has a high level of liquidity, which means that the company has excess cash to finance its operational activities so that the use of debt is low. According to Cristie and Fuad (2015), the larger the company size, the greater the company's liquidity. The greater the company's liquidity, the lower the debt will be. Then the size of the company can moderate the effect of liquidity on the capital structure. The results of the study according to Suherman et al (2019) state that company size significantly moderates the effect of liquidity on capital structure.

### **The Moderation effect of of company size on the effect of profitability on capital structure**

Hypothesis 5 in the study is accepted and it is concluded that company size can moderate (strengthen) the effect of profitability on capital structure. This shows that the size of the company can strengthen the effect of profitability on the capital structure. Companies with high profitability with large company sizes will have a lower capital structure than companies with high profitability but have small company sizes.

This research is in line with the pecking order theory, the bigger the size of a company, the more profitable the company is from the previous year. This means that the value of the company's profitability is increasing. The high profitability value of a company will reduce the use of debt so that the debt owned is getting lower. Cristie and Fuad (2015) state that large companies have large assets, meaning that companies can finance their operational activities by using more internal sources of funding than external sources of funding. The results of the research according to Safitri and Akhmadi (2017) state that company size is able to moderate the relationship between profitability and capital structure.

### **The Moderation effect of company size in moderating the effect of asset structure on capital structure**

Hypothesis 6 in this study is not proven and it is concluded that company size cannot moderate the effect of asset structure on capital structure.

The results of this study are not in line with the trade off theory, companies that have large company sizes tend to have large total assets (Cristie and Fuad, 2015). Then the bigger the company size, the bigger the asset structure. These assets can later be used by the company as collateral to obtain external sources of funds (debt). The bigger the asset structure, the company has a great opportunity to obtain debt. So that company size can moderate the effect of asset structure on the company's capital structure. However, the results of this study indicate that firm size does not moderate the effect of asset structure on capital structure. The results of the study are not in line with the results of research by Suherman et al. (2019) which state that company size significantly moderates the effect of asset structure on capital structure.

## V Conclusion, Implication and Limitation

**Conclusion.** The conclusions obtained from the results of this study are (1) Liquidity has a positive and significant effect on the company's capital structure. The higher the liquidity of the company, the higher the company's capital structure; (2) Profitability has a negative and significant effect on the company's capital structure. The higher the company's profitability, the lower the company's capital structure; (3) Asset structure has no significant effect on the company's capital structure. The level of asset structure does not affect the level of the company's capital structure; (4) Company size can moderate (weaken) the effect of liquidity on capital structure. The larger the company size, the weaker the effect of liquidity on the company's capital structure; (5) Firm size can moderate (strengthen) the effect of profitability on capital structure. The bigger the company size, the stronger the effect of profitability on the company's capital structure; (6) Firm size does not moderate the effect of asset structure on capital structure. The size of the company will not affect the effect of the asset structure on the capital structure.

**Implications.** The results of this analysis indicate that the R squared regression model is still 80.39%, meaning that there is still 19.61% variance in the capital structure influenced by other factors outside of liquidity, profitability, asset structure and company size. Thus, in future studies, research should be carried out using a longer period of years and involving more companies in order to obtain better research results.

**Research Limitations.** The limitation in this study lies in the research sample. This research is only limited to companies in the textile sector and other garment sub-sectors. The limitation of this study also lies in the low value of R square, so it is necessary to have additional research that can involve more independent variables that affect the company's capital structure.

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