Effect of Non-Debt Tax Shield, Growth, Size, and Asset Structure of Firm Value and Capital Structure

Lia Rachmawati[1]

Institut Teknologi dan Sains Madala, Indonesia[1]

ABSTRACT

This study aims to analyze the effect of non-debt tax shield, growth, size, and asset structure on firm value with capital structure as an intervening variable in coal sub-sector mining companies listed on the Indonesia Stock Exchange in 2014-2018. The data used in this research is secondary data. The sample selection in this study was carried out by purposive sampling. Based on the existing criteria, a sample of 15 companies was obtained. The data analysis technique used is path analysis. Based on data analysis of the four independent variables, only the non-debt tax shield variable and size have a significant effect on capital structure, and of the four independent variables only size has a significant effect on firm value. The independent variable is able to moderate the non-debt tax shield, growth, and size capital structure variables, while the asset structure variable is not able to moderate the capital structure to firm value.

Keywords: *Growth, Debt Tax Shield, Size, Asset Structure, Capital Structure, Firm Value*

1. INTRODUCTION

Business growth in Indonesia is currently increasing, this will create increasingly fierce market competition, so companies must be able to improve their performance in order to achieve their goals. In general, companies have two goals, the first goal is to obtain maximum profit by utilizing existing resources and the second goal is to maximize the value of the company (Husnan, 2000: 7).

According to Rodoni and Herni (2014:4), firm value is the investor's perception of the company which is often associated with stock prices. The share price will be a superior value for the company in achieving the company's long-term goal of maximizing shareholder value. According to Mardiyanto (2009: 181) firm value is influenced by 2 factors, namely external factors and internal factors. External factors or investor factors consist of income or savings, age of the company, interest rates, and risk preferences. Meanwhile, internal factors or company factors consist of operating performance (income and expenses), investment decisions, dividend policies, and funding decisions.

Funding decisions are an important part of the company's operational activities in the face of competition. The factors that influence the capital structure include sales levels, asset structure, profit variability and tax protection, company scale, company growth rate, company internal conditions and macroeconomics (Sjahrial, 2008:179).

The company's growth rate or growth is one of the factors that affect the capital structure of a company, where companies that have a high growth rate are usually more likely to be happy to use large debts (Purba, et al, 2018). Another factor that affects the capital structure is the size of the company (size), the size of the company shows the company's ability to increase sales and earnings, judging from the total assets it has can increase the company's ability to seize profitable investment opportunities, increase R&D,

and improve its capabilities. to expand market share. This increase will have a positive impact on the company's earnings prospects in the future (Mangku, 2002).

variability and non-debt tax shield are also factors that affect capital structure. Non Debt Tax Shield is the amount of non-cash costs that lead to tax savings and can be used as capital to reduce debt (Astuti et al, 2018).

In a study conducted by Fuad and Wandari (2018), the results show that the capital structure (DER) has a negative effect on firm value. Research conducted by Septiani and Suaryana (2018) states that firm size has a positive effect on capital structure and asset structure has a negative effect on capital structure. Dewi and Dana's research (2017) states that growth opportunity and Non Debt Tax Shield (NDTS) have a significant negative effect on capital structure. Based on research conducted by Fuad and Wandari (2018), the results show that the capital structure (DER), while the capital structure has a dominant influence on firm value. Research conducted by Purba, et al (2018) shows that the growth rate affects the capital structure and firm value. Indirectly, non-debt tax shield through capital structure has a significant influence on firm value.

This study aims to analyze the direct effect of Non Debt Tax Shield, Growth, Size, and Asset Structure on the capital structure. Direct Effect of Non Debt Tax Shield, Growth, Size, and Asset Structure on Firm Value. Indirect Effect of Non Debt Tax Shield, Growth, Size, and Asset Structure on Company Value through capital structure. and whether there is a direct effect of capital structure on firm value.

2. METHODS

The type of research used is quantitative research using secondary data. The population in this study are coal sub-sector mining companies listed on the Indonesia Stock Exchange (IDX) in 2014-2018, which are 22 companies. In selecting the research sample, purposive sampling method was used with the following criteria: 1. Coal sub-sector companies listed on the Indonesia Stock Exchange (IDX). 2. Companies that publish periodic financial reports from 2014-2018. 3. Companies that submit financial statements in US Dollars, because most of the company's shareholders are foreign investors.

In this study, researchers used several methods of data analysis, namely as follows:

1. Classic assumption test
   a. Normality test
   b. Multicollinearity Test
   c. Autocorrelation Test
   d. Heteroscedasticity Test
2. Path Analysis
3. Hypothesis testing
4. Influence Calculation.

3. RESULTS AND DISCUSSION

Classic assumption test

   a. **Normality test**

   Normality Test Results Equation 1

   Table 1. Capital Structure Normality Test Results
   One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		75
Normal Parameters [a,b]	mean	.0000000
	Std. Deviation	2.23156790

Most Extreme Differences	Absolute	171
	P Ositive	171
	negative	-121
Kolmogorov-Smirnov Z		1.478
asymp. Sig. (2-tailed)		.025

Dependent variable: capital structure
One-Sample Kolmogorov-Smirnov Test
Source: SPSS Data Processing Results

Table 2. Normality Test Results of Firm Value

		Unstandardized Residual
N		75
Normal Parameters [a,b]	mean	.0000000
	Std. Deviation	1.73626311
Most Extreme Differences	Absolute	.154
	Positive	.154
	negative	-.104
Kolmogorov-Smirnov Z		1.334
asymp. Sig. (2-tailed)		.057

Dependent variable: firm value
Source: SPSS Data Processing Results

From the table above, it can be seen that the dependent variable of capital structure is not normally distributed, it can be seen from the magnitude of Sig. < 0.05 that is equal to 0.025. Meanwhile, the dependent variable of firm value is normally distributed with sig. of 0.057 is greater than 0.05 . Then the data transformation is carried out using Ln for all variables that affect the capital structure (dependent and independent), so that the results of the analysis are as follows:

Table 3. Results of Data Transformation Using Ln
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		75
Normal Parameters [a,b]	mean	.0000000
	Std. Deviation	.99573000
Most Extreme Differences	Absolute	.067
	Positive	.067
	negative	-.055
Kolmogorov-Smirnov Z		.583
asymp. Sig. (2-tailed)		.886

Dependent variable: capital structure
Source: SPSS Data Processing Results

Based on the table results obtained from the data transformation, it is known that the capital structure variable is sig. of 0.886 > sig. 0.05 . _ So it can be concluded that the residual value is normally distributed or meets the classical assumption of normality .

b. Multicollinearity Test

Table 4. Multicollinearity Test Results of Capital Structure Coefficients [a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-15,983	4.364		-3.662	.000		
NDTS	3.050	1.304	.339	2,340	.022	.503	1986
GROWTH	-.290	1.865	-.016	-156	.877	.969	1.032
SIZE	.882	.216	.435	4.085	.000	.932	1.073
ASSETS STRUCTURE	-4,526	2,512	-.262	-1.802	.076	.501	1995

a. Dependent Variable: CAPITAL STRUCTURE
Source: SPSS Data Processing Results

Table 5. Multicollinearity Test Results of Firm Value Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	9.541	3.738		2,552	.013		
NDTS	-1.907	1.061	-.270	-1.797	.077	.466	2.144
GROWTH	-.570	1,462	-.041	-.390	.698	.969	1.032
SIZE	-.400	.189	-.251	-2,120	.038	.751	1.332
ASSETS STRUCTURE	2.422	2014	.178	1.202	.233	.479	2,089
CAPITAL STRUCTURE	.394	.094	.501	4.179	.000	.730	1.369

a. Dependent Variable: COMPANY VALUE
Source: SPSS Data Processing Results

Based on the table above, it can be seen that the VIF value for each independent variable is < 10 and no independent variable has a tolerance value of less than 0.10. So from the results above it can be concluded that there is no multicollinearity between independent variable in regression model i.

c. Autocorrelation Test

Table 6. Autocorrelation Test Results 1 Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.538 [a]	.290	.238	.85397	2,378

a. Predictors: (Constant), ASSETS STRUCTURE, NDTS, GROWTH, SIZE
b. Dependent Variable: CAPITAL STRUCTURE
Source: SPSS Data Processing Results

Based on the table above, the value of DW (*Durbin Watson)* for n = 75 with the number of independent variables (k = 4) obtained the value of dl = 1.5112 and du = 1.7383

In equation 1 obtained DW of 2,378 which means:

4 – du d 4 – dl

2,2617 2,378 2,4888

Based on the decision making whether there is autocorrelation, the above equation can be concluded that there is no negative correlation.

Table 6. Autocorrelation Test Results 2
Model Summary ᵇ

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.550 ᵃ	.303	.240	.80475	2,430

a. Predictors: (Constant), CAPITAL STRUCTURE, GROWTH, ASSETS STRUCTURE, NDTS, SIZE

a. Dependent Variable: COMPANY VALUE

Source: SPSS Data Processing Results

Based on the table above, the value of DW (*Durbin Watson)* for n = 75 with the number of independent variables (k = 5) obtained the value of dl = 1.4822 and du = 1.7694

In equation 2 obtained DW of 2.430 which means:

du < d < 4-du

2.2306 2,430 3.4822

Based on the decision making whether there is autocorrelation, the above equation can be concluded that there is no positive or negative autocorrelation.
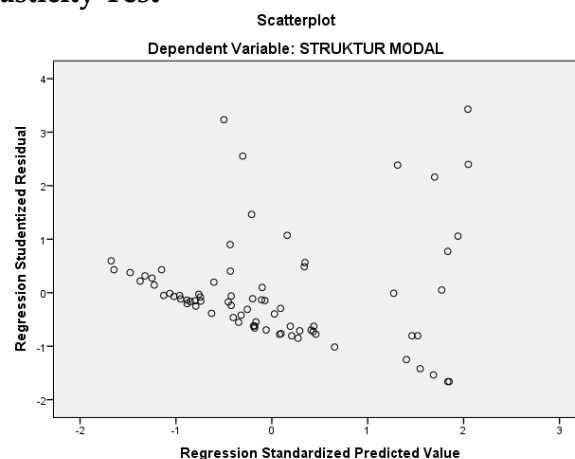
d. Heteroscedasticity Test

Figure 1. Results of Capital Structure Heteroscedasticity Test
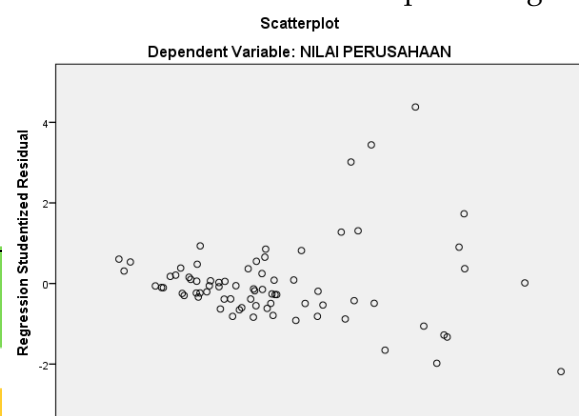Source: SPSS data processing

Figure 2. Firm Value Heteroscedasticity Test Results
Source: SPSS data processing

From the picture above for the dependent variable of capital structure and the dependent variable of firm value above, the *scatterplot graph* shows that the dots do not form a certain regular pattern and the dots spread randomly and are spread above and below the number 0 and the Y axis. it can be concluded that the regression model is free from heteroscedasticity in the regression model.

1. **Path Analysis**

Table 7. Results of Capital Structure Pathway Test Analysis

Coefficients a							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-15,983	4.364		-3.662	.000		
NDTS	3.050	1.304	.339	2,340	.022	.503	1986
GROWTH	-.290	1.865	-.016	-156	.877	.969	1.032
SIZE	.882	.216	.435	4.085	.000	.932	1.073
ASSETS STRUCTURE	-4,526	2,512	-.262	-1.802	.076	.501	1995

a. Dependent Variable: CAPITAL STRUCTURE
Source: SPSS Data Processing Results

Table 8. Results of the Analysis of the Firm Value Pathway Test

Coefficients a							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9.541	3.738		2,552	.013	
	NDTS	-1.907	1.061	-.270	-1.797	.077	.466	2.144
	GROWTH	-.570	1,462	-.041	-.390	.698	.969	1.032
	SIZE	-.400	.189	-.251	-2,120	.038	.751	1.332
	ASSETS STRUCTURE	2.422	2014	.178	1.202	.233	.479	2,089
	CAPITAL STRUCTURE	.394	.094	.501	4.179	.000	.730	1.369

a. Dependent Variable: COMPANY VALUE
   Source: SPSS Data Processing Results

From the results of the analysis that has been carried out to measure the magnitude of the regression coefficient of the *Non Debt Tax Shield variable* (X_1), *Growth* (X_2), *Size* (X_3), Asset Structure (X_4), Interest Rate (X_5), Capital Structure (Z) and Firm Value (Y).

The equations are as follows:

$$Z = 3.050 X_1 - 0,290 X_2 + 0.882 X_3 - 4.526 X_4 + e$$

$$Y = -1.907 X_1 - 0,570 X_2 - 0,400 X_3 + 2,422 X_4 + 0,394 Z + e$$

2. **Hypothesis testing**

Table 9. Hypothesis Test Results

Track	Sig.	Decision	description
X1 against Z	0.022 _	H $_a$ received _	Significantly influential
X2 against Z	0, 877	H $_a$ rejected	Insignificant effect
X3 against Z	0, 000	H $_a$ received _	Significantly influential
X4 against Z	0.076 _	H $_a$ rejected	Insignificant effect
X1 against Y	0.077 _	H $_a$ rejected	Insignificant effect
X2 against Y	0.698 _	H $_a$ rejected	Insignificant effect
X3 against Y	0.038 _	H $_a$ received _	Significantly influential
X4 against Y	0.233 _	H $_a$ rejected	Insignificant effect
Z against Y	0.0 00	H $_a$ accepted	Significantly influential

3. **Effect Calculation Results**

Table 10. Result of Calculation of Effect

NO	Variable	Direct	Indirect	Total	Conclusion
1	*Non Debt Tax Shield*	-0.270	0.170	0.840	Capital structure as an intervening variable
2	*Growth*	-0.041	-0.008	0.485	Capital structure as an intervening variable
3	*Size*	-0.251	0.218	0.936	Capital structure as an intervening variable
4	Asset Structure	0.178	-0.131	0.239	Capital structure is not an intervening variable

In the table above, it can be seen that the *non-debt tax shield, growth,* and *size* variables have a direct effect on firm value through capital structure as an intervening variable, while asset structure and interest rate variables have a direct effect on firm value without going through capital structure as an intervening variable.

Discussion

Effect of *Non Debt Tax Shield* on Capital Structure

The results of the regression analysis regarding the effect of the *non-debt tax shield* on the capital structure show that the *non-debt tax shield* has a significant positive effect on the capital structure. This study contradicts the research conducted by Purba et al (2018) which also states that the *non-debt tax shield* (NDTS) has no significant effect on capital structure.

Effect of *Growth* on Capital Structure

Based on the results of the research conducted, it shows that the *growth variable* has no significant effect on the capital structure. This can happen because companies with high asset growth prefer to use their own capital or retained earnings to meet their funding needs. The results of this study contradict the research of Dewi and Dana (2017).

Effect of *Size* on Capital Structure

The results of the research conducted show that *size* has a significant positive effect on capital structure. This research is supported by the research of Septiani and Suaryana (2018) because the larger the size of a company, the tendency to use external capital is also higher.

Effect of Asset Structure on Capital Structure

Based on the results of the research conducted, it shows that the asset structure has no significant effect on the capital structure. This shows that the asset structure is not one of the factors that affect the capital structure . The results of this study are not in accordance with the research conducted by Septiani and Suaryana (2018).

The Effect of *Non Debt Tax Shield* on Company Value

Based on the results of the research conducted, it is stated that the *non-debt tax shield* has no significant effect to the value of the company. This study is in accordance with previous research conducted by Purba et al (2018) and Astuti, et al (2018) because the level of depreciation in a company will not affect the interest of investors to invest their capital.

The Effect of *Growth* on Company Value

Based on the results of research conducted, it is stated that *growth* has no significant effect on firm value. This means that the company's growth rate has no effect on the fluctuations in the value of the company. This study is not in accordance with research conducted by Suwardika and Mustanda (2017) and research by Purba, et al (2018)

The Effect of *Size* on Company Value

Based on the research results prove that *size* has a significant negative effect on firm value. The results of this study indicate the possibility that can occur in this study is that companies tend to use internal funding rather than external funding. This study is not in accordance with the research conducted by Laksitaputri (2012).

Effect of Asset Structure on Firm Value

Based on the results of the regression in this study, it states that the asset structure has no significant effect on firm value. This research is contrary to the research of Purba, et al (2018)

Effect of Capital Structure on Firm Value

Based on the results of research conducted, capital structure has a significant positive effect on firm value. Thus a high capital structure but followed by good management can increase profits in order to maximize the value of the company. This research is contrary to research conducted by Purba, et al (2018)

4. CONCLUSION

Based on the results of research on non-debt tax shield, growth, size , asset structure, interest rate on the value of the company with the capital structure as the intervening variable , the conclusions that can be obtained are as follows: 1) Non debt tax shield and size have a significant positive effect on capital structure , interest rates have a significant

negative effect on capital structure, while growth and asset structure have no significant effect on capital structure. 2) Non debt tax shield, growth, and asset structure have no significant effect on firm value, size has a significant negative effect on firm value, interest rates have a significant positive effect on firm value and capital structure has a significant positive effect on firm value. 3) Non-debt tax shield, growth, size, have a significant effect on firm value through capital structure, while asset structure and interest rates affect firm value without going through capital structure.

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