



The Moderation Effect of Capital Structure on the Effect of Sales Growth on the Value of Manufacturing Companies Listed on the Indonesia Stock Exchange

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Abstract- There is many indicators in determining the value of the company, one of which is sales growth. In addition, to the level of sales growth, investors usually also focus their attention on the capital structure, because the value of the company can also be reflected in the company's ability to obtain funds to increase its growth. This study aims to determine the effect of sales growth on firm value, using the capital structure as measured by Debt to Asset Ratio (DAR), Debt to equity ratio (DER) and long-term debt (LtDER) as moderating variables. The sampling method used in this study is the census method or saturated sampling, with observations of pooling data from 2015 – 2017. This study was conducted on manufacturing companies listed on the Indonesia Stock Exchange for the period 2015 to 2017. The sample in this study amounted to 131 companies. The results of the t-test and moderation show that growth has a significant positive effect on firm value, DAR weakens the effect of growth on firm value

Keywords: capital structure (DAR, DER, LtDER); firm value; sales growth

I. INTRODUCTION

In general, when the company was founded, it had set both short-term and long-term goals. The short-term goal of establishing a company is to achieve maximum profit, while the long-term goal of establishing a company is to optimize the value of the company. The increased company value can be seen as a reflection of the success of management in managing the company. The success of management in managing the company is the desire of the owner of the company, because it can give a positive signal to investors about the company's good performance. The investors tend to be interested in placing their funds in companies that have good performance. Profits are obtained from per share invested by investors (Puspitaningtyas, 2017). Thus, the value of the company is represented by the market value of the shares.

One of indicators in determining the value of the company is sales growth. Sales growth is important information for investors. Sales growth is a reflection of the company's operational success in the past period to be used as a basis for predicting future growth. In addition, to the level of sales growth, investors usually also focus their attention on the capital structure because the value of the company can also be reflected in the company's ability to obtain funds to increase its growth. Thus, the capital structure is an important issue for the company. The companies that have good growth will attract investors to invest. The company's ability to increase growth is closely related to the company's ability to improve its capital structure.

Several related studies have been conducted previously that examined the effect of capital structure, sales growth and value of manufacturing companies. A study conducted by Mappadang (2020) determine the

significance of the effect of capital structure, liquidity and sales growth on company value. The results of this study showed that the Capital Structure variable simultaneously and partially had a positive effect on Firm Value, the Liquidity variable simultaneously and partially had a positive effect on Firm Value while the Sales Growth variable simultaneously and partially had no effect on the Firm Value variable. In addition, [Abidin et al. \(2021\)](#) in their study determine the effect of Short-Term Debt (STD) on Total Assets (TA), Long-Term Debt (LTD) to Total Assets (TA), and Total Debt (TD) to Total Assets (TA) on firm value by using return on sales and revenue growth as control variables, revealed that first, STD to TA and LTD to TA have a negative and significant impact on firm value. Second, TB to TA has a negative but insignificant impact on firm value. Third, sales growth has a positive and negligible effect. Last, return on sales has a negative and substantial effect. Meanwhile, a result obtained by [Pramesti et al. \(2021\)](#) that conducted the effect of capital structure and sales growth on profitability and firm value, showed that 1) Capital structure has a positive and significant effect on profitability 2) Sales growth has a negative and not significant effect on profitability 3) Capital structure has a positive and significant effect on firm value 4) Sales growth has a positive and significant effect on firm value 5) profitability has a positive and significant effect on firm value 6) Capital structure is able to influence the value of the company through profitability 7) Sales growth is not able to affect the value of the company through profitability. Based on the previous studies above, this study aims to determine the effect of sales growth on firm value, using the capital structure as measured by Debt to Asset Ratio (DAR), Debt to equity ratio (DER) and long-term debt (LtDER) as moderating variables

II. CONCEPT AND HYPOTHESIS

The relationship between sales growth and firm value can be explained in signaling theory. The higher sales growth, the greater the value of the company ([Pantow, et al; 2015](#)). High sales growth in a company can be used as a positive signal by investors to place their investments in the company. The results of previous studies found that sales growth had a significant positive effect on firm value, including [Kodongo et al. \(2015\)](#), [Sukaria \(2015\)](#), while [Emanuel & Rasyid \(2019\)](#) found that sales growth had a negative effect on firm value. Based on the theory and previous

research, the first research hypothesis is proposed as follows:

Hypothesis 1 (H1): sales growth has a positive effect on firm value

Investors also focus their attention on the capital structure, because the value of the company can also be reflected in the company's ability to obtain funds to increase its growth. Thus the capital structure is an important issue for the company. Failure to determine the capital structure will affect the sustainability of the company. A high level of debt creates a large interest expense and installments for the company which will increase the high risk for the company. However, the use of large debt can reduce the company's burden of paying corporate taxes. This is in accordance with the trade of theory that the more companies use debt, the more it saves the amount of taxes paid and other costs incurred. Likewise, signaling theory states that when a company uses debt it gives investors the perception that the company has the ability to increase the capacity and ability to pay debts ([Tunggal & Ngatno, 2018](#)). Thus, management needs to consider the capital structure in order to have a positive impact on the company's growth in the future. Companies that have good growth will attract investors to invest. The results of research by [Tunggal & Ngatno \(2018\)](#) and [Hermuningsih \(2014\)](#) found that capital structure has a significant positive effect on firm value. On the other hand, there are also research results using the DER and DAR measuring instruments on capital structure, which found that capital structure has no effect on firm value. Based on the theoretical review and the findings of previous research, the second hypothesis is proposed as follows:

Hypothesis 2 (H2): capital structure (DAR, DER and LtDER) strengthens the effect of growth on firm value

III. METHOD

The population in this study is all manufacturing companies listed on the Indonesia Stock Exchange (IDX) which publish their financial reports continuously from 2015 to 2017. Based on 180 populations, only 131 companies submit their financial reports continuously and completely. The sample in the study for the 2015 to 2017 period was 131 samples. The sampling method used in this study is the census method or saturated sampling, with observations of pooling data from 2015 - 2017. The census method is a sampling technique in which all of

the population is sampled. The dependent variable of this research is firm value (PBV), namely Price to Book Value (PBV). Price to book value (PBV) is a comparison of market price with book value (Aggarwal and Padhan, 2017). The independent variable is sales growth (Growth), which is comparing the difference between sales for the current year and sales in the previous year with sales in the previous year (Horne & Wachowicz, 2008), while the moderating variables in this study are DAR, DER and LtDER. DAR (Debt to Asset Ratio) is a comparison ratio between total debt to total assets owned by the company in order to show how big the percentage of total assets financed by debt (Sitanggang, 2014:23). DER (Debt to Equity Ratio) is a ratio used to show how big the relationship between the debts owned by the company and the amount of capital provided by the company owner to determine the company's financial leverage (Sitanggang, 2014:23). LtDER (Long Term Debt to Equity Ratio) is a comparison between long-term debt and own capital (Sudana, 2011:21). Data analysis was performed using t test regression analysis and moderation. The research model is as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_1*X_2 + \beta_6X_1*X_3 + \beta_5X_1*X_4 + \varepsilon$$

Annotation

Y = Company Value
 α = constant

X1 = Sales growth
 ε = standard error
 X2 = DAR
 β_1-5 = coefficient regression
 X3 = DER
 X4 = LtDER

IV. RESULT AND DISCUSSION

Descriptive statistics

Descriptive statistics of research variables are shown in Table 1. Company value (Y) with a minimum value of 0.01 is Indo Kordsa Tbk (BRAM) in 2016 and a maximum value of 406.75 is Multi Prima Sejahtera Tbk (LPIN) in 2017. Sales growth (X1) with a minimum value of -0.83 is Alam Karya Unggul Tbk (AKKU) in 2017 and a maximum value of 18.18 is Alam Karya Unggul Tbk (AKKU) in 2016. Debt to equity ratio / DAR shows a minimum value of 0.04 is Anti Agri Resources Tbk (IKKP) in 2015 and the maximum value of 1.22 is Sierad Produced Tbk (SIPD) in 2017. Debt to equity ratio / DER shows a minimum value of 0.04 is Anti Agri Resources Tbk (IHKP) in 2015 and the maximum value of 85.87 is Century Textile Industries (PS) Tbk (CNTX) in 2017. The long-term debt to equity ratio / LtDER shows the minimum value of 0.00 is Kabelindo Murni Tbk (KBLM) in 2017 and the maximum value of 27.68 is Century Textile Industries (PS) Tbk (CNTX) in 2017.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Growth	393	-,83	18,18	,1429	1,22512
DAR	393	,04	1,22	,4625	,20714
DER	393	,04	85,87	1,5076	4,56807
LtDER	393	,00	27,68	,4827	1,53301
PBV	393	,01	406,75	5,1262	29,23983
Valid N (listwise)	393				

Classic Assumption Test

Classical assumption test consists of normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The normality test uses the Kolmogorov Smirnov test in Table 2. The test results show that the regression residuals are normally distributed. Multicollinearity test using VIF and Tolerance methods. The test results are shown in Table 3. VIF which is smaller than 10 and Tolerance is greater than 0.1, indicating that there is no linear relationship between the independent variables, which means that there is no multicollinearity.

The autocorrelation test used the Durbin-Watson (DW) method. From the Durbin

Watson table for $n=131$, and $k=7$, we get $dl=1.6169$, and $du=1.8295$. The regression model has no autocorrelation if the Durbin Watson value is between du and $4-du$. The DW value of the regression model is shown in Table 4 which is 1.980, where this value is greater than du and smaller than $4-du$. It can be concluded that there is no autocorrelation. The heteroscedasticity test uses the Glejser method, which is regressing the independent variables with absolute residual regression. The test results are shown in Table 5. There is no significant regression results indicating there is no relationship between the independent variables and the residuals, which means there is no heteroscedasticity.

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test		
N		Unstandardized Residual
Normal Parameters ^{a,b}	Mean	393
	Std. Deviation	,0000000
Most Extreme Differences	Absolute	1831.432
	Positive	0.159
	Negative	0.134
Test Statistic		-0.159
Asymp. Sig. (2-tailed)		0.159
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Table 3. Multicollinearity Test

Model		Unstandardized Coefficients		Coefficients ^a			Collinearity Statistics	
		B	Std. Error	Standardized Coefficients Beta	t	Sig.	Tolerance	VIF
1	(Constant)	9,391	3,222		2,915	,004		
	Growth	11,815	1,053	,495	11,220	,000	,993	1,007
	DAR	-13,382	6,692	-,095	-2,000	,046	,860	1,163
	DER	1,361	,807	,213	1,687	,092	,122	8,219
	LtDER	-3,761	2,379	-,197	-1,581	,115	,124	8,049

a. Dependent Variable: PBV

Table 4. Autocorrelation Test

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,638 ^a	,407	,396	22,72336	1,890

a. Predictors: (Constant), GrowthxLtDER, DER, DAR, Growth, LtDER, GrowthxDER, GrowthxDAR
b. Dependent Variable: PBV

Table 5. Heteroscedasticity Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	9,852	2,736		3,601	,000
	Growth	4,299	3,475	,216	1,237	,217
	DAR	-10,257	5,699	-,087	-1,800	,073
	DER	,806	,687	,151	1,174	,241
	LtDER	-1,792	2,021	-,113	-,887	,376
	GrowthxDAR	16,706	14,667	,410	1,139	,255
	GrowthxDER	-1,127	1,695	-,093	-,665	,506
	GrowthxLtDER	-1,229	5,554	-,061	-,221	,825

a. Dependent Variable: ab_res

The summary of the regression results is shown in Table 6. The growth variable has a coefficient value of 33,441 and a sig. of 0.00. This means that if growth increases by one unit, the value of the company will tend to increase with the assumption that other variables are held constant. sig value. which is smaller than 0.05 and a positive coefficient, it can be concluded that growth has a significant positive effect on firm value (PBV). DAR moderates the effect of Growth on PBV. The interaction between Growth and DAR was

significant ($0.001 < 0.05$). The interaction coefficient of the Growth variable with DAR is negative (-53,204) while the positive Growth coefficient (33,441) means that DAR weakens the positive influence of growth on PBV. DER does not moderate the effect of Growth on PBV. The interaction between Growth and DER is not significant ($0.887 > 0.005$). LtDER does not moderate the effect of Growth on PBV. The interaction between Growth and LtDER was not significant ($0.634 > 0.05$).

Tabel 6. Regression Results

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	6,374	2,892		2,204	,028
	Growth	33,441	3,674	1,401	9,102	,000
	DAR	-5,684	6,025	-,040	-,944	,346
	DER	,705	,726	,110	,972	,332
	LtDER	-1,864	2,136	-,098	-,872	,383
	GrowthxDAR	-53,204	15,505	-1,087	-3,431	,001
	GrowthxDER	-,254	1,792	-,017	-,142	,887
	GrowthxLtDER	2,802	5,871	,115	,477	,634

a. Dependent Variable: PBV

Growth has a positive effect on firm value (PBV), meaning that the higher sales growth, the greater the firm value (Pantow, Murni, & Trang, 2015). High sales growth in a company can give a positive signal to investors to place their funds in the company, the increasing investment in the company can increase the value of the company. These results are in accordance with the research of Kodongo et al. (2015) and Sukaria (2015).

The presence of DAR in moderating sales growth on firm value has a significant negative effect (weakening the effect of growth on firm value), indicating that the use of DAR is not a concern for investors when occupying their funds in the company, but instead the profit earned from sales is a concern for investors. to place the funds in the company. Profits from sales can be a positive signal for investors to place their funds so that they can increase the value of the company. Thus, DAR is not an amplifier of the influence of growth on firm value.

The presence of DER in moderating sales growth on firm value has no significant positive effect, indicating that the use of DER is not a concern for investors when placing their funds in the company, because investors are more likely to pay attention to long-term debt owned by the company. The use of long-term debt can increase the cost of capital. The

use of long-term debt can provide opportunities for companies to develop the company, through increased sales. Increased sales will create profits for the company, so it is a positive signal for investors. Thus, DER is not an amplifier of the effect of growth on firm value.

The presence of LtDER in moderating sales growth on firm value has no significant negative effect, indicating that the use of LtDER is not a concern for investors, because long-term debt can cause interest costs so that there is a tendency for some investors to avoid this fee because it will affect the profits generated from the increase in sales generated, thus it can reduce the intention of investors to put their funds into the company so that it will have an impact on decreasing the value of the company. Thus, LtDER is not an amplifier of the effect of growth on firm value.

V. CONCLUSION

Based on the test results obtained from this study, it can be concluded that growth is related to firm value and DAR, DER and LtDER do not strengthen the relationship between growth and firm value. An interesting finding of this study is that only growth has a positive effect on firm value. DAR weakens the effect of growth on firm value, while DER and LtDER do not affect the relationship

between growth and firm value. These results indicate that management prioritizes sales growth from internal funding sources, thereby reducing interest costs, but also uses only a small amount of external funds to capitalize on capital costs so that it can be used to increase sales growth. Management does not prioritize the use of capital from debt to increase firm value, as evidenced by the absence of a strong and significant effect of DAR, DER, LtDER on firm value. DAR actually weakens the positive influence of growth on firm value. Management is more likely to use the profit from the sale to increase the return on the next sale. In addition, the limitation of this study is that it cannot explain further about the relationship that does not strengthen the relationship between DER, LtDER and growth in increasing firm value. This study can only explain with existing data and test results, namely based on the relationship between growth and firm value. This study does not consider other factors that affect firm value other than growth and other moderating factors, so this can be a concern for further researchers.

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