

The Size of Company as a Leading Indicator of Capital Structure in the Manufacturing Industry

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Abstract: This research respond to the issue of companies that are experiencing financial problems in the structure of capital and the factors that affected it. On test F, Sales Growth, Size, ROE and Liquidity together influential significantly to DER. With t-test, independent variable in the partial effect significantly to DER. Liquidity and sales growth negatively effect to DER. Size and profitability positively effect to DER. This research supports Pecking Order and Trade Off Theory. The findings of this research, the company has a very high effect size is huge in terms of obtaining capital from external. So with loan capital can support in terms of operations and lead to increased productivity so that profitability increased. From the size big company pointed out that manufacturing company in the position of mature. But the results of this research indicate high size but low sales growth so company does not had high capital outlay and profits obtained not many being held for development of the company. The size of company is large but the company is experiencing liquidity problems because too rely on short-term funding due to the lack of long-term funds.

Keywords: Capital Structure, Liquidity, Profitability, Size of Company, Sales Growth.

I. INTRODUCTION

Corporate financial conditions affect performance of company. As for the factors that affect the performance of company may come from internal and external of the company. From internal company can perform analysis through the fundamental factors of the company while it from external side can be seen from systematic risk or market risk referred, namely the risk that cannot be controlled by the company because of the risk occurring due to factors outside of company. Apart from the external factors or internal company, to see if the company's performance was good or not can also be done by using technical analysis. The sales growth is not stable then the very effect on corporate earnings. The size of fairly unstable companies also has an effect on the company's capital structure because of impact to acquire external funding. Profitability also greatly impacted on the company's capital structure. When profitability is low then the company is not able to manage efficiently the available capital. The value of low current ratio indicates that company may have difficulty to meet current obligations. But Investors must also pay attention to the company's operating cash flow in order to better understand the degree of liquidity of company. If current ratio is too high then the company does not use assets smoothly or short-term financing facilities efficiently. This greatly interferes with the growth of his company's performance. This shows composition of total debt is so large compared to the total capital on its own, so that the greater impact to the load of the company against outside parties (creditors). Increasing the load against lender showing source of capital the company depends very much with outside parties. In addition, the company bore the brunt of magnitude of the debt that can reduce the amount of profit earned company. In determining the capital structure of company, then the company needs to take into account the existence of a variety of factors that affect Debt to Equity Ratio (DER). This research aims to contribute to the implication of Pecking Order theory and Trade off Theory in capital structure used in the manufacturing industry on BEI.

II. LITERATURE REVIEW

According to Myers (1984), pecking order theory States that a company with a high level of profitability is precisely the level of debt is low; due to the high profitability companies have abundant internal funds. In the pecking order theory is there is no optimum capital structure. Specifically, the company has order of preference (hierarchy) in the use of funds. According to the theory of pecking order quoted by Smart, Megginson, and Gitman (2004) there is the scenario of the order (hierarchy) in choosing the funding source. Pecking Order theory set the order in which the funding decision the first time Manager will choose to use profit withheld, debt and the issuance of shares as a last resort. According to the trade-off theory expressed by Myers (2001), the company will owe a certain debt to the level, where tax savings from additional debt is equal to the cost of financial difficulties. The cost of financial hardship (financial distress) or is the cost of reorganization, and agency costs are increased due to the falling credibility of an enterprise. Trade-off theory in determining the optimal capital structure to incorporate a number of factors, among others, agency fees and taxes, cost of financial difficulties but still maintaining the assumption of market efficiency and

symmetric information as the balance and benefits the use of debt. The optimal debt level is reached when the tax savings achieved maximum amount towards the cost of financial difficulties. Trade-off theory has implications that managers will think in terms of a trade-off between tax savings and the cost of financial difficulties in the determination of capital structure. Companies with a high profitability level will certainly be trying to reduce his taxes by way of increasing the ratio of its debts, so that the additional debt that will reduce taxes.

Capital Structure

The capital is right or part owned by the owner of company in the post capital (share capital), profitably arrested or excess assets owned by the company on the entire loan (Munawir, 2001). Capital structure is a composition of common stock, preferred stock; earnings held long-term debt and defended by the unity effort in fund assets. So the capital structure is a description of the form proportion between the company's financial capital owned sourced from long-term debt and capital which became the source of financing of an enterprise (Fahmi, 2011).

The purpose of the management of capital structure was aggregating source – the source of the funds used to finance the company's operations. Brigham and Houston (2011) stated that the factors affecting capital structure is the structure of assets and profitability. Arwana (2008) there are several factors affecting capital structure that is interest rate, earning assets composition, stability, levels of risk assets, large amounts of capital, state of capital markets, nature and magnitude of Management Company.

Weston and Brigham (1994) have another opinion about the factors affecting capital structure that is the stability of structure of assets, sales, growth, profitability, tax, attitude management, liquidity, market conditions, company's internal conditions and financial flexibility. According to Margaretha (2003) the factor of company structure is the size of the company, type of ownership and control of industry while according to Fahmi (2011) the factor of company structure is the level of sales, assets structure, growth rate, profitability, and profit and variables tax shelters.

III. HYPOTHESIS DEVELOPMENT

Size of companies describe a large and small company, larger companies will more easily obtain loans than small companies (Chen and Strange, 2005). A company that has a size larger companies use many debts so as to enlarge capital structure, while the company that has size of a small company, less use of debt so that minimize structure the company's capital. Based on the results of research partially knowable influential company size variable is positive and significant capital structure (Meidera, 2012). Because of the large companies have large funding needs and fulfillment of one the funds needed by the use of external funds (Titman and Wessel, 1988). The larger size of a company making it easy to obtain a flow of funds from outside the company. So the size of a company affects magnitude of the debt that the company may be acquired and also affects magnitude of the debt needs of these companies.

H1: Size of company towards positive effect to capital structure.

Athifah (2014) stated growth rate of company's capital structure towards negative effect occurs because companies with high sales growth prefer using their own capital or profits is withheld to the finance activities of operational compared using long-term debt. So in meeting the needs of fund companies that are experiencing increased sales do not always take funds from debt but rather use your own capital or profits on hold. Saleem et al. (2013) shows the result of increased sales of its debt then will be getting smaller in Pakistan because of a change of the sales will be used for internal financing companies.

H2: Sales growth towards negative effect to capital structure.

Every company has ability to meet their respective obligations or current debts (Fahmi, 2011). The greater ability of liquidity, the company increasingly able to pay debts or external funding of company. With the ability of liquidity, the company can reduce level of Risk Company by reducing debt levels above his ability. Liquidity and significant negative effect which means that the higher liquidity of company, the lower structure of capital owned (Sheikh and Zongjun, 2011). Companies that have high liquidity levels then tend to lower its debts. This is because the company that owns high liquidity levels have a considerable source of funding, so the company opted to use its internal funds in advance to finance his company before making a decision to use the funds were sourced from the external. In addition the company will reduce use of long-term debt with increasing degree of liquidity of company, the company's more liquid will reduce the use of long-term debt that generates a negative relationship between liquidity and capital structure (Ramlal, 2009).

H3: Liquidity towards negatively effect to capital structure.

Profitability is the company's ability to obtain profit. According to Arwana (2001) a ratio of profitability that shows the end result of a certain amount of discretion and decisions. Meidera (2012) states the existence of a positive relationship that high profits should be more use of debt and more taxable profits are therefore protected should give a higher debt ratio. This means that the company will use as much debt to get a bigger profit.

H4: Profitability towards positive effect to capital structure.

Based on hypothesis of research that has been outlined above, the hypothesis of this research can be described as follows:

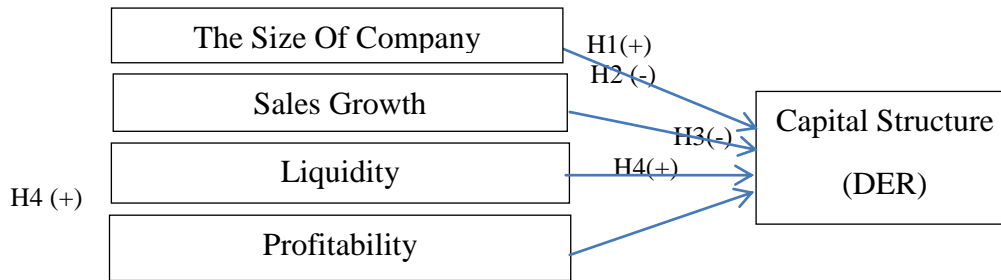


Figure1. Research Hypotheses

IV. METHODS OF RESEARCH

This research is causality research. The data used in this research is secondary data. Secondary data used in this research is data liquidity, profitability, size of company, growth and capital structure at the industrial sector manufacturing company basic chemical sectors & consumption and assorted industrial sectors listed in Indonesia Stock Exchange (IDX). The data is annual time series data from 2011-2016. Thus the population in this research is the entire manufacturing company listing in BEI 2011-2016 period. In addition, this research uses techniques of sampling research sampling purposive sampling technique, namely by using the criteria specified by researchers. As for sampling criteria were used: the company has annual report 2011 period up to 2016, the company has complete data for all variables such as ROE, DER, Sales, Current Ratio and the Total Assets of 2011 up to 2016.

Table 1.Determination Of Total Sample

Description	Amount
Manufacturing companies registered in BEI	154
Not yet listing of the year 2011	32
Not yet Publish Annual Report 2016/Data Incomplete	14
The Number Of Samples	108
The Number of Observations (108 x 6 years)	648

Source: Indonesia Stock Exchange (processed) Capital structure (the dependent variable) using DER. Independent variable is size of company using natural logarithm of total assets, sales growth, liquidity using current ratio and profitability using Return on Equity (ROE). Here is an operational definition and measurement of variables.

Table 2.Operational Definitions Of Variables

No	Variable	Operational Definition	Proxy
1.	Debt Equity Ratio (DER) (Kasmir, 2013)	Measuring company's ability in covering some or all of their debts either long term or short term with funds originating from total capital compared to the large amount of debt of company.	$DER = \frac{Total Liabilities}{Total Equity} \times 100\%$
2.	Size of Total Asset(Mas'ud, 2009)	The size of company that is a reflection of magnitude the wealth of company.	$Size = Ln Total Assets$
3.	Growth of Sales(Kesuma, 2009)	The increase in the number of sales from year to year or from time to time.	$GROWTH = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}} \times 100\%$
4.	Liquidity (Fahmi, 2011)	The increase in the number of sales from year to year or from time to time. To measure the ability of corporations to meet short-term obligations, assuming that all current assets converted into cash.	$Current Ratio = \frac{Current Asset}{Current Liabilities} \times 100\%$

N o	Variable	Operational Definition	Proxy
5.	Profitability (Kasmir, 2013)	Ratio to measure net profit after tax of capital itself.	$ROE = \frac{Net\ Profit}{Equity} \times 100\%$

Source: the Data processed

V. RESULTS AND DISCUSSION

Panel data regression is to combine the data time series and cross section data. A classic assumption test used in linear regression approach to Ordinary Least Squared (OLS) includes autocorrelation, multi-collinearity, heterokedastisitas and normality. Not all classic assumption tests must be performed on each linear regression model with the OLS approach. Test of normality in essence didn't follow terms BLUE (Best Linear Estimator Unbias). In addition, if size of data $n > 30$ then it is assumed that the data distribution is normal. This research used classic assumption test, namely the test of multicollinearity, heterokedastisitas and autocorrelation test using Eviews.

Test For Multicollinearity

Tabel 3. Hasil Uji Multikolinieritas Variabel Independen

	GROWTH	SIZE	ROE	CURRENT RATIO
GROWTH	1.000000	-0.028159	0.001753	0.005746
SIZE	-0.028159	1.000000	0.061151	-0.062190
ROE	0.001753	0.061151	1.000000	0.002941
CURRENT RATIO	0.005746	-0.062190	0.002941	1.000000

Source: Indonesia stock exchange (processed)

The value of the correlation coefficient, all independent variables under 0, 800. It was concluded that multicollinearity does not occur between independent variables.

Autocorrelation Test

The decision of autocorrelation is done by setting value of the lower limit (dL) and the upper limit (dU). The requirement for autocorrelation is not happening $dU < DW < (4-dU)$. Autocorrelation values by using Table Durbin Watson with N (number of samples) $k=108$ samples (independent variable) are 4 variable (size, growth, ROE, current ratio). Durbin Watson Tables obtained from the $dL = 1,6104$ and $dU = 1,7637$. The value of the Durbin Watson (DW) retrieved $DW = 1,7706$. Then the retrieved results $dU < DW < (4-dU)$ namely $1,7637 < 1,7706 < 2,2294$. So it can be concluded that autocorrelation is not happening.

Test Heterokedastisitas

Table 4. Glejser Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GROWTH	-0.131961	0.123827	-1.065685	0.2870
SIZE	0.104804	0.096533	1.085684	0.2781
ROE	8.08E-05	0.002202	0.036690	0.9707
CURRENT RATIO	-0.005369	0.006659	-0.806282	0.4204
C	-2.500369	2.708349	-0.923208	0.3563

Source: Eviews (processed) Glejser test results from above seen the existence of independent variable probability $>0,05$ so free from heterokedastisitas.

VI. DISCUSSION

The Results Descriptive Statistics Analysis

Table 5.Descriptive Statistics DER, GROWTH, SIZE, ROE, CURRENT RATIO

	DER	GROWTH	SIZE	ROE	CURRENT RATIO
Mean	1.080545	0.129072	28.20139	0.045352	3.248502
Median	0.710000	0.081032	28.07314	0.080000	1.467050
Maximum	29.61000	18.18070	33.19881	19.00000	464.9844
Minimum	-4.130000	-0.890661	23.08250	-86.00000	0.010500
Std. Dev.	2.107361	0.822019	1.714019	3.534328	20.66573
Skewness	7.440268	17.54190	0.226328	-21.99069	19.80900
Kurtosis	81.27735	367.9643	3.065880	545.3553	416.0043
Jarque-Bera	171416.9	3629605.	5.649437	7994259.	4647838.
Probability	0.000000	0.000000	0.059325	0.000000	0.000000
Sum	700.1933	83.63837	18274.50	29.38810	2105.029
Sum Sq. Dev.	2873.308	437.1873	1900.797	8081.983	276315.8
Observations	648	648	648	648	648

Source: Eviews (processed)

Regression Model with Fixed Effects

Based on results of Chow test and Hausmanntest then done analysis panel data regression model to the Fixed Effect. Panel data regression results using Eviews wearing method approach a Fixed Effect can be seen in the following table:

Table 6.Summary of results regression test with Fixed EffectsModel

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GROWTH	-0.267550	0.073936	-3.618675	0.0003
SIZE	0.387459	0.129809	2.984842	0.0030
ROE	0.079284	0.016564	4.786631	0.0000
CURRENT RATIO	-0.028377	0.003073	-9.235162	0.0000
C	-9.723229	3.658400	-2.657782	0.0081

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.673442	Mean dependent var	1.080545
Adjusted R-squared	0.605815	S.D. dependent var	2.107361
S.E. of regression	1.323089	Akaike info criterion	3.553738
Sum squared resid	938.3027	Schwarz criterion	4.327003
Log likelihood	-1039.411	Hannan-Quinn criter.	3.853710
F-statistic	9.958206	Durbin-Watson stat	1.770674
Prob(F-statistic)	0.000000		

Source: Eviews (processed)

The value of coefficient is 9,723 while growth coefficient is -0.267, size is 0.387, ROE is 0.079 and current ratio is 0.028 with a level of significance is 5%. As a result of Test Test Chow and Hausmann, then this study using Fixed Effect panel data analysis. Test the R^2 shown in the value of Adjusted R-Squared = 0,605 from table 7 above shows that 60,50% of the variance can be explained by changes in DER Growth, Size, ROE and Current Ratio, 39.50% DER is influenced by other factors such as on trade off theory which States that in determining an optimal capital structure to incorporate a number of factors such as taxes, agency cost, financial distress. The F-test is intended to test whether the independent variables together influential significantly to the dependent variable. Processed data indicates that variable SIZE, Growth, ROE and Current Ratio together influential significantly to DER. The t-test intended to test whether the independent variable in the partial effect significantly to dependent variable. The value of probability of Growth, Size, ROE, Current Ratio value independent variables so that $0,05 < \text{Growth, Size, ROE, Current Ratio}$ partially significant influential variable against DER. Test a regression analysis of the data by the method of Fixed Effect equation is obtained as follows:

$$\text{DER} = -9,723 - 0,267 * \text{Growth} + 0,387 * \text{Size} + 0,079 * \text{ROE} - 0,028 * \text{Current Ratio} \quad (1)$$

The results obtained from testing regression regression coefficient values obtained for growth -0,267 value P-value of 0,0003. These results prove that growth of sales variables influence negatively affecting capital structure (DER). Research results in accordance with Athifah (2014) and Saleem (2013). This means the greater sales growth so the smaller the number of company capital structure (DER). With increased sales, so the company can improve its ability to earn income and profit of company. With the increased income, then the company can recoup the costs incurred for company's operations and improve company's capital structure because it can pay the debts of company and increase its own capital. This is in accordance with Pecking Order Theory that growth offset the costs so that profits can be set aside into profit on hold and does not rely on debt. The results obtained from testing the regression regression coefficients obtained by size of 0,387 value P-value or significance level of 0,0030 this result proves that the size of company (Size) a positive effect against Capital Structure (DER). These results fit with Chen and Strange (2005) also according to Titman and Wessel (1988). Size large small companies describe a company, larger companies will more easily obtain loans than small companies. A company that has a size larger companies use many debts so as to enlarge capital structure, while the company that has size of a small company, less use of debt so that minimize structure the company's capital. Large companies have large funding needs and the fulfillment of one the funds needed by using external funds. These results support previous studies such as research Meidera (2012), Siti & Barbara (2010), Devi and Haryanto (2013), Sarsa and Djoko (2012). This means that the larger size of company which is reflected from the total assets then the greater amount of capital structure (in this case debt to equity) in a manufacturing company. The size of company is proven to have an important role in determining choice of capital structure that will be used by a single company. Large companies usually have a better reputation on debt markets and deal with the constraints of lower information when making loans so more easily obtain capital in the market compared to smaller companies. Thus, the larger size of company increasingly has the level of debt (external funding).

The results obtained from testing the regression profitability of 0,079 value P-value of 0,0000. These results prove that proved influential profitability positively against DER. Results of research Meidera (2012) states existence of a positive relationship that high debt usage then more and more profit taxable protected therefore must provide a higher debt ratio. This means that the company will use as much debt to get a bigger profit. The existence of a positive relationship that high debt usage then more and more of the taxable profit of the protected therefore must provide a higher debt ratio. This means that the company will use as much debt to get a bigger profit. This is in accordance with Trade off theory stating that companies with a high profitability level will seek to reduce his taxes by way of increasing the ratio of its debt so with additional debt that will reduce taxes.

The results obtained from testing regression liquidity coefficients obtained of -0,028 with P-value of 0,0000. These results prove that influence negatively affecting liquidity variable capital structure (DER). These results are in accordance with Sheikh and Zongjun (2011) as well as according to Ramlal (2009). The results of this study support research of Siti and Barbara (2010), Devi and Haryanto (2013), IsnurhadiSyahril (2013), Sarsa and Djoko (2012) which concluded that liquidity (current ratio) negative effect of capital structure. This shows that company is using current assets can meet the company's obligations in short-term than long-term debt, so that the greater degree of liquidity of company is then the smaller structure the company's capital means increasingly little use of debt (external funding). The availability of cash and other current assets owned by company in addition to the supplies turned out to be able to be used to cover short-term debt of company. Closed short-term debt resulted in a decrease in proportion of overall debt in capital structure. This is in accordance with the Pecking Order Theory.

VII. RESEARCH FINDINGS

The results showed the size of company is high but sales growth is low. At this stage of mature, the company entered stage where Manager started professional. But the company no longer old age and leads to final stage in life cycle of company. There are several companies that remain in this stage for a long period but there is also that leads to

bankruptcy. At the stage after mature, there are companies that do not enter the stage of decline but remain in a stable position (stagnant). The company did not experience an increase in sales and a decline in earnings is quite drastic. With the level of sales growth is low so that companies are not doing a massive capital outlay and profits of acquired company is no longer much withheld for corporate development. The size of a large company, the company is experiencing liquidity problems due to too short term financing sources rely on due to lack of long-term funds. Because when this problem occurs then does is reduce growth rate in accordance with the amount of internal funds. To scope with fluctuating sales growth can be done in terms of marketing by way of promoting the product to the customer. Marketing strategies to increase sales and customer loyalty, raising the income of company. The company can also make product innovation so as to differentiate the company's products with other companies of its kind.

VIII. CONCLUSIONS AND SUGGESTIONS

Growth of sales variables negatively affecting capital structure (DER) means the greater sales growth so the smaller number of company capital structure (DER). With increased sales, so the company can improve its ability to earn income and corporate profit, with an increase in the income, then the company can recoup costs incurred for operations the company and improve the company's capital structure because it can pay the debts of the company and increase its own capital. The size of company's Capital Structure towards positive effect (DER). This means that the larger size of company which is reflected from the total assets then the greater amount of capital structure (in this case debt to equity) in a manufacturing company. The size of company is proven to have an important role in determining choice of capital structure that will be used by a single company. Profitability (ROE) positively influencing capital structure (DER) that profit is high debt usage then more and more of the taxable profit of the protected therefore must provide a higher debt ratio. This means that the company will use as much debt to get a bigger profit. Negatively affect the liquidity of the capital structure (DER). This shows that the company is using current assets can meet the company's obligations in the short-term than long-term debt, so that the greater degree of liquidity of company is then the smaller structure company's capital means increasingly little use of debt (external funding). Growth, Size, ROE and Current Ratio together influential significantly to DER of 60,50% and the remaining 39,50% influenced other factors like taxes, agency cost, financial distress.

The Limitations of The Research

The data used in this study is annual data. Sample company used in this study only 108 companies listed at the IDX. Long years used only 6 years from the year of 2011 to 2016. The factors affecting the capital structure in this research use only sales growth, the company's size, profitability and liquidity.

Suggestions for Further Research

Can expand the research by way of extending the period of research with a number of observations with data quarterly, quarter or semester or can do research by adding years of research over six years. Can also add other variables that may affect the structure of the capital such as taxes, agency cost, financial distress.

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