The Influence of Profitability, Asset Tangibility, Growth, and Non Debt Tax Shield on Capital Structure in Manufacture Companies Listed in Indonesian Stock Exchange

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Keywords: Profitability, Asset Tangibility, Growth, Non Debt Tax Shield, Capital Structure

Abstract: The objective of the research was to examine the influence of Profitability, Asset Tangibility, Growth, and Non Debt Tax Shield on Capital Structure in manufacture companies listed in BEI (Indonesia Stock Market) in the period of 2012-2016. The research used causal research method. The population was 136 manufacture companies listed in BEI in the period of 2012-2016, and 85 of them were used as the samples, taken by using purposive sampling technique. The data were analyzed by using path analysis. The result of the research showed that the variables of Profitability, Asset Tangibility, Growth, and Non Debt Tax Shield simultaneously had influence on Capital Structure. Partially, Profitability and Growth positive significant influence on Capital Structure. Asset Tangibility and Non Debt Tax Shield positive unsignificant influence on Capital Structure.

1 INTRODUCTION

Investors in equity investments want profit, in the form of dividend yield and capital gains, but investing in equities also involves risks. Therefore, to attract investors to invest their capital in equities by offering a higher profit level compared to the profit level of other investments that are less risky. In this case, investors need a variety of information that can be used as a signal to assess the prospect of the company concerned, such as seeing the value of the business, namely by analyzing financial statements.

The main goal of companies that have become public is to increase the prosperity of the owners or shareholders by increasing the value of the company (Salvatore 2005). Business value is the perception of investors to see a company that is often associated with the share price of the company. In reality, not all companies want the stock price of the company to be high, because the company is afraid that the shares will not sell or attract investors to buy them by conducting a share split.

The impact of the financial crisis in Europe and America in 2008 spread throughout the world. The crisis of a country that other countries treft, is the contagion effect that can occur for all events in different areas of economic and financial crisis. The financial crisis, such as fluctuations in stock prices that occur on a capital market, has an impact on falling stock returns and ultimately affects abnormal returns as a benchmark for performance.

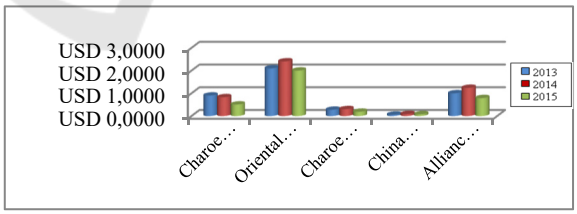

Figure 1: Diagram of the stock price of production companies in different countries in the Southeast Asia region 2013-2015

The image above shows that the share price data of production companies in the Southeast Asia region for the period 2013-2015. The share price grew between 2013 and 2014, with the exception of the company Charoen Pokphand Foods Public Company Limited (Thailand), which fell and in 2015 the share price fell compared to the share price

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in 2014 for the five companies in Southeast Asia. The statement indicates that there were problems with production companies in different countries in the Southeast Asia region, as seen from the share price of the company that declined.

The global crisis is expected to have a greater impact in the real sector in the longer term, especially trade related to the slowdown of the global economy, especially in developed countries. The global crisis has no major impact on direct trade between Indonesia and Europe and with the United States. But the path of indirect trade in Indonesia with Europe and the United States will be influenced by China. China, the largest importer of Indonesian goods, is expected to reduce imports as a result of the declining demand from Chinese countries for Chinese goods.

The crisis of a country that affects other countries is a contagion effect that can occur for all events in different areas, both economic and financial crises. The financial crisis, such as fluctuations in stock prices that occur on a capital market, has an impact on fluctuations in falling share returns and ultimately affects the pattern of abnormal returns as a measure of performance.

(Franco Modigliani and Merton H. Miller 1958) who published matters relating to the capital structure and became one of the subjects that drew the attention of academics on a global scale. For more than half a century, various studies have been conducted by academics to explain the relationship of the capital structure with profitability, tangibility of assets, growth and non-debt payments. In this case, the company must be able to determine its capital structure, namely how much is to be borrowed from third parties by considering the benefits and costs of using debts. There are several developments in the theory of capital structure (Franco Modigliani and Merton H. Miller 1958), namely Trade-Off Theory, Pecking Order Theory and Signaling Theory.

Some of the earlier researchers who supported the theory of the pecking order were (Ilyas Muhajir dan Triyono 2010), who concluded that profitability had a positive effect on the capital structure. Groups that do not support the pecking order theory are the results of research (Huang & Song 2006) which show that profitability has a negative effect on the capital structure.

The results of empirical studies showing the opposite results with regard to the effect of asset tactility on the capital structure. The group of researchers offering support is the research carried out by (Jemmi Halim Liem 2013) that concludes that asset tangibility (real assets) has a positive effect on the capital structure (debt). The group of researchers who did not support this advice was conducted by (Booth et al. 2001), in which it was concluded that asset tactility had a negative effect on the capital structure.

Research carried out by (Margaretha & Ramadhan 2010) which showed that growth has a positive effect on the capital structure. The research group that does not support this is the research of (Rajan & Zingales 1995) that concludes that the growth rate negatively affects the capital structure.

The group of researchers who support the research of (Moh & Rimbey 1998), who came to the conclusion that NDTS has a positive effect on the capital structure. While the research conducted by (Zou & Zezhong 2006) concluded that NDTS had no influence on the capital structure.

This research focuses on manufacturing companies listed on the Indonesian stock exchange, because as we know, since the economic crisis in 2008, the center of global economic power from Western countries, namely Europe and North America, slowly shifted to Asia. In Asia, Indonesia is one of the fastest growing economic zones.

Based on the above description, the authors are interested in analyzing the "Effect of profitability, tangibility, growth and non-debt tax shield on the capital structure in manufacturing companies listed on the Indonesian stock exchange for the period 2012-2016".

The formulation of the problem in this study is whether profitability, tangibility of assets, growth and non-debt tax shield partially and simultaneously affect the capital structure of manufacturing companies quoted on the Indonesian stock exchange?

The aim of this research is to partially and simultaneously identify and analyze the effect of profitability, asset tactility, growth and non-debt tax shield on the capital structure of production companies that are listed on the Indonesia Stock Exchange.

Although the contribution of research to researchers and academics is expected to increase the understanding and knowledge of researchers in the field of economics, particularly in terms of profitability, tangibility of assets, growth and non-debt tax shield, the impact on the capital structure. Production companies are expected to be used as important information and input to improve business performance in terms of improving the capital structure.

This research is a development of research carried out by (Yuliani et al. 2014) entitled "Determining factors for the capital structure and its impact on value in emerging markets (studies of the real estate and real estate sector)". This difference with previous research lies in the variable, where earlier research uses independent variables, namely

the sales level, the asset structure, growth potential, profitability, non-tax tax shield, company scale, internal company circumstances, while this study uses profitability, Tangibility Asset, Growth, and Non-Debt Tax Shield. and the dependent variable of the previous survey is the capital structure and business value, while this study only uses variables of the capital structure. In contrast to the previous research period, this study period was 2012-2016, while the previous research period was 2007-2011.

2 DEVELOPMENT OF HYPOTHESES CAPITAL STRUCTURE

According to (Wild et al. 2005) the capital structure is the composition of financing between equity (own financing) and debt in a company. Capital structure is a permanent expense that reflects the balance between long-term debt with equity. Capital structure is reflected in long-term liabilities and the element of own capital, where both elements are permanent funds or long-term funds. In this study the capital structure is approached by debt / equity ratio (DER).

DER is a group of Levarage (debt) ratios. This ratio reflects the composition or capital structure of the total loan (debt) to the total capital that the company holds to meet its long-term obligations. Some theories about debt financing are:

Capital Structure Theory
Modigliani & Miller theory is a modern theory of the capital structure that publishes its article "The costs of capital, corporate finance and theory of investment". MM proves that the value of a company is not affected by the capital structure .

Exchange theory
The trade-off theory suggests that the optimal debt ratio should take into account the benefits obtained and the costs incurred by the company through the use of corporate debts. This theory suggests that the optimal capital structure will be achieved if the benefits of the value added from the use of debts in the form of tax savings are used to cover the rise in the financial emergency costs associated with the use of debt (Bradley et al. 1984)

Agency approach
According to this approach, the capital structure is designed to reduce conflicts between different interest groups. The conflict between shareholders and managers is actually the concept of free cash flow.

Signal Theory
If the manager is confident that the company's outlook can use more debt, then this will work later as a more reliable signal. This is because companies that increase debt can be seen as companies that have confidence in the future of the company. We can therefore conclude from the above explanation that debt is a positive sign or signal of the company.

Profitability
Profitability as a yardstick in determining alternative financing, but the way to assess the profitability of a company that depends on profit and shared assets is net profit after tax (net result) derived from operating activities in total assets. The profitability ratio as measured by Return on Assets (ROA) is a measure of the company's ability as a whole to make a profit with the total available assets in the company.

Tangibility Asset
Tangibility assets are one of the most important factors in determining decisions about the capital structure, because the amount of fixed assets can be used as collateral for creditors (Joni & Lina 2010). Because companies with a greater tangibility of assets have a better position in providing loans. The tactile capacity can be used as collateral for loans provided by creditors. If the company does not comply with its obligations towards creditors, the tangibility of the assets is confiscated by the creditor to pay off all obligations that the company can not pay to the creditor.

Growth
The growth rate of the company may affect the creditor's confidence in the company and the willingness of investors to provide financing through long-term debt (Firnanti 2011). Growing companies will come under pressure to fund their investment opportunities that exceed the retained earnings in the company, so that it is in line with the pecking order theory, so in this case the company will use debts rather than equity or this case retained earnings.

Non-debt Tax Shield
Non-debt tax shield is a tax deduction for investment write-offs and tax relief. (DeAngelo, H., and Masulis 1980) stated that the optimal capital structure model with respect to the existence of both personal tax and

corporate tax and non-debt tax shield (tax savings of non-debt accounts). This non-debt tax shield (NDTS) arises because the company makes depreciation costs as an impact on the use of assets, particularly fixed assets. The benefits that the company obtains from the use of loan capital as financing for the company's investment activities will have an impact on the taxes and interest costs to be paid. Also with companies that cause higher depreciation costs, they will receive tax benefits as a result of the depreciation costs paid.

Conceptual framework.

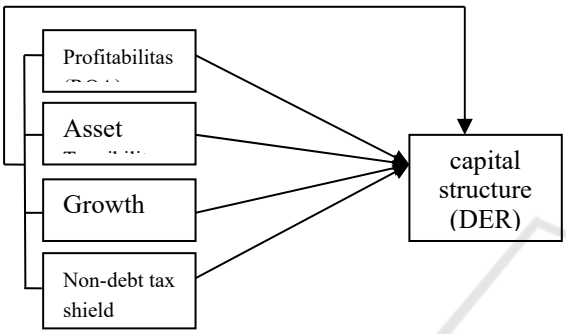

Figure 2: Concept Drawing

The research hypothesis is:

1. Profitability, tangibility of assets, growth and non-debt tax shield partly affect the capital structure of manufacturing companies listed on the Indonesian stock exchange
2. Profitability, tangibility of assets, growth and non-debt tax shield have a simultaneous effect on the capital structure of manufacturing companies quoted on the Indonesia Stock Exchange

3 RESEARCH METHOD

This type of research is a conclusive (causal) investigation. The population in this study consisted of production companies listed on the Indonesia Stock Exchange (IDX) from 2012 - 2016, a total of 140 companies. The sampling technique used was targeted sampling and a sample of 85 companies was obtained for the period 2012-2016 with a total observation of 425 analysis units.

Research model

The data analysis method used is multiple linear regression by first performing descriptive statistical tests and classical assumption tests. The equations in the hypothesis:

$$Y = b1\ X1 + b2\ X2 + b3X3 + b4\ X4 + \epsilon$$

at which:

Y : Capital structure
b1, b2, b3, b4 : variable coefficients independent
X1 : Profitability (ROA)
X2 : Asset Tangibility (FATA)
X3 : growth rate (TP)
X4 : Non - Debt Tax Shield (NDTS)
E : standard error

4 RESULT AND DISCUSSION

Table 1: Descriptive table of research Variable statistics

	N	Min	Max	Mean	Std. Deviation
Profitabilitas	425	,0066	,4453	,154888	,1009156
Aset Tangibility	425	,0029	1,0311	,292145	,2343584
Growth	425	,0475	,3013	,175475	,0564156
Non Debt Tax Shield	425	,0120	,9997	,393648	,2555603
Capital Structure	425	,1002	,9996	,428096	,2312980
Valid N (listwise)	425				

Testing Classical Assumptions.

Testing the classical assumptions used in this study includes normality tests, multicollinearity tests, autocorrelation tests and heteroscedacity tests.

Normality Test

In this study, the restnormality test can be performed by the non-parametric statistical test Kolmogorov-Smirnov (K-S).

Table 2: Normality test table

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		425
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	,18724734
Most Extreme Differences	Absolute	,040
	Positive	,040
	Negative	-,037
Kolmogorov-Smirnov Z		,825
Asymp. Sig. (2-tailed)		,505

a. Test distribution is Normal.
b. Calculated from data.

The Kolmogorov-Smirnov Z value of 0.825 is above α = 0.05 (Asymp., Sig = 0.505> 0.05), so the hypothesis H0 is accepted, which means that the remaining data are normally distributed.

Multicollinearity Test

Multicollinearity tests are done using the variance inflation factor (VIF). Data is said to have no multicollinearity if the tolerance value is ≥ 0.10 and VIF ≤ 10.

Table 3: Multicollinearity test table

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Profitabilitas	,804	1,244
Aset Tangibility	,996	1,004
Growth	,822	1,216
Non Debt Tax Shield	,972	1,029

a. Dependent variable: capital structure

All independent variables have VIF values ≤ 10, so the data from this study did not experience multicollinearity.

Autocorrelation Test.

This test is done by looking at the value of Durbin Watson, as follows:

Table 4: Autocorrelation test table Durbin Watson Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,587[a]	,345	,338	,1881369	2,012

a. Predictors: (Constant), Non Debt Tax Shield, Aset Tangibility, Growth, Profitabilitas
b. Dependent Variable: Capital Structur

The Durbin Watson (DW) value is 2.012. Based on the Durbin Watson statistical table with α = 0.05, the number of samples (n) = 85 and the number of independent variables (k) = 4 are known to have the value of dL = 1.82767 and the value of dU = 1.85576. So it can be concluded that: dU = 1.85576 <DW = 2.012 <4 - dU = 4 - 1.85576 = 2.14424 On the basis of these predetermined criteria, indicates that H0 (hypothesis 0 (zero)) is rejected means no there are positive and negative autocorrelations.

Heteroscedasticity Test

In this study, the heterosexasticity test was observed using a scatterplot plot between the predicted value of the related variable (ZPRED) and the residual value (SRESID).

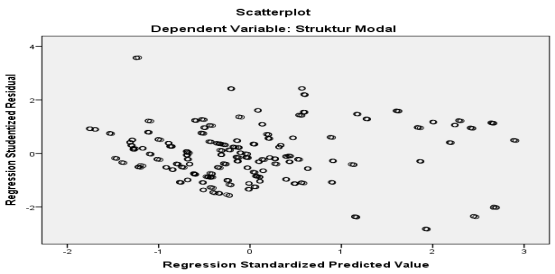

Figure 3: Heteroscedasticity test image - Scatter plot graph

The Scatterplot Heteroscedasticity test above shows that the points above and below the number 0 (zero) spread on the y-axis and did not form a clear pattern, so it can be concluded that heterocedasticity does not occur.

Hypothesis test

Testing the hypothesis in this study uses the F-test, t-test and determination coefficient (R2)

Test F

Significant value of 0.000 small levies of 0.05, so it can be said that the variable profitability (ROA), Tangibility Asset, Growth and Non Debt Tax Shield have a simultaneous effect on the dependent variable, namely Capital Structure (DER).

Table 5: F-test table

(ANOVA[b])

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7,817	4	1,954	55,214	,000[b]
	Residual	14,866	420	,035		
	Total	22,683	424			

a. Dependent Variable: Capital Structure
b. Predictors: (Constant), Non Debt Tax Shield, Asset Tangibility, Growth, Profitabilitas

T-test

The t statistical test basically shows how far someone is independent in explaining dependent variation.

ROA and growth have a positive and significant effect on the capital structure, while Tangibility Assets and Non Debt Tax Shields do not have a significant effect on the capital structure.

Table 6: T-test Table

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
	(Constant)	,040	,045		,900	,369		
	Profitabilitas	1,475	,101	,644	14,606	,000	,804	1,244
	Asset Tangibility	,000	,039	,000	-,005	,996	,996	1,004
	Growth	,898	,179	,219	5,026	,000	,822	1,216
	Non Debt Tax Shield	,005	,036	,006	,140	,888	,972	1,029

Determination Coefficient test (R2)

The coefficient value (R) is 0.587, which shows a strong relationship, with a (0.3% or 33.8%) fixed coefficient of determination (Adjusted R Square). This means that Profitability (ROA), Tangibility Asset, Growth and Non Debt Tax Shield Capital Structure (DER) can explain 33.8%, while the remaining 66.2% is explained by other variables outside this estimation model.

Table 7: Determination Coefficient Table

Determination Coefficient test table (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,587[a]	,345	,338	,1881369	2,012

a. Predictors: (Constant), Non Debt Tax Shield, Asset Tangibility, Growth, Profitabilitas

b. Dependent Variable: Capital Structure

5 CONCLUSIONS

From the results of the research carried out, conclusions can be drawn as follows:

1. In part, profitability (ROA) has a positive and significant effect on the capital structure (DER). Tangibility Asset has a positive and not significant effect on the capital structure (DER). Growth has a positive and significant effect on the debt structure (DER). Non-debt tax Shield has a positive and not significant effect on the capital structure (DER).
2. At the same time, profitability (ROA), Tangibility Asset, growth and non-debt tax shield influence the capital structure (DER).

Constraint

This study has several limitations, namely :

1. Limitations on the criteria of the research sample used are only companies with profit that meet the criteria, but processing companies that suffer losses do not meet the criteria. So that in this case the profitability can not be fully reflected in production companies that are listed on the Indonesia Stock Exchange (IDX)
2. This study only uses independent variables Profitability, Assibility, Growth and Non-Debt Tax Shield, as future researchers add the number of independent variables to be analyzed in addition to the above variables. Investment decisions, for example proxied by Price Earning Ratio (PER), Growth Potential, Interest Rate (SBBI) and others.

Suggestion

Based on the conclusions and limitations of this study, the researcher gave some suggestions to the following researcher, among others, as follows:

1. Can conduct research with the criteria of companies that have profit / loss for 10 (ten) years in a row.
2. Can add independent variables such as investment decision (PER), growth potential, interest rate (SBBI) and other

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