

DETERMINANTS OF CAPITAL STRUCTURE DECISIONS IN INDONESIA

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Abstract

The aims of this study are to examine the effect of return on equity (ROE), current ratios (CR), tangibility, non-debt tax shields (NDTS) and growth opportunities (GO) on the debt to equity ratio of the Indonesian Stock Exchange Manufacturing Sector. This study uses data analysis techniques with multiple linear regression models using a panel data analysis mechanism. The object of this research is manufacturing companies listed in Indonesia Stock Exchange with a span of observational studies is from 2008 - 2012. The sampling technique used was purposive sampling technique. In testing multiple regression models using panel data analysis used a statistical software tool namely E-views series 4. Panel data testing was carried out in 3 tests, namely Pooled Least Squared (PLS) Test, Fixed Effect Model (FEM) and Random Effect Model (REM)

The results of the sample selection are based on 88 companies from the total of 125 companies. Every data from this research is collected from the sources of the Indonesian Capital Market Directory (ICMD). Multiple regression testing begins with testing the estimation of Pooled Least Square (PLS) and Fixed Effect Model (FEM) and the results of the Chow-Test test stated that FEM is better than PLS. Also, Random Effect Model (REM) testing and Hausman showed that REM is a better model in analyzing this research data, so that this study is no longer testing classical assumptions.

Based on the results of the tests conducted, the results show that the research model formed from the independent variable return on equity (ROE), current ratio (CR), tangibility, non-debt tax shields (NDTS) and growth opportunities (GO) affected the debt to equity ratio (DER) in the manufacturing sector of companies listed on the Indonesia Stock Exchange in the period 2008 to 2012. Also, partially variable which has a significant effect and in accordance with the theory is only the ROE variable where the variable has a negative effect.

Keywords: debt to equity ratio, Data Panel, Capital Structure, Random Effect

JEL Classification: G29, G 30, O44

Introduction

Companies need additional funds to increase their capacity for a sustainable growth. These can be obtained from the company itself – for example, deposit of owner's capital (internal funds) and from outside the company- for example, from creditor funding in the form of debt (external funds). The owner's capital investment has the smallest risk but the amount is very limited. So, it cannot be relied upon and financing the growth of the

company by using debt must be done (leverage). The funds obtained by the company should be managed properly, because each of these funding sources contains liability obligations to the owners of the funds. The proportion between the two funding sources - the capital structure- must be considered. Brigham (2006) states that developing the capital structure targets require analysis of many factors to take into consideration the company's financial condition, as reflected in the Debt to Equity Ratio (DER)

Factors that cause fluctuations in DER are caused by the movement of total debt relatively high in the manufacturing sector individually, as shown in Table 1.1.

Table 1.1
Value of Debt Seven of the Biggest Capitalized Manufacturing Companies

Index	Name	Market Capitalization (Billion Rupiah)	Total Debt (Millions of Rupiah)		
			2011	2010	2009
HMSP	HM Sampoerna	233,176	7,880,837	10,309,637	7,250,522
UNVR	Unilever Indonesia	152,600	6,046,516	4,652,409	3,776,415
GGRM	Gudang Garam	105,921	11,178,495	9,421,403	8,848,424
SMGR	Semen Gresik	72,661	4,353,407	3,423,246	2,633,214
INTP	Indocement Tungal Perkasa	67,919	2,271,988	2,245,548	2,572,076
INDF	Indofood Sukses Makmur	42,585	22,640,767	22,432,117	24,886,781
SMCB	Holcim Indonesia	19,732	3,512,644	3,611,246	3,949,183

Source : www.idx.co.id (data processed)

Total Debt that fluctuates both between companies and individually does not necessarily indicate the capital structure of the manufacturing sector. It is not optimal because the composition of the company's capital is a reflection of the company's strategy. Company that focuses on the use of debt means have different strategies with firms that rely on the owners of capital. Companies that obtain debt funding are a reflection of companies that have good prospects because creditors will only provide loans to firms that show a good business proposal. The success of a company in obtaining debt funding represents a good signal for the capital market and for the company's prospects. However, there is a high level of debt that will signal to the market that the company has a big risk. Companies have a high risk because the financing that focuses on the source of debt will increase the cost of capital, and vice versa. However, debt also has the ability to increase profitability. Contradictions that debt can have a good impact and a bad impact make capital structure decisions become something that is not simple but must consider many things that might affect profitability. These various factors make the company continually have to make policy adjustments to change its capital structure. This was confirmed by the study of Seppa (2007) which concluded that low-levered companies tend not to make changes to the composition of capital while high-levered companies tend to balance capital over time.

Factors influencing capital structure include sales stability, asset structure, operating leverage, growth rate, profitability, liquidity, tax, control, management attitude, lender attitude and rating agent, market conditions, company internal conditions and financial flexibility (Brigham and Houston, 2006). Other opinions state that the factors that influence a company's capital structure are: interest rates, earnings stability (earnings volatility), the composition of assets (asset structure), growth rates, risk levels of assets, the amount of capital needed, market conditions, the nature of management, and the size of a company (Riyanto, 2001). Penelitian is not aimed at determining the optimality of the capital structure, but rather focuses on the testing of the factors that affect the capital structure of the manufacturing sector 2008-2012 period

Research on the factors that affect capital structure has been carried out, among others, in the Panda (2012) study which shows that the structure of assets, profitability and growth opportunities proved to have a positive effect on capital structure decisions. But it still contradicts the results of previous studies conducted by Seikh and Wang (2011) which states that the structure of assets, profitability and growth opportunities negatively affects the capital structure. In research conducted by Seikh and Wang (2011), it is also stated that liquidity factors have a negative influence on capital structure while in previous studies by Nugroho (2006) stated that liquidity significantly influences the capital structure.

From a review of previous studies, it can be seen that there are still differences in results from several factors that influence capital structure decisions and even show opposition between one another. This is what will be raised as a research gap that needs further research. The factors in question are profitability, liquidity, tangibility (asset structure), growth opportunities (opportunity to grow) and Non-Debt Tax Shield.

The objectives of this study are:

1. To analyze the effect of return on equity (ROE), current ratio (CR), tangibility, non-debt tax shields (NDTS), growth opportunities (GO) simultaneously to the debt to equity ratio of the Indonesian Stock Exchange Manufacturing Sector companies;
2. To analyze the influence return on equity (ROE), current ratio (CR), tangibility, non-debt tax shields (NDTS), Growth Opportunities (GO) partially against the company's debt to equity ratio Sector Manufacturing Indonesia Stock Exchange.

Theoretical Review

The research was conducted by Panda (2012) with the aim of examining the influence of several financial indicators on the decision to use venture capital. The factors tested were asset, company size, profitability, profit consistency, and growth opportunities. The object of this research is venture companies in India, using Multiple Linear Regression Testing Model. The results of the study showed that all the measured variables tested influence the decision to use venture capital.

Seikh and Wang (2011) conducted research in Pakistan with the aim to examine the factors that influence the capital structure of manufacturing companies and to find out whether the capital structure model is controlled by western regulations. The testing of this research was carried out by paying attention to several different conditions in the capital structure theory, namely trade-off theory, pecking order, agency theory, and theory of free cash flow, it aims to obtain or formulate proportional testing in determining the factors that affect the capital structure of manufacturing company. This test was conducted using panel data for a sample of 160 companies listed on the Karachi Stock

Exchange for 2003-2007. The results of the study state that profitability, liquidity, profit volatility, and asset structure are negatively related to the debt ratio, while firm size is positively related. The results of this study are consistent with the theory stated by the trade-off theory, pecking order theory and agency theory.

Riaz and Afzal (2011) conducted research in the manufacturing sector in Pakistan obtained almost the same results as other previous studies. This research still uses several other financial factors in influencing the company's capital structure and the company's strategic financial decisions. Using the Data Panel Regression Analysis Tool and refers to the theoretical model where the leverage model is in the cross-sectional framework. The data panel was taken from companies activating in the following fields: textile, automotive, sugar, chemical and cement sectors listed on the Karachi Stock Exchange in the years 2001 to 2008. The results obtained from this study are that profitability and asset growth have a negative influence on the debt ratio and vice versa with the asset structure and size of the company. Other factors tested in the study did not affect the debt ratio.

Furthermore, Seppa (2007) conducted a study with the aim of examining the effect of several company-specific financial factors on capital structure decisions. This study relied on non-financial companies in Estonia and examined behavioral differences among several companies. The object of this research is 260 non-financial companies in Estonia which are divided into three small, medium, and large sections. The data analysis was done using correlation and regression in two aspects, namely the influence of financial factors on the static capital structure and structure dynamic capital. This research uses financial data from 2002 to 2004. The results of the study state that capital structure decisions in non-financial companies in Estonia are influenced by pecking order theory. The results of this study support the condition that optimal capital structure decisions are weak who survives. The resilience of pecking order behavior is significantly different between small and large companies.

Nurrohim (2008) conducted a study of Capital Structure in Manufacturing Companies in Indonesia to test whether financial factors such as profitability, fixed asset ratios, ownership control, and asset structure affect the capital structure of manufacturing companies listed on the Indonesia Stock Exchange from 2001 to 2005. This study uses testing with multiple linear regression models that are carried out both jointly (simultaneously) and separately (partially). The results showed that profitability, fixed asset ratio, ownership control, and asset structure had a significant effect on capital structure. Partially, only profitability and ownership control have a significant effect on the company's capital structure.

Other research conducted in Indonesia was done by Nugroho (2006) in 1994-2004 which aims to examine the influence of financial factors such as leverage, liquidity, asset structure, company growth, PER, and profitability and its effect on the capital structure of the company. There were included companies listed on the Indonesia Stock Exchange. Multiple linear regression testing was used to do data processing and from the all variables tested in this study, only the structure of assets did not significantly affect the company's capital structure.

Capital structure consists in the mix (proportion) of a company's long-term funding indicated by debt, equity, preferred stock and ordinary shares. Understanding capital structure, according to Riyanto (2001), is a balance or comparison between the amount of long-term debt with own capital. Capital structure theory explains how the influence of funding decisions on firm value or capital costs. Capital structure can be measured using Debt to Equity Ratio (DER) which shows the level of risk of a company.

The higher the DER ratio, the higher the risk that will occur to the company. This is because the company's funding from the element of debt is greater than its own capital. Determination of capital structure is a policy taken by the management in order to obtain a source of funds so that it can be used for company operational activities. Decisions made by management in finding these sources of funds are strongly influenced by the owners or shareholders. Many factors influence manager's decisions in determining the company's capital structure. According to Brigham and Houston (2006) the factors that influence capital structure are: sales stability, asset structure, operating leverage, growth rate, profitability, liquidity, tax, control, management attitude, lender attitude and rating agent, market conditions, internal conditions of the company and financial flexibility, especially in the targeted capital structure. There are several capital structure theories that aim to provide a basis for thinking to find the optimal capital structure. Optimal Capital Structure represents a capital structure that can minimize the cost of using total capital or the cost of average capital, so it will maximize the value of the company (Weston and Brigham, 1994).

One of the theories underlying the capital structure is Balancing Theory, according to Myers (1984) in Husnan (2000) referred to as equilibrium theories, because the aim is to balance the composition of debt and equity. Balancing theory talks start from extreme conditions, namely in perfect capital market conditions and no taxes. Basing on balance theory the company seeks to maintain a targeted capital structure with the aim of maximizing the value of the company. Another basic theory is pecking order theory which states that company with a high level of profitability even low levels of debt, due to the high profitability of companies that have internal funding sources are abundant. In this pecking order theory, there is no optimal capital structure. Specifically, companies have sequences of preferences (hierarchies) in the use of funds. According to Smart, Megginson, and Gitman (2004) order (hierarchy) in selecting sources of funding, companies prefer to use the resources from inside or internal funding rather than external funding. When external funding is required, the company will choose first the safest securities, namely the lowest risk debt, down to riskier debt, hybrid securities such as convertible bonds, preferred shares, and the last common stock. There is a constant dividend policy, i.e. the company will determine the amount of dividend payments that constant, not affected by how large the company is profit or loss and to anticipate a shortage of cash inventories because of a constant dividend policy and fluctuations in profit rates, as well as investment opportunities. In this context, the company will take an investment portfolio that is smoothly available. The pecking order theory does not indicate the target capital structure, but explains the order of funding. Financial managers do not take into account the optimal level of debt and the need for funds is determined by investment needs. This pecking order theory can explain why companies that have a high level of profit actually have a small debt level. In reality, there are companies that use funds for their investment needs that are not appropriate, such as the sequence scenario (hierarchy) mentioned in the pecking order theory. Singh and Hamid (1992) states that company enterprises in developing countries prefer to issue equity rather than debt to finance the company. This is contrary to the pecking order theory which states that the company will choose to issue debt first rather than issuing shares when it requires external funding.

According to the trade-off theory, the company will owe up to a certain level of debt, where the tax savings (tax shields) from additional debt is equal to the cost of financial difficulties (financial distress). The trade-off theory in determining the optimal

capital structure includes several factors including tax, agency costs and financial distress, but still maintains the assumption of market efficiency and symmetric information as a balance and benefit of using debt. The optimal debt level is achieved when tax savings (tax shields) reach the maximum amount of the cost of financial distress. The trade-off theory has the implication that managers will think in terms of the trade-off between tax savings and financial difficulties in determining capital structure. Companies with high levels of profitability will certainly try to reduce taxes by increasing the debt ratio, so that the additional debt will reduce taxes. In reality, rarely do financial managers think that way. Observation of the behavior of corporate capital structures in the United States shows that companies with high levels of profitability tend to have low debt ratios. This is contrary to the opinion of trade-off theory. The trade-off theory cannot explain the negative correlation between the level of profitability and the debt ratio. According to Brigham (1999), debt has an advantage because of the interest that affects taxable income, so that debt becomes lower and the redeemer only gets a relatively fixed interest cost, the excess profit will be a claim for the owner of the company.

The first modern capital structure theory is the theory of Modigliani and Miller (MM theory) which argues that capital structure is irrelevant or does not affect firm value. MM proposes several assumptions to build their theories (Brigham and Houston, 2001), namely there are agency cost, no tax, investor may owe with interest rate equal to the company, investors have the same information as the management regarding the company's prospects in the future, there is no bankruptcy costs, Earning Before Interest and Taxes (EBIT) is not affected by the use of debt, the investors are price-takers and if a bankruptcy occurs then the assets can be sold at market price (market value). With these assumptions, MM proposes two propositions known as MM propositions without tax. The first proposition is the value of the company that owes the value of the company that is not in debt. The implication of this first proposition is that the capital structure of a company is irrelevant, changes in capital structure do not affect the company's value and the company's weighted average cost of capital (WACC) will remain the same, not influenced by how the company combines debt and capital to finance the company. The second proposition is the cost of share capital will increase if the company conducts or seeks out loans from outsiders. Risk of the equity depends on the risk of the company's operations (business risk) and the level of corporate debt (financial risk). Brealey, et. al (1999) concluded that from MM without tax theory does not distinguish between indebted companies or debt-bearing shareholders in conditions without taxation and perfect markets. The value of a company does not depend on its capital structure. In other words, financial managers cannot increase the value of a company by changing the proportion of debt and equity used to finance the company.

MM theory without tax is considered unrealistic and then MM incorporates tax factors into its theory. Tax is paid to the government, which means it is a cash outflow. Debt can be used to save taxes, because interest can be used as a tax deduction. In theory this tax is MM with two propositions are repositioned first the value of the indebted companies equal to the value of a company that does not owe plus the tax savings due to interest on the debt. The implication is that financing with debt is very profitable and MM states that the company's optimal capital structure is one hundred percent debt. The second proposition is the cost of share capital will increase with increasing debt, but the savings in taxes will be greater than the decrease in value due to the increase in the cost of share capital. The implication of this second proposition is that the more use of debt will increase the cost of share capital. Using more debt means using

cheaper capital (the cost of debt capital is smaller than the cost of share capital), which will reduce the weighted average cost of capital (even though the cost of share capital increases). The MM theory is very controversial. The implication of the theory is that companies should use as much debt as possible. In practice, no company has such a large debt, because the higher the debt level of a company, the higher the probability of bankruptcy. This is what lies behind MM's theory saying that companies use as much debt as possible, because MM ignores bankruptcy costs.

Theory of market timing equity disclosed by Baker and Wurgler (2002) suggested that the p-company will issue equity at the time of high market value and will buy back equity at current low market value. The purpose of conducting this market timing equity is to exploit temporary fluctuations that occur in the cost of equity against the cost of other forms of capital. According to Baker and Wurgler (2002) structures are at the capital is the cumulative result of an effort to make the equity market timing in the past. They found that companies with low debt levels are companies that issue equity at high market value and companies with high debt levels are companies that issue equity at a low market value. They use a market-to-book ratio, which is generally used as a proxy to measure investment opportunities, but in theory the market-to-book ratio is also used to see whether the value of an equity is overvalued or undervalued and builds a variable model, namely external finance weighted- average market-to-book ratio. This variable is the weighted average of the market-to-book ratio of a company in the past. This variable is used by Baker and Wurgler to see the business of a company in carrying out market timing equity.

There are two versions of the equity market timing that follow the results of Baker and Wurgler's research. First is the dynamic version of Myers and Majluf (1984) regarding asymmetric information that assumes rational managers and investors. The second version of the equity market timing involves irrational investors or managers and perceptions of mispricing. Managers will issue equity when they believe that the cost of equity is low and buy back equity when the cost of equity is high. Market-to-book is generally known to be negatively correlated with future equity returns, and the extreme value of market-to-book is associated with extreme expectations from investors. If managers try to exploit too much (extreme) expectations from investors, net equity issues will positively correlate with market-to-book. If there is no optimal capital structure, the manager does not need to replace the funding decisions when the company has been properly assessed and the cost of equity looks normal, this is waiting for temporary fluctuations that occur in the market-to-book have a fixed effect on leverage.

The establishment of a signaling theory is based on the existence of well-informed asymmetric information and poor-informed stockholders. This theory is based on the idea that managers will announce to investors when getting good information, aiming to increase the value of the company, but investors will not believe it, because managers are interested parties. The solution to high-value companies will try to do signaling on their financial policies that are costly so they cannot be copied by companies that have lower value. Signal is a costly process in the form of deadweight costing, aimed at convincing investors about the value of the company. A good signal is one that other companies that have lower value cannot imitate, because of cost factors. One example is the level of company leverage, i.e. large companies will create incentives that encourage them to take high leverage. Smaller companies cannot be followed, because they will be more vulnerable to bankruptcy. This will create separating

equilibrium, ie companies that have a higher value of the company will use more debt and companies with lower value will use more equity.

This theory will reveal that investors can distinguish between high value companies and companies that have low value by observing ownership of their capital structure and marking high valuations for companies that are highly levered. The equilibrium is stable because low-value companies cannot replicate higher companies. The advantage of this theory is the ability to explain why there is an increase in stock prices in response to an increase in financial leverage. The weakness of this model is the inability to explain the inverse relationship between profitability and leverage. Another disadvantage is not being able to explain why companies that have growth potential and high intangible asset values must use more debt than mature companies (high tangible assets) that do not use debt, but in theory are needed to reduce the effects of information asymmetry.

The capital structure in this study is measured from Debt to Equity Ratio (DER) because DER reflects the proportion between total debt (debt) and total shareholder's equity (own capital). Where total debt is total liabilities, both long-term debt and short-term debt, while total shareholder's equity is total capital, namely paid-in share capital and retained earnings owned by the company. This ratio shows the composition of total debt to total equity. The higher the DER means the composition of the debt is greater than the capital itself, so that the impact of the greater burden on the creditor company. In determining the balance between the amount of debt and the amount of equity capital that is reflected in the company's capital structure, it is necessary to take into account the various factors affecting the debt to equity ratio (DER). In this study the factors that are thought to affect DER are as follows:

- Profitability, Brigham and Houston (2001) state that companies with high returns on investment will use relatively small debt.

A high rate of return makes it possible to finance most of your income needs with funds generated internally. Companies that have high profits will use low amounts of debt and vice versa. This is supported by the results of research by Riaz and Afzal (2011) that is profitability has a negative influence on the debt ratio of textile, automotive, sugar, chemical and cement companies listed on the Karachi Stock Exchange in the year 2001-2008. Likewise, with the results of the research of Seikh and Wang (2011) which states that profitability is related negative with debt ratio.

Tangibility (asset structure) describes a number of assets that can be used as collateral. Brigham and Gapenski (1996) state that in general companies that have collateral against debt will find it easier to get debt than companies that have no collateral. According to Riyanto (2001) most industrial companies where most of their capital is embedded in fixed assets will prioritize the fulfillment of their capital from permanent capital, namely their own capital while debt is complementary. Panda (2012), Riaz and Afzal (2011), Seppa (2007) and Nurrohim (2008) have proven in their research that asset structure has a positive effect on capital structure.

Non-Debt Tax Shield is a tax advantage obtained by the company other than the interest on the loan paid. In the capital structure, non-debt tax shield is a substitution interest expense which will decrease when calculating company tax (Mutamimah, 2003). According to De Angelo et. al (in Sunarsih, 2004) tax deductions in the form of depreciation and investment tax credit can be used to reduce taxes other than debt interest. So, in conducting tax efficiency in addition to charging interest on debt, companies can take advantage of profits / tax protection through tax facilities provided

by the government or referred to as non debt tax shield. Tax savings other than interest payments due to the use of debt also come from depreciation and amortization. The greater the depreciation and amortization will cause the greater the income tax savings and the greater the company's cash flow. Thus, a company that has a high non debt tax shield tends to use a lower debt level and means that the non debt tax shield variable is negatively related to the level of debt usage in the capital structure.

Growth Opportunity (opportunity to grow) is a type of intangible asset which is one of the factors that becomes a consideration in influencing the company's capital structure. Companies that have more growth opportunities will tend to borrow less. While companies that have growth, opportunities are less likely to borrow funds anymore, because the opportunity for growth is an asset not tangible and can be used as collateral (Jensen and Meckling, 1986; Myers, 1997). The theory give it signal that companies have more growth opportunities large and more income high in the future you have to use more leverage, because they will be in a position to pay interest. This has been proven by Seikh and Wang (2011) in his research which states that asset structure has a negative effect on capital structure.

Conceptual framework

The capital structure policy is a complicated matter that cannot be generalized properly. Of the various theories that develop related to the structure of capital does not provide a common theoretical basis. These differences arise from the perspective of various variable relational that occur. However, understanding various theories reviewed in the previous section and input from various studies that have been reviewed make to establish temporary estimates of the various relationships examined in this study.

In understanding the relationship between profitability and capital structure, peneliti use assumptions and establishments used by pecking order theory. In the theory stated that in certain circumstances the company will prioritize using internal funding sources. Internal funding sources come from profits that are not shared. Profits that are not shared in large quantities can only be generated by a company that has a high level of profitability. This understanding concludes that the company is level profitability the high will tend to use internal funds. This use of internal funds means debt ratio the company is relatively low.

Relationship between liquidity with a capital structure based on trade theory that says that companies with relatively high levels of liquidity will tend to increase the proportion of debt because they are better able to obtain loan contracts as a result of their ability to pay off obligations. This understanding pushes peneliti to establish the hypothesis that the level of liquidity is directly proportional to the level of debt.

Relationship between tangibility with debt ratio is also explained by using trade off theory. Companies that have a high asset structure are able to have also a guarantee (collateral) for their debts. The high security as a result of the guarantee makes the creditor provide a relatively low interest as trade off (exchange) of the low risk in the debt transaction.

In explaining the relationship between non-debt tax shields with capital structure used to trade off theory. Non-debt tax shields, formulated as a total depreciation expense against total assets, is actually one form of tax savings (tax shield) which comes from the depreciation. In trade off theory it is understood that the tax savings that have been successfully obtained from high depreciation burdens encourage management to do so trade off (exchange) willingly loses tax benefits from increasing debt. This makes

companies to use internal funding and lose tax benefits from increasing loans / debt. Explanation above makes peneliti conclude a hypothesis that non-debt tax shields negative effect on debt ratio.

Growth opportunities represent an asset owned by the company. The application of the concept is the opposite of the relationship that occurs between tangible assets, where intangible assets in the form of growth opportunities are a set which cannot be pledged so as to encourage companies not to borrow because they cannot make it a guarantee for debt transactions.

Hypothesis

Based on the conceptual framework stated in the previous section, the following hypotheses can be stated:

- **H₁**: Return on equity (ROE), current ratio (CR), tangibility, non-debt tax shields (NDTS), Growth Opportunities (GO) simultaneously affects the debt to equity ratio of the Indonesian Stock Exchange Manufacturing Sector companies?
- **H₂**: Return on equity (ROE), current ratio (CR), tangibility, non-debt tax shields (NDTS), Growth Opportunities (GO) partially influences the debt to equity ratio of the Indonesian Stock Exchange Manufacturing Sector company?

This research was conducted on the Indonesia Stock Exchange (IDX) through the internet using the official website www.idx.co.id. This research was conducted from April 2013 to September 2013 by using secondary data. The population in this study is a company incorporated in the manufacturing sector in the Indonesia Stock Exchange. The manufacturing sector in Indonesia Stock Exchange consists of basic industrial and chemical sub-sectors, various industries and consumer goods industries with a population of 125 companies with a description of the target population of 88 companies. It can be explained that out of 125 total population companies, there are 13 companies which in the range of 2008-2012 observation period have not been actively traded shares or companies that have exited the stock exchange. 24 companies whose data cannot be collected or are incomplete and unaudited. The amount of incomplete data with very large numbers is one of them caused by the year of observation of this study that uses data up to 2012, where when this research data was collected, not all companies listed on the stock exchange officially reported financially on the site. Indonesia stock exchange. The names and indices of the target population of this study are presented in the appendix of this study. Thus, the target population is obtained used as a sample of 88 companies.

To facilitate the understanding of the technical research that will be carried out explained the operationalization of variables. Explanation for each variable that will be used in this study can be seen in the framework of operationalizing the variables below:

Variable	Definition	Measurement	Scale
Debt to Equity Ratio (Y)	This ratio is used to measure how much the company's assets are financed by total debt.		Ratio
Profitability (X ₁)	Profitability is the ability of a company to get profit (profit) in a certain period		Ratio

Liquidity (X ₂)	is a ratio that shows the ability of a company manager to fulfill obligations or pay short-term debt using only its current assets.		Ratio
Tangibility (X ₃)	Asset Structure (Tangibility) is the relative composition of fixed assets owned by the company		Ratio
Non-debt tax shields (X ₄)	NDTS is a tax advantage obtained by a company other than the interest on the loan loan paid.		Ratio
Growth Opportunities (X ₅)	Growth opportunities are a measure of the extent to which a company's earnings per share can be increased by leverage		Ratio
Dummy (D)	Variables used to carry out industry categories	D = 1; Industry Category X D = 0; Other industries	Nominal

This study uses a statistical test to test whether changes in profitability (ROE), Liquidity (CR), Tangibility (Tangibility), Non-debt Tax Shield (NDTS), and Growth Opportunity (GO) influences Capital Structure decisions in this case the Debt Ratio (DER). The analytical method used to test the hypothesis is multiple linear regression analysis (multiple regression). The multiple linear regression models used in this study are as follows:

$$DER = \beta_0 + \beta_1 ROE_{it} + \beta_2 CR_{it} + \beta_3 Pliers_{it} + \beta_4 NDTS_{it} + \beta_5 GO_{it} + \varepsilon_{it}$$

Where:

DER= Debt to Equity Ratio

ROE= Return on Equity

CR= Current Ratio

Pliers= Tangibility

NDTS = Non-Debt Tax Shields

GO= Growth Opportunity

ε = Error; i = cross section data; t = time series data

β_0 = Parameter constants

β_i = Regression coefficient of each X_i, i = 1,2,3,4,5.

Before carrying out the analysis using the model presented above, it must be specified that the analysis is in accordance with the method requirements Ordinary Least Square (OLS). First, normality and classic assumption testing will be carried out which includes testing multicollinearity, heteroschedasticity, and autocorrelation. After that is done e stimulation using panel data is a combination of time series data (timeseries) with latitude data (cross section).

General Description of Manufacturing Companies that are Sampled

Manufacturing companies included in the Indonesia Stock Exchange which were sampled in this study amounted to 88 companies with a general description of the company are included below:

Descriptive statistics

Variable	Minimum	Maximum	Average	Standard Deviation
Debt to Equity Ratio (DER)	-31.78	322.27	2.31	0.75
Return on Equity (ROE)	-5297.00	324.63	-0.20	12.32
Current Ratio (CR)	0.00	58345.00	376.50	133.90
Tangibility (Tang)	0.01	2.50	0.35	0.01
Non-Debt Tax Shield (NDTS)	0.00	0.15	0.03	0.00
Growth Opportunity (GO)	-220.27	247.29	1.60	1.12

Source: Data processed

4.3 Panel Data Regression Test

In accordance with the explanation previously stated, the hypothesis testing will be carried out using a panel data regression procedure. This test treats data as a series like a normal regression method by sorting all data down.

PLS Test Results

Item Variable /	Coefficient	Significance Value	Information
ROE	-0.05921	0.0000	Significant
CR	-0.0000398	0.5273	Not significant
Tangibility	1.18403	0.1248	Not significant
NDTS	32.83295	0,0005	Significant
GO	0.00692	0.4266	Not significant
R ²	0.94		
Significance	0,000		Significant

Source: www.idx.co.id (processed, November 2013)

Estimated with Fixed Effect.

Next, testing is done with the procedure Fixed Effect Model (FEM). The summary results of the FEM test are found in Table 4.4, which is sourced from Annex 2c.

FEM Test Results

Item Variable /	Coefficient	Significance Value	Information
Constant	2.53429	0.0000	Significant
ROE	-0.05911	0.0000	Significant
CR	-0.0000201	0.5273	Not significant
Tangibility	-2,59475	0.1248	Not significant
NDTS	24.26523	0,0005	Significant

GO	-0.00162	0.4266	Not significant
R ²	0.98		
Significance	0,000		Significant

Source: www.idx.co.id (processed, November 2013)

Chow Test

Information	Significance Value	Information
Cross-Section F	0.0000	FEM is better
Cross-Section Chi Square	0.0000	FEM is better

Source: www.idx.co.id (processed, November 2013)

Table 4.5 shows that the value of F from Cross Section F and Cross Section Chi Square were smaller than 0.05, which means FEM is better than PLS, so further testing is needed to determine the better one between Fixed Effect Model (FEM) or Random Effect Model (REM)

Estimation using Random Effect Model (REM)

REM Test Results

Item / Variable	Coefficient	Significance Value	Information
Constant	2.85121	0.0000	Significant
ROE	-0.05917	0.0000	Significant
CR	-0.000034	0.5273	Not significant
Tangibility	-2.52245	0.1248	Not significant
NDTS	12.36516	0,0005	Significant
GO	-0.00048	0.4266	Not significant
R ²	0.976		
Significance	0,000		Significant

Source: www.idx.co.id (processed, November 2013)

Hausman Test

Information	Significance Value	Information
Cross-Section Random	0.0581	Better REM

Source: www.idx.co.id (processed, November 2013)

These results above indicate that REM is better. This result also suggests that homoxedasticity testing is not necessary because the procedure used is General Least Square (GLS) so that model formation and hypothesis testing can be carried out directly. The selection of REM also indicates that the data between cross sections is relatively the same so there is no need to divide industry categories with dummy mechanisms in the FEM equation. This implies the withdrawal of the hypothesis is done once against the sample as a whole.

A better model is the REM model so that the research model produced uses the coefficients produced by the REM model as follows:

$$\text{DER} = 2.85121 - 0.05917 \text{ ROE} - 0.000034 \text{ CR} - 2.52245 \text{ Tangibility} + 12.36516 \text{ NDTs} - 0.00048 \text{ GO}$$

Of the five regressors (independent variables) contained in the model, only two variables have a significant effect, namely ROE and NDTs. Of the five partial hypotheses of each hypothetical variable received only one is a variable Return on Equity (ROE) has a significant influence with a negative pattern towards Debt Ratio (DR) while variables Non Debt Tax Shield (NDTs) even though it has a significant influence but a positive relationship pattern Debt Ratio (DR), where the pattern of relations is hypothesized negatively. The hypothesis simultaneously shows that the independent variables together have a significant influence on the Debt Ratio with a fairly high coefficient of determination that is equal to 97.6% with a fairly good significance value of 0.000.

In accordance with the things that have been conveyed in the previous sections stating that the capital structure policy is something quite complicated, which can also be seen from the results obtained from this study. Relationships shown from processed data do not always indicate compatibility with the theory or with other studies that have been done before. This illustrates complexity and the multitude of factors that affect capital structure both those that affect directly and which affect indirectly.

Testing the regression model used panel data procedures. This procedure includes treating with three different concepts, namely Partial Least Square (PLS) which treats data the same and only sequences as usual regression data processing. The second method that might be the basis of analysis is Fixed Effect Model (FEM). In the FEM assumption the relationship between explanatory variables and dependent variables is not random. The non-random pattern in this study is thought to be the impact of industry categories in the manufacturing sector so that dummy variables are created in the FEM model. The third method that is likely to be the basis of testing hypotheses is Random Effect Model (BRAKE). In this assumption the relationship is assumed to be random and there are no specific influences that are individual and sectoral.

Based on Chow Test, the use of PLS in the analysis of this model is less precise so that the alternatives are only two, FEM and REM. The next Hausman test procedure concludes that REM is the most suitable model to explain and test the hypothesis proposed in this study. From the model it can be explained that the ROE and NDTs variables have a significant influence where ROE can reduce DER by -0.05917 while NDTs is 12.36516. The other three variables do not have a significant effect on DER. Simultaneously this model is quite good because it has a high enough coefficient of determination which reaches 97.6% with a significant value of the research model which is quite good at 0.000 much smaller than the significance of the model at 0.05.

Partial analysis of each variable shows a relatively different influence. On variables Return on Equity (ROE) in this study showed a significant effect with a negative relationship pattern. This explains that in certain circumstances the company will prioritize using internal funding sources so that increased profitability will reduce the use of debt. Based on this understanding, the results obtained in this study are in accordance with the theory. In addition to being in accordance with the theory, this study also confirms the results in accordance with the study of Panda (2012) and Seikh and Wang (2011). This result shows the pattern of actions of companies in Indonesia who will use internal funding more when there is retained earnings derived from business profitability.

The next variable that has a statistically significant effect is Non Debt Tax Shield (NDTS) which is defined as the total depreciation expense against total assets. Based on theory trade off, the background of the conceptual framework is said that management will be willing to lose the benefits of saving tax from debt when the company has enjoyed tax savings from high depreciation expenses. So, based on the theory of companies that have high NDTS values, they will have a debt structure the small one. Even though this variable has a significant influence on the model, the sign of the relationship is different from the hypothesis that was built. In this study the relationship formed is positive. The possibility of this is caused by the pattern of action of managers who still try to increase the number of assets by borrowing. In a strategic perspective this includes active and speculative strategies. In the Sheikh and Wang (2011) study this variable has no effect. This shows that indeed the pattern of the relationship between NDTS and DER does not have a strong pattern. The other three variables are Current Ratio (CR), tangibility, and Growth Opportunity (GO) that do not have a significant effect. CR should have a positive relationship where the more ability to repay debt, the more courageous the company will become. The results obtained show that there is no strong evidence that the theory applies in the Indonesian manufacturing sector. These results are not in line with Nugroho's (2006) research which showed a significant effect.

Tangibility in this study also does not have a significant effect even though in theory the relationship should be positive in accordance with the trade-off theory theory. Tanggibility which is a measure of the ratio of fixed assets to total assets should be used as collateral for loans. The last variable is Growth Opportunity (GO) also does not have a significant effect. Even though it's based trade off theory must have a positive influence. Growth opportunities should be a guarantee that is not real for the ability to repay loans.

These results also differ from those of Sheikh and Wang (2011) and Panda (2012) who obtained influential results. It turns out that this does not occur in the data obtained, this is almost in accordance with the results obtained in the CR and variable Tanggibility. CR, tangibility, and GO should be used as a loan condition, it turns out the three have no significant influence. These results are also relatively different from the research of Sheikh and Wang (2011). The results obtained show the complexity of managing capital structure policies where there is no pattern of relationships that can consistently explain capital structure policies. This makes the next researcher need to explore various other variables that determine capital structure policies. Other variables that may be influential are psychological problems of managers who clearly have differences between individuals who dare to take risks and individuals who do not dare to take risks.

Conclusion

Based on the results of the research and discussion that have been conducted in the previous chapter, we can conclude a number of things as follows:

1. The research model is formed from independent variables Return on Equity (ROE), Current Ratio (CR), Non Debt Tax Shield (NDTS), tangibility and Growth Opportunity (GO) simultaneously affects Debt to Equity Ratio (DER) in the manufacturing sector of companies listed on the Indonesia Stock Exchange (IDX) for the period 2008 to 2012 using the assumption of Random Effect Model)
2. Partially the variables that have a significant effect and are in accordance with the theory are only variables ROE where the variable has a negative effect. NDTS

variables have a significant effect but the direction of the relationship is not in accordance with the theory developed in this study. The other three variables are CR, Tangibility, and Growth Opportunity which can actually be used as collateral to obtain a loan does not have a significant effect on DER.

Based on the results of the research and discussion, for future research suggestions are:

1. The next researcher can examine the same thing but by considering aspects of manager's behavior in determining the company's funding policy.
2. The next researcher can also use a more diverse industrial sector and a longer period of time to get a better picture of the research area in question.

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