THE STUDY OF DYNAMIC TRADE-OFF CAPITAL STRUCTURE EXISTENCE TO THE NONFINANCIAL BUSINESS ENTITIES LISTED ON INDONESIA STOCK EXCHANGE DURING PERIOD 2007-2011

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A. INTRODUCTION

1. Background

Financing is one of the strategic financial management functions in addition to investment function, since both functions have a direct influence to maximize business entity's value. Financing decision is related to the optimum capital mix selection and decision which is the combination of various capitals that contain the lower capital costs. Meanwhile, the capital cost functions as a discount rate of cash flow on investment projects undertaken by the business entity. The lower capital costs – with the specific project cash flow, the higher business entity's value (vice versa). Thus, the capital structure has an important role in determining the value of business entity, so that the managers should be able to take the best decision to optimize the capital structure, because it can increase and maximize the value of business entity. Modigliani and Miller (1963) in Megginson (1997: 323) implicitly stated that the capital structure can increase the value of business entity, but in the other hand it can also increase the risk of bankruptcy, which means decreasing the value of business entity itself.

According to the importance of capital structure in determining the value of business entity, Muradoglu and Sivaprasad (2006) examined business entities listed on London Stock Exchange (LSE) during period 1980-2004 about the leverage effect to the firm value. As many as 792 business entities were taken as a sample then classified into the different risk classes. The result showed that leverage significantly influence firm value, eventhough in a certain risk class both variables showed a negative relationship and the opposite one in other risk classes.

Ghosh (2003) studied the effect of dividend policy, leverage, and profitability to the firm value on 500 business entities listed on S&P during period 1989-2002. The result showed that dividend and probability had a positive-significant influence to the firm value, but leverage had a negative-significant influence to the firm value. While Gemmill (2001) studied the effect of capital structure to the firm value on UK split-capital close-end funds business entities in 2000. The population number that appropriate for those business entities characteristic is 76. The result showed that capital structure can increase firm value.

According to this capital structure, Akhtar (2002) argued that in the presence of capital structure was really able to maximize the firm value, it was important to be really understand about the factors that could affect capital structure, so that we knew how to maximize the firm value. On the other hand, the variables that can affect capital structure become a growing study since Miller and Modigliani literature has been published. Various theories emerge with each point of view in explaining how business entities determining their capital structure. Among those various theories, trade-off theory and pecking order theory are the most dominating (Bouallegui, 2006). Empirical studies conducted by researchers in the various regions/countries currently have been giving many contributions to both theories, either in the form of confirmation or contradiction.

Rajan and Zingales (1995) examined the determinant of capital structure on go public business entities in G-7 countries (US, Japan, Germany, France, Italy, UK, and

Canada) during period 1987-1991. The result showed that size, tangibility, growth, and profitability significantly influence the capital structure with variety correlation for each country. Abor and Biekpe (2005) examined the critical determinant of capital structure to all listed business entities on Ghanaian Stock Exchange during period 1998-2003 and they found that growth and size had a positive influence to the capital structure, while tangibility, profitability, and non-debt tax shield had significantly a negative influence to it. Drobetz and Fix (2003) did the same examination to the 124 Switzerland business entities listed on Swiss Performance Index. They found that tangibility and size significantly had a positive influence to the capital structure, but growth, profitability, and volatility significantly had a negative influence to it. While non-debt tax shiled and uniqueness had insignificant influence to the capital structure. Darminto (2008) tested trade-off theory and pecking order theory to the group of industrial business entities (based on OSIRIS category) listed on Indonesia Stock Exchange during period 2002-2006. The research using 37 business entities. The result showed that tangibility and size significantly had a positive influence to the capital structure, while non-debt tax shield significantly had a negative influence to it. In this research, trade-off theory was more able to explain the capital structure behavior than pecking order theory. This research also measured speed of adjustment toward target debt ratio (optimum capital structure) of a business entity. Optimum capital structure was an idea coming from trade-off theory perspective.

Bouallegui (2006) also did the research about target debt ratio to the 99 Germany hi-tech industries during period 1998-2002. As a result, size, tangibility, and non-debt tax shield significantly influence the capital structure with a positive correlation, while profitability and operating risk significantly had a negative influence to it. Additionally, this research also found that the Germany hi-tech industries made an adjustment to the target debt ratio very quickly.

Gaud et.al. (2003) investigated the relationship between a number of explanatory variables and the capital structure dynamics of nonfinancially business entities listed on Swiss Stock Exchange (SWX) during period 1991-2000. Obtained a number of 106 business entities as a sample. The results showed that the business entities listed on the SWX had a slow speed of adjustment to the target debt ratio. The relationship among the variables here significantly had a positive and negative influence to the capital structure. Size, tangibility, and risk significantly had a positive influence to the capital structure, while growth and profitability significantly had a negative influence to it.

Other researches related to the speed of adjustment to the target debt ratio had been done by Clark et al. (2007), Flannery and Rangan (2004), also Zhao and Susmel (2008). Graham and Harvey (1999) conducted a study using cost of capital, capital budgeting, and capital structure as the primary data, also did the survey about capital structure to the 392 CFO of US business entities. The result proved that 81% of those business entities considered the target debt ratio either specifically or by a specific range in making a capital structure decision.

The adjustment to the predicted leverage explained that the business entity had a target debt ratio. It verified the existence of trade-off theory by looking to the behavior of capital structure dynamically. As described in Gaud et al. (2003), Clark et al. (2007), Flannery and Rangan (2004), Zhao and Susmel (2008) researches, there were trade-off practices where the business entities doing the capital structure adjustment to the target debt ratio continuously, called dynamic trade-off capital structure.

According to the results of those described researches, there were 6 variables that significantly influenced the capital structure of business entity which were size, profitability, tangibility, non-debt tax shield, operating risk, and growth. So that this

research will use those variables and also capital structure variable measured by the debt. The research will be conducted to the nonfinancial business entities listed on Indonesia Stock Exchange during period 2007-2011. Financial sectors will be eliminated since they had special regulations that greatly affect their funding process (Gaud et al., 2003). Rajan and Zingales (1995) stated that financial sectors had a debt level that was not in proportion to the nonfinancial sectors. The existence of a wide variety of regulations such as minimum capital requirements could affect directly to the capital structure in financial sectors, so that they became irrelevant to be used coincide with nonfinancial sectors in research related to the capital structure.

This research is the development of previous research from Atanzil and Ernawati (2012). In the previous research, the number of populations and samples are so few and not representing the whole populations. They were limited to the business entities listed on OSIRIS. Meanwhile, this research using the whole nonfinancial business entities listed on Indonesia Stock Exchange as a population. This research was also done updating on the period used, previously used from 2002 to 2009, while this research use the 2007-2011 period. In addition, the method of data processing as well as linear regression method was developed from the use of multiple programs help e-View 4 for Windows be pooled least square which is supported by the e-View program 7.0 for Windows. With some of this development, it is hoped the research results could be better than the results obtained in previous studies.

2. Research Questions

Based on the background of the problem, then research problems are formulated as follows:

a. Whether there is influence of size, profitability, tangibility, non-debt tax shields, operating risk, and growth of capital structure in the non-financial business entities registered in the period 2007-2011 Indonesia Stock Exchange?

b. Among those factors, the dominant factor which affects the dynamic trade-offs capital structure (speed of adjustment) in the non-financial business entities registered in the period 2007-2011 Indonesia Stock Exchange?

c. How the image of the existence of dynamic capital structure trade-off on non-financial business entities registered in the period 2007-2011 Indonesia Stock Exchange?

3. Research Purpose and Benefits

From the formulation of the problem, the goal to achieve is to know the influence of size, profitability, tangibility, non-debt tax shields, operating risk, and growth of capital structure in the non-financial business entities registered in Indonesia Stock Exchange period 2007-2011. In addition, this research also aims to determine the existence of dynamic picture trade-offs at the capital structure of non-financial business entities registered in Indonesia Stock Exchange period 2007-2011.

The existence of dynamic trade-off capital structure means that the business entity doing the adjustment of capital structure towards the optimum capital structure is sustainable, either partially or in full. The adjustment is carried out continuously due to the optimum level of capital structure also is always changing due to changes in various conditions.

The research conducted is expected to give the following benefits: first, as inputs for the management in taking decisions relating to the optimal capital structure on a non-financial business entities with attention to the variables used in the model for this research. Second, to provide information to investors as considerations related to the

investment of non-financial business entities registered in Indonesia Stock Exchange. Third, open up opportunities for other researchers who want to do the development on the research of capital structure.

B. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

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1. Capital Structure

The capital structure is a combination of debt and equity in the long term financial structure a business entity (Megginson, 1997: 293). Gitman (2006: 538) defines the structure of the debt mix capital as long-term and equity is maintained by the business entity. Capital structure (debt + long-term equity stockholder's) is part of the financial structure. The financial structure of the business entity are reflected on the right side of the balance sheet, consisting of current liabilities, long-term debt and equity stockholder's. Conditions of the debt and equity mix of efficient capital structure is referred to as optimal. By optimizing capital structure, cost of capital is becoming increasingly low so the value of business entity will increase.

2. The Theory of Capital Structure

There are three main theories in explaining the capital structure of the business entity, that is the trade-off theory, pecking order theory, and the signaling model of financial structure (Megginson, 1997: 315). In addition there are also other theories which are quite influential in explaining the decision of capital structure considerations the agency theory. These theories give explanations regarding the determination of the behavior of different capital structures of the business entity.

Trade-off Theory. The trade-off theory of capital structure assumed that Agency's effort is the result of the process of consideration between benefit and cost obtained from increased use of debt (Megginson, 1997: 315). Debt as a source of external funding is beneficial in reducing the tax (tax) (Gitman, 2006: 555). This reduction occurred because the interest paid to bondholders businesses will reduce earnings before interest and § taxes (EBIT), so the value of earnings (EBT) § taxes before will become increasingly low. Thus, the more the proportion of debt in the capital structure will be more and more also a tax benefit. On the other hand, the increase in debt can also increase financial distress. There are two types of cost in financial distress that is direct and indirect costs for bankruptcy bankruptcy costs (Ross et al., 2003: 553). Direct costs are the costs for bankruptcy issued a business entity is directly related to its bankruptcy business entity, whereas indirect costs are bankruptcy costs incurred a business entity in order to avoid bankruptcy.

The higher use of debt, then the higher the risk of the inability of the business entity in meeting interest payments. This means the probability of default of a business entity (financial distress) is also higher. In addition, there is an increased risk of causing the debtholders are demanding increasingly high return. It will have an impact on the rising cost of debt, so that in the end will lower the value of a business entity. The trade-off theory predicts that business entity shall maintain an optimal capital structure where

marginal benefit equals the marginal costs of the use of debt (Cotei and Farhat, 2009). The implication of this model is the existence of the target debt ratio where the business entity always make adjustments towards the target.

Pecking Order Theory. This theory has two key assumptions, namely the existence of asymmetric information and managers acting on the interests of existing shareholders (Megginson, 1997: 315). Managers are more aware of the value and risks of business entities which are actually rather than investors. To avoid problems of underinvestment, will fund the new project manager with the source of funds that have not experienced in the market as undervalued the internal funds or debt riskless (Cotei and Farhat, 2009). This resulted in the existence of a choice between internal and external funding sources in the pecking order theory.

Pecking order theory States that a business entity will give priority to financing with debt rather than equity if internal resources are not able to meet the funding needs of business entities (Bouallegui, 2006). Business entity has a preference in funding that started from internal financing (retained earnings, accumulated depreciation), then external funding with the lowest risk, up to the highest risk.

In the pecking order theory, capital structure is not a result of the process of consideration between the benefit and the cost of the use of debt, however, is the result of the cumulative efforts of the Manager to reduce the information asymmetry (Cotei and Farhat, 2009). This means a pecking order theory does not explain the existence of the target debt ratio in a business entity.

The Signaling Model of Financial Structure. This theory is also using the assumption of asymmetric information. The explanation put forward is that managers will give certain signals to investors to demonstrate that they manage business entities is the most competent (Megginson, 1997: 315). The signal would cause high costs and is not easily done by competitors. One form of signals is done by applying a high level of debt in the capital structure. Only a strong business entity that is able to face the risk of financial distress due to application of high capital structure.

The Agency Theory. The agency theory argues that supervision can be exercised by a shareholder by inviting the business entity that is external creditors (Mahadwartha, 2004). The existence of the debt management has remained on the debt obligation (fixed payment) so that it can reduce agency conflicts caused by excessive investment by management actions.

Debt policy is one alternative to move the cost of supervision by the owner to the lender, the use of debt relief also encourage managers to act more disciplined so as not threatened bankruptcy (Megginson, 1997: 335). The debt led to a business entity must pay interest periodically and principal payment obligations, so that will reduce the cash flow control managers of business entities in the activities which are not optimal (Jensen and Meckling, 1976).

3. Debt

Debt (long-term debt) are all long-term loans made to business entities, including bonds (Gitman, 2006: 326). Debt is a source of external finance than equity. In its business activities, business entity can use debt as an alternative to increasing the ability of funding when the internal funds as profits held insufficient needs. Because of that debt also known by the term leverage.

The use of debt can reduce the amount of taxes to be paid by the business entity because of the interest payments of the debt resulted in earnings before § taxes reduced. In addition the use of debt is also able to improve the firm value because the value weighted average cost of capital (WACC) is becoming increasingly lower.

Debt can be measured by the market value and book value. In this study, the debt ratio of book value to be used as a tool for measuring the variable debt (Bouallegui, 2006). Book value debt ratio was chosen to match the statement MacKay & Philips (2005) in Chen & Strange (2005), that use of the debt ratio with a market value of debt as well as book value of debt would give the same result. Managers often use the book value in taking decisions, and data about the corporate debt is very limited, so that the market value of debt is not used. Debt ratio is measured by the following formula.

$$Debt\ ratio = \frac{(long - term\ debt)}{(long - term\ debt) + (total\ equity)}$$

4. Growth and the Effects on Debt

Growth is the growth of a business entity to maintain his position through the sale (Mazur, 2007). Akhtar (2002) stated that the growth is measured by the growth of total assets. Sales grew, the capacity of a business entity will also be enhanced through additional investments in assets, so that the asset growth reflects the growth of a business entity. A measure of growth is the percentage change in total assets.

$$Growth = \frac{total\ assets\ (t) - total\ assets\ (t-1)}{total\ assets\ (t-1)}$$

Gaud et al. (2003), Rajan and Zingales (1995), as well as Titman and Wessels (1988), Chung (1993), Barclay et al. (1995) in Bouallegui (2006) suggests that growth has a negative relationship with respect to debt. With high debt, cash flow Manager controls against business entities will be more weak because a business entity must pay interest periodically and principal payment obligations. This business entity is likely to unleash a variety of investment opportunities with a positive NPV (growth options) due to the influence of conservative debtholder. Thus, a business entity that has a high chance of growth will tend to reduce the use of debt to make it easier to realize growth options that exist. So, the higher the growth of a business entity, then the lower the debt from the business entities.
H1: There is a negative effect of growth on debt.

5. Size and the Effects on Debt

The definition of size according to Bouallegui (2006) is a great small business entities which can be measured using the total assets of the business entity. A healthy business activity is expected to expand the size of the business entity. Size can be attributed to the ease in obtaining funding through debt. The size of the size of the total asset is logarithmic.

$$Size = Log.Total\ asset$$

Larger businesses would be easier to do with debt funding, because it has a greater collateral. Fix & Drobetz (2003) stated that the size has a positive relationship with respect to debt. The larger the size of a business entity, then the lower the probability of bankruptcy business entity (Titman and Wessels, 1988, in Bouallegui, 2006; Rajan and Zingales, 1995). In the trade-off theory, the business entity with the risk of bankruptcy is still low will increase the debt until it reaches an optimal point. Thus, the larger size can be attributed to the use of debt that is increasingly high. Ferri and Jones (1979) in Bouallegui (2006) adds that business entities with size tends to be great, then the debt used for these businesses is also getting higher.

H2: Allegedly there is a positive influence of size on debt.

6. Profitability and the Effects on Debt

Profitability is the ability of business entities in making profits after a reduction of revenue by business entity loads (Gitman, 2006: 629). Profitability is closely related to funding decisions. Business entities with a high profitability has good ability in providing internal funds. Profitability ratios are also used to see how effective the effort in generating profit from the use of its resources. It became one of the considerations of the lender, so that business entity with a high profitability will be easier to get the debt rather than corporately with poor profitability.

Profitability is measured by the ratio of operating profit (EBIT) to total assets of business entities (Deesomsak et al., 2004; Flannery and Rangan, 2004). The use of operating profit more than net profit because of the chosen operating profit occurs before the business entity making the payment interest so as to better reflect the effectiveness of a business entity wholly owned assets to manage. While the net profit only reflect profitability business entity from the standpoint of shareholders because of the interest element has been omitted.

$$Profitability = \frac{EBIT}{total\ assets}$$

Bouallegui (2006), Gaud et al. (2003), Abor & Biekpe (2005), as well as Fix & Drobetz (2003) state that profitability has a negative relationship with debt. Pecking order theory, appropriate business entities with a high profitability has good ability in meeting the financing needs through internal resources so that the higher the profitability then external funding needs (in this case the debt) will be getting lower. So, the higher the profitability of a business entity, then the lower the debt from the business entities.
H3: There is a negative influence between profitability and debt.

7. Tangibility and the Effects on Debt

Tangibility is a keberwujudan belonging to the assets of the business entity. Intangible assets associated with informational asymmetries are lower and generally have a higher value compared to the intangible assets on the conditions of bankruptcy (Gaud et al., 2003).

$$Tangibility = \frac{tangible\ fixed\ assets}{total\ assets}$$

Rajan and Zingales (1995), as well as Fama and French (2000) in Bouallegui (2006) stated that a positive relationship tangibility with debt. Tangible assets can be used as collateral in obtaining a cheaper debt costs. The higher the tangible assets a business entity, then the greater the guarantees can be given to the lenders. The low cost of debt is an advantage for a business entity so that it can be utilized by using a larger debt. So, the higher the tangibility of a business entity, then the higher the debt from the business entities.
H4: There is a positive influence between tangibility and debt.

8. Non-Debt Tax Shield and the Effects on Debt

According to Deesomsak et al. (2004), the definition of non-debt tax shields is a component of investment to reduce taxes without using debt. In the trade-off theory, the primary motivation in their use of debt is to reduce the tax burden. Thus the non-debt tax

shields is a component that is in line with that goal. Size for non-debt tax shield is the ratio to the total assets depreciation (Mazur, 2007).

$$Nondebt\ tax\ shield = \frac{depreciation}{total\ assets}$$

Campbell & Jerzemowska (2001; 71) in Fix & Drobetz (2003), as well as Shenoy and Koch (1996) in Bouallegui (2006) States that there is a negative relationship between non-debt tax shields with debt. Business entities with non-debt tax shields is high there is other than components indicated that the debt can reduce taxes without having to use debt. So the business entity will use the component in addition to the debt to reduce the tax burden, because the use of debt increases the financial burden on businesses. So, the higher the non-debt tax shields a business entity, then the lower the debt from the business entities.

H5: There is a negative effects between non-debt tax shields and debt.

9. The Operating Risk and the Effects on Debt

Operating risk is the level of income volatility of business business entity functionality (Abor and Biekpe, 2005). The higher the volatility of earnings stream is a business entity, then the greater the chance of a bankruptcy of the business entity. With regard to the structure of capital, business entities with a high operating risk tend to be rated poorly by creditors so that it will have difficulty in getting funding for debt. Based on studies of Bouallegui (2006), then measure for operating risk is the square of the difference between the profitability of the business entity with an average profitability of all business entities (cross section of mean).

$$Operating\ risk = (cross\ section\ mean\ of\ profitability - profitability)^2$$

Kremp et al. (1999) in Bouallegui (2006) as well as Fix & Drobetz (2003) stated that the operating risk has a negative relationship with debt. The higher the operating risk of a business entity, then the greater the chance of a bankruptcy of the business entity. High Debt is also associated with a high chance of bankruptcy of a business entity. Thus, a business entity with a high operating risk tend to use debt are low in order to reduce the chance of bankruptcy.

H6: There is a negative influence of operating risks on debt.

10. The Process of Adjustment to the Optimum Capital Structure

In the trade-off theory, stated that a business entity doing the process of trade-offs between cost and benefit in using debt so that in the end will find an optimal level of debt. But any change many conditions causing debt levels considered optimal yg also fickle. When such changes occur, the business entity shall perform repeated considerations regarding the cost-benefit of using debt and find the optimal point of the new debt. The process of consideration and adjustments are made on an ongoing basis it is called dynamic trade-off capital structure. The process of adjustment is carried out partially or in full.

The existence of dynamic capital struture trade-off can be known by looking at whether the behavior of the actual level of debt movement leads to optimal target debt or not. Thus, this study sought to find out how the existence of a dynamic picture of the trade-off of capital structure in this manner.

Any adjustment to the direction of the predicted leverage explained that the business entity has a target debt ratio. It proves the existence of the trade-off theory by looking at the behavior of capital structure dynamically. As has been described in the

research of Gaud et al. (2003), Clark et al. (2007), Flannery and Rangan (2004), as well as Zhao and Susmel (2008), there is a trade-off in which practice business entities do the adjustment of capital structure towards the target debt ratio on an ongoing basis, called dynamic trade-off capital structure.

In most research, business entity customizations to the financial targets are considered to be instantly and free of charge. In a perfect market, adjustments to long-term targets will be instantaneous (instantaneous) and completed (complete). However, market imperfections such as transaction costs and adjustments as well as some of the obstacles preventing businesses from changing the rate or ratio of their debt in a way they want (Marsh, 1982; Jalilvand and Harris, 1984). Because this market imperfections business entity financial decision should be seen as a two-stage process. The first phase is the establishment of targets and the second stage is the adjustments to debt levels set out in the first stage. Therefore, behavioral finance business entity is best characterized by a partial adjustment model (Spies, 1974; Taggart, Jr., 1977; Jalilvand and Harris, 1984; Ozkan, 2001). These statements confirm the opinion that the adjustment partially selected by business entities more than adjustments in full.

C. RESEARCH METHODS

Based on the Literature Review that has been put forward, there is a hypothesis that generated suspect the influence of size, profitability, tangibility, non-debt tax shields, operating risk, and growth of capital structure in the non-financial business entities registered in BEI period 2002-2009. In addition, this research also aims to determine the existence of dynamic picture trade-offs at the capital structure of non-financial business entities registered in BEI period 2002-2009. For that, it takes research methods.

1. Research Type

This research includes the type of applied research i.e. research to develop research that has been done before. This research is also a quantitative approach uses research namely research involving quantitative data in proof theory. This is a joint research between causal and descriptive, i.e. research conducted to perform testing of the working hypothesis that have been made before, and at once to find out about a picture of the phenomenon. This is done for testing hypothesis concerning the influence of size, profitability, tangibility, non-debt tax shields, operating risk, and growth of capital structure as well as to know the existence of a dynamic picture of the trade-off of capital structure.

2. Variables and the Operational Definitions

Based on the method of analysis and research hypothesis, so the variables in this study can be distinguished into one dependent variable and independent variable six. Bound variable (the dependent variable) in the study of the capital structure. While the free variable (the independent variable) in this study i.e., size, growth, profitability, tangibility, non-debt tax shields, and operating risk.

Table 1: Definitions of variables, operations, and Measurement

Variabel	Definisi Operasional	Pengukuran
Debt	borrowings from external parties	*Debt ratio = longterm debt / (longterm debt + total equity)*
Growth	percentage growth in total assets	*Growth = (total assets $_t$ – total assets $_{t-1}$) / total assets $_{t-1}$*
Size	company size based on total assets	*Size = Log.Total assets*

Profitability	the company's ability to generate earnings	Profitability = EBIT / total assets
Tangibility	fixed assets that have a physical manifestation as a form of corporate investment	Tangibility = tangible fixed assets / total assets
Non-Debt Tax Shields	component of the company investment for tax reduce without the use of debt	Non-debt tax shields = depreciation / total assets
Operating Risk	volatility of revenue from the company's operation	operating risk = (cross section mean of profitability – profitability)^2

3. Populations and Samples

The Target population in this research is all the non-financial business entities that are listed in the Indonesia stock exchange with an observation period of 2007-2011. The characteristics of the population that are used are: (1) Publish a financial report each year in order during the period 2007-2009 and have been audited; (2) has a long term debt; (3) not being in the process of delisting is tersuspen. Minimum samples to be taken is 30% (could be more) of the target population (the population of which meet the characteristics).

4. Measurement Levels and Data Collection Procedures

Measurement of the levels used in this study is the ratio levels. The ratio is used because it is the level of the unit of measure representing the true value at any given result or observation which means having a zero point as the origin. Data collection procedures are as follows: (1) set the required data in accordance with the variables measured in this study; (2) looking for a secondary data from the data provider sites (OSIRIS, IDX, Yahoo Finance); (3) to process the raw data obtained in accordance with the needs analysis; (4) makes tabulating data.

5. Data Processing Methods

This study uses regression model type of pooled least square (PLS) regression models, because multiple linear has some disadvantages in comparison with panel data processing model PLS. Stages in this analysis techniques are as follows: (1) determine the value of the variables for each of the selected business entity during the period of research; (2) Identify the symptoms of a classic assumption with the goal of keeping the regression models can produce an unbiased penduga (invalid) made with normality test, test, test for multicollinearity, autikorelasi and test heteroskedastisitas. (3) do the regression analysis data after determining the value of the data used in the study with the equation of linear regression analysis on the model of double. Multiple Linear regression was used to analyze the variables associated with the study of the dependent variable one dependency (y) against some of the other free variables (x). (4) measures the ability of the free variables of variables describing the bound. The indicator used is the coefficient of determination (R2). The magnitude of the R2 is a tool for measuring how well a regression model is able to provide an explanation. The determination coefficient, describes how large a proportion of the dependent variable is a variant of which can be explained by variations in the proportions of the independent variable. The value of the coefficient of determination has an interval.

That value has meaning, as follows: when R2 = 1, meaning the proportion of variation of the variables is not free (of capital structure) which can be explained by the proportion of the variation of the free variable (tangibility, profitability, growth, size,

non-debt tax shield, the operating risks with debt) by 100% and when R2 = 0 or close to 0, meaning that the proportion of variation of the variables is not free (of capital structure) are not able is explained by the variation of the proportion of free variables (tangibility, profitability, growth, size, non-debt tax shield, the operating risks with debt).

a. Normality

This test aims to determine the distribution of research data and can be determined by using the Kolmogorov-Smirnov test. This study uses 5%.
Hypothesis Test:
H0: The normal distribution
H1: The distribution is not normal
Criteria for decision-making that is if the Sig> 0.05, the data were normally distributed, and if the value of Sig <0.05, data not normally distributed.

b. Multicollinearity

Multicolinearity is a condition when the independent variables are correlated with each other. Detection of multicollinearity can be done using the Variance Inflation Factor (VIF). If VIF <5 said to be free of multicollinearity.

c. Autocorrelation

Autocorrelation is a condition that occurs when an error by the independent variables are correlated. Autocorrelation can be determined by the value of Durbin Watson.

d. Heteroskedastisitas

Heteroscedasticity test the differences in the residual variance of a period of observation to observation period to another. How to predict heteroscedasticity with Park or Glesjer test.
H0: Homoskedatisitas
H1: heteroscedasticity
The statistics count compared with chi-square table. Criteria for rejection of H0 when calculating statistics> statistics table.

Equations used in this research is the development of the static model. With the development, the dynamic picture of the existence of a trade-off capital structure can be determined in addition to the relationship between free and bound variables. Equations used in this study refers Bouallegui (2006) as follows:

$$Y_{it} = \alpha_i + \Psi Y_{it-1} + \beta x_{it} + e_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Description:
Yit: Debt entity i in period t
α_i: i constant coefficient
Ψ: regression coefficient, or (1-λ)
λ: Adjustment parameters
Yit-1: Debt entity i in period t-1
β: regression coefficient
XIT: Variable research enterprise i in period t
e it: error (standard error)

Value of λ is a parameter that is used to reveal the existence of a dynamic trade-off capital structure. If $\lambda = 1$, means a business entity doing full adjustment, so that enterprises in period t arrives at the optimal debt. If $\lambda <1$, then the process of adjustment in period t-1 into period t is less than the level required to achieve the

optimal debt (under adjustment). It is explained that entities perform partial adjustment. If $\lambda > 1$, then the process of adjustment in period t-1 into period t exceed the level required to achieve the optimal debt (over adjustment).

By using equation (1), it must be tested to determine whether the model is in a state fixed effect or random effect. This is because the estimator to be used in the data processing to be distinguished for each condition. Based on the research Anderson and Hsiao (1982) in Bouallegui (2006), the test can be ignored by using the transformation model. The transformation is done by using first differences for each variable, so that it becomes the following equation:

$$Y_{it} - Y_{it-1} = \alpha_i + \Psi(Y_{it-1} - Y_{it-2}) + \beta(X_{it} - X_{it-1}) + e_{it} - e_{it-1} \quad \ldots\ldots\ldots\ldots..(2)$$

According to equation (2), then the whole equation form used in this study are as follows:

$FDDEBT = \alpha_i + \Psi FDLAGDEBT + \beta_1 FDPROF + \beta_2 FDTANG + \beta_3 FDSIZE + \beta_4 FDGROW + \beta_5 FDNDTS + \beta_6 FDRISK + e$

Description:
FDDEBT: Long-term debt, the enterprise i in period t minus the long-term debt, the enterprise i in period t-1
α_i: constant coefficient
Ψ: 1 - parameter adjustment
FDDEBTZ: Long-term debt, the enterprise i in period t-1 reduced long-term debt, the enterprise i in period t-2
FDPROF: Profitability entity i in period t minus profitability entity i in period t-1
FDTANG: tangibility entity i in period t net of tangibility entity i in period t-1
FDSIZE: Size entities i in period t minus size enterprise i in period t-1
FDGROW: Growth entity i in period t net of agency growth enterprise i in period t-1
FDNDTS: Non-debt tax shields entity i in period t minus non-debt tax shields entity i in period t-1
FDRISK: Operating risks enterprise i in period t minus operating risks enterprise i in period t-1
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$: Regression coefficients
e: Standard error of period t minus standard error of period t-1

The processing of the data used in this study using the help of Microsoft Excel 2007 and Eviews 7.0 for Windows.

6. Hypothesis Testing

One of the purposes of the regression analysis that has been done is to make predictions based on the value of the dependent variable regression equations obtained. Predictions can be made after acquired evidence that is generated by the regression equation is an equation that can describe the pattern of relationship between the dependent variable and the independent variables are pretty good. There are two kinds of tests were performed to test the equation and testing of regression coefficients.

a. F-Test

F-test is used to determine whether the independent variables jointly have a significant effect on the dependent variable. F test using a significance level of 5%.

Hypothesis:

H0: $\beta1$, $\beta2$, $\beta3$, $\beta4$, $\beta5$, $\beta6$ = 0, meaning tangibility, profitability, growth, size, non-debt tax shield, operating risks do not affect the structure of capital significantly.

H1: $\beta1$, $\beta2$, $\beta3$, $\beta4$, $\beta5$, $\beta6 \neq 0$, meaning tangibility, profitability, growth, size, non-debt tax shield, operating risks affecting the capital structure significantly.

Criteria F test using one-tailed test, if Sig <0.05 then H0 is rejected and if Sig> 0.05 then H0 is accepted. Testing was conducted to test the overall equation, if the test reject H0, it can be concluded that the equation is quite meaningful in describing the relationship between the two types of variables. If significant equation, the equation can be used to predict the variation in the dependent variable caused by variations in the independent variables.

b. T-Test

Partial regression coefficient testing performed using the t test with significance level of 5% and 10%.

Hypothesis 1:

H0: $\beta1 \leq 0$, profitability did not significantly affect debt

H1: $\beta1> 0$, significant negative profitability on debt

Hypothesis 2:

H0: $\beta2 \leq 0$, tangibility does not significantly affect debt

H1: $\beta2> 0$, tangibility significant positive effect on debt

Hypothesis 3:

H0: $\beta3 \leq 0$, size did not significantly affect debt

H1: $\beta3> 0$, size significant positive effect on debt

Hypothesis 4:

H0: $\beta4 \leq 0$, growth did not significantly affect debt

H1: $\beta4> 0$, significant negative growth of the debt

Hypothesis 5:

H0: $\beta5 \leq 0$, non-debt tax shields do not significantly affect debt

H1: $\beta5> 0$, non-debt tax shields significant negative effect on debt

Hypothesis 6:

H0: $\beta6 \leq 0$, operating risks not significantly affect debt

H1: $\beta6> 0$, operating risks significant negative effect on debt

D. RESULTS AND DISCUSSIONS

Based on the research methods that have been designed previously, further research sampling, data collection and processing, as well as discussion of the research results have been obtained.

1. The Data View

The number of listed companies on the Stock Exchange consistently during the year 2007-2011 as many as 283 companies. According to the characteristics of the population has been established, there are 13 companies that have incurred due to not having complete financial statements during the study period, so that has complete financial statements totaling 270 companies. Of the 270 companies there are 15 companies with negative equity, so that the final sample used was 255 companies or as many as 1275 observations.

After the sample set, The next carried out the collection and tabulation of data. The collected data is calculated by the formula appropriate research variables, and then

processed using descriptive statistics. The results of treatment are presented in Table 2.

Table 2. Descriptive Data

Variable	Min.	Max.	Mean	SD
DEBT	0,000	9,689	0,249	0,448
GROWTH	-0,899	33,330	0,255	1,494
SIZE	8,754	14,186	12,033	0,768
PROFITABILITY	-3,435	2,684	0,082	0,187
TANGIBILITY	0,000	0,943	0,338	0,231
NDTS	0,000	0,532	0,036	0,038
RISK	0,000	12,453	0,035	0,426

From the descriptive data shows that long-term debt on average the company achieved 25% growth rate over the last 5 years reached 25.5%, while the level of profitability on assets of 8%. It is significant that during the study period, the average company using long-term debt is not too much compared to the share issue, in order to take advantage of significant growth opportunities. Considering the issue of shares has a cost of more expensive, it can be seen the average profitability is relatively low at less than 10%. Tangibility has an average of 33.8%, which means that companies invest their funds almost 35% in fixed assets. Tangible fixed assets in the company's long term average shows the results of 35%, consistent with the use of long-term debt is only 25%. Non-debt tax shield from depreciation on average very small ie below 4%. This means that the tax savings from the elements of depreciation / amortization is not too big for the average depreciation of the company less than 4%. Operating risk as measured by volatility shows the average income of the relatively low risks of under 4%.

2. Results and Discussion

After looking at the descriptive statistics, then the next dilakuan data processing and hypothesis testing. The main model has been tested classical assumptions, and passes except for heteroscedasticity. Thus be improved by first differences. From the processing of the data obtained the following equation.

FDDEBT = -0,016723 – 0,003807FDGROW + 0,109628 FDSIZE – 0,362853 FDPROF + 0,222535FDTANG – 0,113168FDNDTS + 0,560931FDRISK + 0,028164FDLAGDEBT + e

While the results of inferential statistical hypothesis testing can be seen in Table 3 below.

Table 3: Results of Hypothesis Testing

Variable	PLS		FEM		REM	
	beta	t	beta	t	beta	t
Constanta	-0.016723	-9.793178*	-0.026764	-32.95795*	-0.025556	-3.154404*
FDGROW	-0.003807	-2.206858*	-0.003176	-1.482226	-0.002330	-0.631064
FDSIZE	0.109628	5.249983*	0.131504	8.269560*	0.160286	2.370279*
FDPROF	-0.362853	-12.10521*	-0.349979	-17.07721*	-0.547604	-6.031819*
FDTANG	0.222535	8.680838*	0.375935	12.77706*	0.333151	3.949459*
FDNDTS	-0.113168	-0.834525	-0.096436	-0.643813	-0.356748	-1.036761
FDRISK	0.560931	13.06707*	0.549379	17.24273*	0.724827	14.31440*
FDLAGDEBT	0.028164	1.315281	-0.094716	-9.503925*	0.037258	1.775057*
R Squared	0.275071		0.905343		0.374844	
Adjusted R	0.268368		0.856227		0.369063	

Squared			
F Statistics	41.03435*	18.43274*	64.84249*
N	1.275	1.275	1.275

* Significant at 5%

In Table 3, presented 3 results from the inferential statistical processing pool least square (PLS) and a fixed effect or a fixed effect model (FEM) and random effect or random effect model (REM). Before choosing which model to be interpreted, it is tested and Hausmman Chow as shown in Table 4 below.

Table 4. F-Test

Test Effect	Statistic	df	Prob.
Cross Section F	16.360623	(254,503)	0.0000
Cross Section Chi-Square	68.302649	7	0.0000

From Table 4, it appears that the model is appropriate to interpret fixed effect model. Furthermore, the discussion below will focus based on the results obtained from the fixed effect model.

Based on FEM results in Table 3, the simultaneous testing using the F test proved that all the independent variables significantly influence the debt. This means that the model is found it can be used to predict the behavior of corporate debt in the future.

Based on the magnitude of the regression coefficients (beta), all independent variables affect the company's debt and variables that have the most impact is the risk with a beta of 0.549379. This means that the speed of capital structure adjustment towards the optimal level predominantly influenced by the risk variable.

Partially by using the t test, the variables that significantly influence the amount of debt the company is company size, profitability, tangibility, risk and debt lag period last year. While that does not have significant influence is growing and nondebt tax shield.

Firm size has a significant positive effect. This means that the larger the company, the higher use of debt. It is very reasonable, considering the large companies will seek to take advantage of the tax savings by using more debt. In addition, firms with larger size have a greater collateral and bankruptcy risk is lower. These results are consistent with research Drobetz & Fix (2003) which states that the size has a positive relationship to the debt, Titman and Wessels (1988) in Bouallegui (2006), Rajan and Zingales (1995).

Profitability has a significant negative effect, this means that the greater the profit the company used debt tends to wane. This is consistent with the pecking order theory, where the company will seek to use financial slack in the company such as using marketable securities, and retained earnings in order to develop their business, so the higher the profitability of the company, the greater the financial slack owned, will further reduce the proportion of debt used. These results support the research Bouallegui (2006), Gaud et al. (2003), Abor & Biekpe (2005), as well as Drobetz & Fix (2003) which states that profitability has a negative relationship with debt.

Tangibility has a significant positive effect, which means more tangible assets owned by the company, the higher the debt is used. Logical explanation of this finding is to have a large real assets, then the company can use it as collateral to borrow. The creditors will be easier to give credit if the company guarantees a real asset to him. It is also supported by the results of descriptive statistics which the proportion of tangible assets reached 34%, and the company's long-term debt reached 25%. In addition, these results are also consistent with the results of Rajan and Zingales (1995), and Fama and French (2000) in Bouallegui (2006) which states that tangibility has a positive relationship with debt.

Business risks the company has a significant positive effect on the level of debt

used. This can be attributed to the concept of risk-return, where the high-risk companies that indicate a high yield potential as well, thereby increasing the debt provided by lenders. Consistent with signaling theory, the use of debt for the company gave a positive signal which indicates the use of debt to investment companies have interesting business prospect. These results are not consistent with predictions that have been formulated in the hypothesis of the study, but more research supports Gaud et al. (2003) which states that risk significant positive effect on capital structure.

This research model using a dynamic model by including debt lag period last year. From the FEM results shows that the lag period of debt and have a significant negative effect. This means that if the debt has been high the previous period, to reduce exposure to the business, the company will reduce the debt in the next period. Conversely, if the debt is considered low-earlier period, the company can raise debt in the current period to obtain tax savings.

From the results of data processing, there are two variables that do not affect the growth and non-debt tax shield. Interesting results can be seen in the growth of which found no significant effect on the level of debt. When seen from the results of descriptive statistics shows that the growth of the company in the period 2007-2011 is significant at 25%, but the rate of long-term debt on average only 26%. It is understandable that the period 2007-2011 there is a global crisis that plagued the world, so this is encouraging companies in Indonesia do not use a large amount of debt. The company certainly learned a lot in the 1998 economic crisis, where companies that use a high debt level mainly in the form of offshore loans will have great difficulty even to bankruptcy. This study also found that non-debt tax shield effect was not significant. A possible explanation of this is by looking at the descriptive statistics, which NDTS relatively small percentage of less than 4%. The small NDTS is certainly not going to significantly influence the use of debt.

In addition to determine the effect of the independent variables were investigated for corporate debt, the study aims to describe the existence of dynamic trade-off capital structure. The presence of dynamic trade-off capital struture can be determined by looking at whether the behavior of the actual debt rate movements lead to the optimal debt targets or not. The parameters used to describe it is the value of λ (lambda). If $\lambda = 1$, means a business entity doing full adjustment, so that enterprises in period t arrives at the optimal debt. If $\lambda < 1$, then the process of adjustment in period t-1 into period t is less than the level required to achieve the optimal debt. It is explained that entities perform partial adjustment. If $\lambda > 1$, then the process of adjustment in period t-1 into period t exceed the level required to achieve the optimal debt (over adjustment).

Value of first differences lagged variable-debt (LAGDEBT) had regression coefficient (Ψ) of -0.095 or λ of 1.905. The value of λ has a meaning that adjustment in period t-1 into period t more than the level required to achieve the optimal debt (over adjustment). Based on the results of data processing, the company will perform over-adjustment in the opposite direction to reach the optimum point.

In most studies, the adjustment of enterprises to financial targets are considered instantaneous and free. In a perfect market, adjustments to long-term targets will instantly (instantaneous) and full (complete). However, market imperfections such as transaction costs and adjustments as well as some of the obstacles preventing enterprises from changing the rate or the ratio of their debt in a way that they want (Marsh, 1982; Jalilvand and Harris, 1984). Because of these market imperfections financial decisions a business entity should be seen as a two-stage process. The first stage is the formation of the target and the second stage is the adjustment of the level of debt set out in the first stage. Therefore, behavioral finance business entities that best characterized by a partial

adjustment models (Spies, 1974; Taggart Jr., 1977; Jalilvand and Harris, 1984; Ozkan, 2001). This statement strengthens the notion that the partial adjustment preferred by the enterprise rather than the full adjustment.

E. CONCLUSION AND RECOMMENDATIONS

Based on the research and discussion that has been done, it can be formulated some conclusions and recommendations of the following:

1. Conclusion

From the obtained results it is known that simultaneously via the F test all independent variables significantly influence the company's debt. Means that the model finds can be used to predict the behavior of the company's debt. Partially, the variables that significantly influence the company's debt is firm size, profitability, tangibility, risk and debt lag period last year. While that does not have significant influence is growing and nondebt tax shield. It also indicated that the speed of adjustment to the company's debt level optimal debt as measured by the value of λ is equal to 1.905, which means that the adjustment in period t-1 into period t more than the level required to achieve the optimal debt (over Adjustment).

2. Recommendations

For the management, are expected to pay attention to the variables that affect the decision-making related to the optimal capital structure. It should be noted that the dominant effect variables, namely the risk. Should the adjustment towards the optimal capital structure is not excessive, since the use of excessive debt will increase the degree of risk and the cost of debt.

For investors, the investment should pay attention to the level of corporate debt, since the use of the debt on the one hand it can improve the results, but at the same time will also increase the risk. Therefore, investors should also consider the variables that affect the company's debt, which can predict the level of debt that will be used by the company.

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