THE EFFECT OF CAPITAL STRUCTURE TOWARDS SMALL AND MEDIUM ENTERPRISES PERFORMANCE

By

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APPROVAL SHEET

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DECLARATION OF ORIGINALITY

I declare that this thesis, entitled “The Effect of Capital Structure Towards Short and Medium Enterprises performance” is, to best of my knowledge and belief, an original piece of work that has not been submitted, either in whole or in part, to another university to obtain a degree.

Cikarang, Indonesia, August 30, 2010

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ABSTRACT

The research is conducted to examine the effect of capital structure on the financial performance of small and medium-sized enterprises (SMEs). The data of this research is obtained from twenty (20) corporations of SMEs enlisted in Indonesia Stock Exchange since 2002 – 2007.

Quantitative research is applied so it can be analyzed through mathematical expression, and then it can be used to identify the study in the research. Secondary data is used in this study which is based on Indonesian Capital Market Directory and Indonesian Stock Exchange. Multiple regression is also used as the statistical method to analyze the effect between dependent variables with independent variables, and also effect from control variables.

Furthermore, the result of this research is to examine that Short-term Debt, Long-term Debt, have the positive effect towards the Performance. Meanwhile Total Debt and Trade Credit have the negative effect towards the Performance. In the end, the writer intends to make some suggestion; (a) for company to consider the policy to gain its performance seen from Gross Profit Margin, Return on Assets, and Tobin’s Q (dependent variables) and (b) for investors to consider factors such as Short-term Debt, Long-term Debt, Total Debt (independent variables).
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I. INTRODUCTION

1.1. Background of Study

In every company, internal problems are often found when a company is running its business. One of the problems is company funding. Funding is the most important thing for a company in order to operate its activities and to pay its obligations. There are several alternatives funding sources can be used by a company, which are funding source from internal and external of the company. The company can use retained earnings as its funding source from the internal, such as using debts, issuing bonds payable, and issuing shares as funding source from the external.

Small and medium enterprises need external capital to fund their growth and the investment in order to reach the maximum profit of the business running. In fulfilling the need of fund, Small and Medium Enterprises (SMEs) can use its common equity which comes from the owner and from the debts. If the company is using the fund comes from debt, it must routinely pay the interest which will become fixed expense for the company.

The using of funding source from the external has advantages and disadvantages. Thus, a finance manager has to be able to make strategies in deciding which funding source that will be used for the company, so the company can optimize the ability to earn profit and it benefits the shareholders.

The company using debt as its capital will receive some advantages. First, the interest will reduce the company’s taxes. Second, the creditor does not have rights to receive the profit shares, so he just receives the interest expense paid by the borrower. Third, the creditor does not have rights to control the company without permission from the borrower (Brigham, 1997)

However, the using of liabilities as capital does not only give advantages, it also can affect loss for the company. First, the more liabilities are used, the higher risk and interest that will be paid by the company, but the higher interest expense can help to reduce taxes that will be paid by the company. Second, if the company is having financial problem and the margin profit cannot cover the interest expense, however
the shareholders must cover the minus which is able to cause bankruptcy for the company if the shareholders cannot be able to cover it.

Liabilities also can slower the company’s growth someday which cause the shareholders think twice to invest their capitals in that company. According to Zeng (1993), the main advantage of using liabilities is tax benefits, and the main disadvantages are bankruptcy and agency loss.

In order to attain the goals and to keep existing in difficult competition, the company has to understand the effect of deciding fund source used by the company towards its performance. Some researches stated there is relationship between leverage with performance. If the performance is good, so the company can earn the profit to pay the obligations. Fama and French stated (1998) high leverage and the increasing of debt indicates the company is performing badly. Fama and French also stated there is negative relationship between leverage and profitability. It is important for the company where debt and equity can optimize company’s performance or the value of company. The using of debt and equity in company’s capital structure is often called as a specific strategy of the company used by a manager to increase company’s performance (Gleason, K.C., Mathur, and L.K., 2000). According to Mok and Chau (2003), some specific variables of the company such as the change of firm size, systematic risk from the company, industry classification, liquidity and leverage are significant in explaining profitability’s change and company’s stock return.

When many researches stating that there is relationship between debt and performance, there is also research stating that debt does not affect company’s profitability which is considered as capital structure irrelevance theory (Modigliani and Miller, 1958). Modigliani and Miller (1958) stated debt does not affect the value of company based on assumptions which cannot be used in the real situation such as the perfect capital market, no tax, and no transaction cost.

In the company, capital structure is the combination between debt and equity used by the company to pay its operational expense (Abor, 2005). Generally, company can choose between many alternatives of capital structure by issuing more and less debt.
1.2. Problem Identified

The relationship between debt and equity with company’s performance is often used for some researches. Some old previous empirical researches about SMEs have reviewed the capital structure decision, although it was still limited. However, there is a large crack from literature is the research about the effect of capital structure towards SMEs. According to the statement, the writer is interested to re-evaluate about the effect of capital structure towards SMEs’ performances.

The writer chooses this problem because small and medium enterprises (SMEs) are often seen as being too minute to serve as significant drivers of economic growth (and therefore unworthy of policy consideration by governments), yet too large to benefit from non-profit and microfinance institution schemes such as joint-debt programs. While the challenge to the SME sector can be daunting, there have been many promising initiatives to support this crucial sector in emerging economist by civic, investment, and business leaders who recognize the clear role of SMEs in sustainable development.

1.3. Statement of the Problem

**Topic:** This research is about determining the effect of capital structure towards SMEs’ performance. The variables used as the capital structure are the independent variables such as short term, long term, total debt, trade credit. The independent variables have effect towards performance as dependent variables and are measured by using GPM, ROA, Tobins Q.

**Question:** "Is there an effect of capital structure towards small and medium enterprises’ performance (SMEs)?


1.4. Research Objective
This research is about to evaluate the effect of capital structure towards SMEs’ performances listed in Indonesian Stock Exchange period 2002-2007.

1.5. Significance of the Study
The writer intends this research can give some contributions for several parties which include the company, investor, and other writer.

1. The finance manager of a company has to make right decision of capital structure, so he must also be capable in taking debt policies which will be chosen in a short-term or a long-term. It is also useful as the inputs for small and medium enterprises company to evaluate the effect of capital structure towards company’s performance, so it can be used by the company to make right decision in funding.

2. For investor, this research is useful as the consideration to get some information that can be used for basic knowledge when investing.

3. For all researchers, hope this research can explore the knowledge and also the understanding in explaining the effect of capital structure towards the small medium enterprises in the future.

1.6. Theoretical Framework

![Diagram]

**Figure 1.1 Developed by the Writer**

In running the business, the company should have objectives/goals to maximize the wealth of shareholders and the value of company. In order to reach the goals, the company should have abilities to earn good profitability.
In order to have good profitability, the company often faces many problems in running its business, especially in the middle of heavy competition. In addition, the company has to be able to take right decision in financing. The using of greater short-term debt by the company will decrease company’s expenses. On the other hand, the using of greater long-term debt will only increase company’s expenses.

According to the statement above, so the writer would like to define relationship between Short-term Debt ratio, Long-term Debt ratio, Total Debt ratio, and Trade Credit ratio with company’s performance measured by Tobin’s Q, Gross Profit Margin, and Return on Assets (ROA).

1.7. Scope and Limitation of the Study
The subjects observed in this research are the Small and Medium Enterprises (SMEs) based on BAPEPAM, those SMEs have the most of IDR 100,000,000,000 (ten billion rupiahs) of total asset and listed in Indonesia Stock Exchange (IDX). The observation time of this research is six years which starts 2002-2007 and the companies being sample are based on the criteria-by releasing financial statement while observation periods.

1.8. Assumptions and Hypothesis
1. Short-term Debt Ratio
Mesquita and Lara (2003) in their researches found a positive relationship to finance short-term debt and equity. Abor (2005) investigated the effect of capital structure towards profitability of companies listed in Ghana using panel regression model. The measurement towards capital structure include short-term debt ratio, long-term debt ratio, and total debt ratio. The writer found that there is significant positive relationship between short-term debt with profitability.
H1: Short-term debt ratio affects positively towards performance.

2. Long-term Debt Ratio
In his research, Hammes (2003) tested the relationship between capital structure with performance by comparing Polish and Hungarian companies towards many companies as big sample in industrial countries. Hammes used panel data analysis to investigate the relationship between total debts with the performance, and also relationship between various sources of debt such as bank loan and trade credit with
company’s performance measured by profitability. Then, it results a significant effect and negative for a big group of countries. Hammes found that kind of debt, bank loans, or trade credits are not important factor, but the problem is the debt as general. Mesquita and Lara (2003) in their research found that the relationship between rate of return and debt indicates a negative relationship for a long-term debt.

H2: Long-term debt ratio affects negatively towards performance.

3. Total Debt Ratio
The relationship between total debt (kinds of debt) such as bank loan and trade credit towards company’s performance shows that there is negative relationship and significant. If the total debt ratio is higher rather than own capital, the company will face higher risk which could cause bankruptcy if the company is not discipline to pay the debt. In this case, the managers are responsible in planning the better performance in the future by choosing capital rather than debt.

The company having ability to earn profits depend on the debt as the main alternative for financing. Besides that, the result of regression from the previous section shows that there is positive relationship significantly between total debts with the company’s performance. As the increasing of debt used by the company, then it will increase the company’s ability to earn profits. However, it results that the higher company’s debt, the higher company’s ability to earn profits (Abor, 2005).

H3 (a): Total debt ratio affects positively towards performance.

H3 (b): Total debt ratio affects negatively towards performance.

4. Trade Credit Ratio
Trade credit is used to test its effect towards the performance. Trade credit is assumed could give positive relationship towards the performance, because the trade creditors give credit to companies who are having good/effective financial performance (Abor, 2007).

H4: Trade credit ratio affects positively towards performance.
1.9. Definition of Terms

- SMEs: A business that maintains revenues or number of employees below a certain standard. Every country has its own definition of what is considered a small and medium-sized enterprise. In the United States, there is no distinct way to identify SME; it typically depends on industry on industry in which the company competes.

- Bonds Payable: Generally a long term liability account containing the amount, or maturity amount of the bonds issued by a company that are outstanding as of the balance sheet date.

- Liabilities: A company’s legal debts or obligations that arise during course of business operations. Liabilities are settled over time through the transfer of economic benefits including money, goods or services.

- Common Equity: A measure of company’s capital, which is used to evaluate a financial institution’s ability to deal with potential losses. Common equity is calculated by subtracting intangible assets, goodwill and preferred equity from the company’s book value.

- Retained Earnings: The percentage of net earnings not paid out as dividends. But retained by the company to be reinvented in its core business or to pay debt. It is recorded under shareholder’s equity on the balance sheet.

- Short-term Debt Ratio: Any bond or other debt that must be repaid or refinanced within one year. Short-term debts are recorded on a balance sheet as current liabilities.

- Long-term Debt Ratio: A measure of a company’s financial leverage calculated by dividing its total liabilities by stockholder’s equity. It indicates what proportion of equity and debt the company is using to finance its assets.

- Total Debt Ratio: A debt service that financial lenders use as a rule of thumb to give a preliminary an assessment of whether a potential borrower is already in too much debt. More specially, this ratio shows the proportion of gross income that is already spent on housing related and other similar payments.

- Trade Credit Ratio: An arrangement between business to buy goods or services on account, that is, without making immediate cash payment.
II. LITERATURE REVIEW

2.1. Definition of Capital Structure

Capitalization or capital structure is defined as a mixed of companies long-term debt, specific short-term debt, common equity, and preferred equity. The capital structure is how a firm finances its overall operations and growth by using different source of funds. Capital structure is one of the problems which should be paid good attention from the investors and finance nowadays. The problems appear because of the limitation of fund sources which can be allocated by the company to run its production. In this case, the finance decision is an important thing for the company’s wealth, because one wrong decision taken will cause financial distress or bankruptcy for the company (Eriotis et al, 2007). Capital structure is a mixed of debt and equity capital which finances the firm (Ross et al, 1985). In addition, capital structure of a company is only a half of its financial structure.

However, the finance manager should focus on two main ideas. The first is about the best combination between long-term debt and common equity for the company, because the chosen combination itself will affect the risk and also the value of company (Modigliani and Miller, 1958). The second idea is about the reaching of funding sources of the company which has the lowest cost.

Based on two main ideas above, we can conclude that capital structure is a mixed or combination of equities which comes from permanent debts, preferred stocks, and from the internal sources like retained earnings. In this case, the company could fulfill its financing by using the funding source which comes from internal or external. The external financing is used as the last alternative if the internal funds are not enough to finance its operational. If the company uses debt, so the fixed expense for the company is the interest expense. If the company uses its common equity, then it creates opportunity cost. Opportunity cost is the cost of passing up the next best choice when making a decision. In addition, capital structure has to be chosen correctly to lower opportunity cost so it will give profits for the company.
Capital structure is the most complex part of finance decision. It is caused the capital structure is engaged with some variables of finance decision. The incorrect of capital structure decision will cause the opportunity cost increase, while the correct decision will decrease the opportunity cost.

The optimal capital structure is the capital structure that will optimize the balance between risk and income, thus it could maximize the value of company. In order to optimize the capital structure, the company should know how much costs issued by the company of the capital using, because the optimal capital structure is able to decrease its opportunity cost (Eriotis, et al, 2007).

2.1.1. The Component of Capital Structure

Generally, the needs fulfillment of funding sources for the company consists of two funding sources, which are internal source and external source of the company (Brigham, 1997).

1. Internal funding source
This kind of source is the capital comes from internal of the company. This funding source can be retained earning and accumulated depreciation. The amount of retained earning depends on the amount of profit in specific period, and the dividend policies of the company. The more equities increase, means that the more funding source becomes greater for the company. Therefore, the profit from the internal source means that the company will not depend on the external source. Thus, it will repair the financial structure of the company. The financial structure of the company reflects the strength of company’s financing. While the weakness of internal funding source is the shareholders could not have chance to diversify their funds.

2. External funding source
It is a fund comes from external of the company include funds from the creditors and the owners. Capital which comes from the creditors is debt for the company. Therefore, the advantage of the using of the external funding source is the shareholders could diversify funds they have. On the other hand, the disadvantage is that external funding source will cause the cost of capital increase higher. However, the company should pay with the high interest because of the using of the external fund.
According to the explanation about capital structure above, what company needs to add the need of capital is debt which comes from creditor (Abor, 2005). In this research, that debt uses the measurement of debt ratio as its measurement level owned by the company.

2.2. Small and Medium Enterprises (SMEs)

Small and medium enterprises (SMEs) are companies whose headcount or turnover falls below certain limits (www.wikipedia.com). According to the previous section, a company observed by two countries is an industrial company categorized as small and medium enterprises (SMEs) which already *go public* and having several criteria whether it is the number of employee, or even total assets along six periods (Abor, 2007). While in this research, companies moving in industrial (non-financial) and enlisted in Indonesia Stock Exchange, and the criteria taken can be seen from the total assets which are less than IDR 100,000,000,000 (one hundred billion).

2.3. Company’s Performance

2.3.1. Definition of company’s performance

Company’s performance is a result of success reached by the company in operating its function in a specific period to gain people’s trust, outside parties, and governments. When operating the business, the company should keep focus on its performance. The company’s performance can be seen from several aspects affecting, such as financial aspect and operational aspect. Financial aspect that should be paid attention by the company is seen in cash flow, financial statement, income statement, and balance sheet (Gitman, 2003).

Investors would really pay attention to the company which has good financial performance, when they are allocating their funds in capital market (Rugman, 1983). People especially investors, need to know the prospect and performance from each company listed in capital market before they invest their funds. We have to remember the information role about financial performance of the company in affecting the investors’ preference that will reflect share price of the share market the end. In addition, every company will face the problem about performance. Performance is really important for an organization that makes every organization using performance
to measure its ability, the success, and the failure to develop the resources effectively and efficiently.

A company’s performance can be categorized as good as it succeeds in using the debts proportionally and is able to pay its obligation suitable to the schedule. Then, the company can be able to earn profits. Some writers stated profitability is affected by leverage. Derosa (1990) stated that the using of capital effectively is the key to increase the profitability. It can be done by using debts which is borrowing funds and buying assets with interesting return and low risk. The institution that has high ROA (Return of Assets) and greater debts ratio will have ability to earn better profitability rather than the institution with low ROA.

Company’s performance is resulted from several individual’s decision done frequently by the management. However, we can conclude that company’s performance is useful in predicting the company’s ability to create cash flow from the source owned by the company (Helfel, 1994). In addition, company’s performance is useful in creating decision about the how effective the company uses the source. Basically, performance is a level of success for the company measured by the effectiveness and efficiencies of the company overall.

2.3.2. **The measurement of company’s performance can be explained as follows:**

1. **Tobin’s Q**

In this research the measurement of performance is using Tobin’s Q. Tobin’s Q is calculated based on share price reflecting the market value of company. Tobin’s Q is able to catch other factors like the risk of assets takeover for small shareholders with big shareholders.

Some researches in western countries use Tobin’s Q variable as the measurement of the long-term company’s performance (Abor, 2007). Tobin’s Q contains all information about the chance for company investment in the future, and is defined as the total market value of a company divided by the replacement value of the firm’s assets. Thus, Tobin’s Q calculated is based on company’s share price reflects the value of company for the shareholders, especially the small ones. Tobin’s Q ratio which is greater than one describes the company owns intangible assets such as trademark, reputation, knowledge, and innovation observed and reviewed by many
business analysts and shareholders. Furthermore, the Tobin’s Q ratio which is greater than one also describes the company definitely has chance in investment and benefits to compete.

As the proxy Q used by market to book ratio, Tobin’s Q effectively explains the value of company perceived by the replacement value. However, because the replacement value of firm’s assets are difficult to be found in Indonesian companies, so the proxy used to measure Tobin’s Q is the ratio of equity market value added with debt book value towards asset book value (simply defined as ratio of equity market value towards equity book value (Perroti and Gelfer, 1998)).

In measuring the value of company, we also can use market value, which is the measurement method used to measure market value commonly is using Tobin’s Q. Tobin’s Q is the company’s performance measurement method invented by James Tobin from University of Yale, and James Tobin also was awarded Nobel in economics. Tobin’s Q or commonly known as Q ratio measures the chance of company to develop by comparing market value of firm’s assets with replacement value of firm’s assets. Tobin’s Q is the ratio of the firm’s market value asset (measured by market value of the common shares and leverage) towards the firm’s replacement cost assets (Tobin, 1969)

2. Gross Profit Margin
If a company is using more debts rather than other companies, the company will have higher interest expense. That interest expense will lower net income down and when the sales are stagnant, the profit margin will be relatively low. Gross profit margin measures the percentage of every left goods sold after the goods are paid by the company. The higher gross profit margin increase, the low goods to sell (Gitman, 2003).

3. ROA (Return on Assets)
Return on Assets (ROA) shows how strength a company to earn net margin which is sourced from total assets of the company, the evaluation of ROA is to measure the effectiveness and efficiencies of the company. In other word, investors consider the measurement of ROA as an indicator of success to management in the company in maintaining its assets. ROA is commonly called as Return of Investment (ROI) which
means the ability of a company to earn profits as investment that becomes a measurement overall of company’s achievement (Gitman, 2006).

ROA indicates how much the income of company of average assets. This measurement is used as the common effective level measurement for management to increase the profit by optimizing the available assets (Gitman, 2006). If the company is below of the average of industry, because of the low strength of a company to earn profits and high interest expense caused by the average of debt using, where it is caused by the relative low profit (Chaganti and Damanpour, 1991).

In addition, as the ratio getting higher, the company will be able to cover the investment that is already used. This could make the company possibly to finance the investment with funds come from the available internal source with the retained earning.

In addition, there are various factors affected company performance, particularly for small and medium enterprises. One classical answer is the competitive force as explained by Michael Porter. The competitive forces include the threat of new entrants, threat of substitution, bargaining power of suppliers and customer, as well as the intra industry competitiveness. This theory basically determines the market and industry environment setting in which the firm operates.

The more recent literatures suggest that intra industry performance variations are due to recourse heterogeneity within the firms, which is also known as resource based view. Some resource’s uniqueness such as valuable, rare, imperfect inimitability, and non substitutable would give competitive edge of the company.

2.4. Debt Ratios

The debt ratios are classified into four kinds of ratio, which are short-term debt, long-term debt, total debt, and also trade credit.

1. Short-term Debt

According to Brigham (1997) short-term debt is a debt that its schedule of borrowing is one year or less. While Hall et al (2004) defined short-term debt as the proportion of total debts of company which could be paid in one year. Short-term debt contains bank overdraft, a one year agreed bank loan, and other current liabilities.
According to the statement above, it can be concluded that short-term debt is a debt used to fulfill seasonal and current asset that should be paid in one year or less.

2. *Long-term Debt*

According to Kieso, Weygant, and Warfield (2004) long-term debt is a debt which appears from the unpaid obligations in one year. Long-term, notes payable, debenture, pension liability, and other leasing liabilities are the examples of long-term debt. Hall et al (2004) in his research stated the long-term debt defines as total debts of the company which could be paid more than one year. Long-term debt contains long-term bank loan and other long-term debts that could be paid more than one year such as director’s loan, purchasing, and obligation from the leasing. Furthermore, it can be conclude that long-term debt is the company’s liabilities that its schedule of borrowing is more than one year.

3. *Total Debt*

A company that has ability to earn profits generally depends on the debt as the main alternative financing. Blaine (2004) stated companies use debt in hoping that the incomes received will be greater than the fund issued by using debt itself. In addition, the effect of the debt is to increase the company’s revenue.

The relationship between total debts such as bank loan and trade credit towards company’s performance indicates a significant and negative relationship. If the ratio of total debts is greater rather than common equity, then the risk is higher for the company that enables the company into the bankruptcy if the company is not discipline in paying the debts.

The company having ability to earn profits depend on the debt as the main alternative for financing. Besides that, the result of regression from the previous section shows that there is positive relationship significantly between total debts with the company’s performance. As the increasing of debt used by the company, then it will increase the company’s ability to earn profits. However, it results that the higher company’s debt, the higher company’s ability to earn profits (Abor, 2005).

4. *Trade Credit*
A company is often able to purchase its stock/supply by credit from another company. Trade credit is the biggest short-term funding source, especially for a prestigious company.

Trade credit is also included to research about relationship with company’s performance. Trade credit is assumed could give some positive relationship towards the performance, because the trade creditors only give to the companies who have correct financial performance (Abor, 2007).
III. METHODOLOGY

3.1. Research Method

This research used quantitative research methodology. Copper and Schindler (2006) defined that quantitative research attempts precise measurement of something. Such methodologies answer questions related to how much, how often, how many, when and who. In quantitative research, Schiffman and Kanuk (2004) state that the writer analyses the data by using objective, standardized statistical method consisting mainly of comparisons of averages among the predefined variables and significance test that estimate the extent to which the result represent the universe.

Quantitative research involves counting and measuring of events and performing the statistical analysis of a body of numerical data (Smith, 1988). The assumption behind the positivist paradigm is that there is an objective truth existing in the world that can be measured and explained scientifically. The main concerns of the quantitative paradigm are that measurement is reliable, valid, and generally in its clear prediction of cause and effect (Cassell & Symon, 1994).

Being deductive and particularistic, quantitative research is based upon formulating the research hypotheses and verifying them empirically on a specific set of Scientific hypotheses are value-free; the writer's own values, biases, and subjective preferences have no place in the quantitative approach. Writers can view the communication process as concrete and tangible and can analyze it without contacting actual people involved in communication (Ting-Toomey, 1984).

The strengths of the quantitative method include:

- Stating the research problem in very specific and set terms (Frankfort-Nachmias & Nachmias, 1992);
- Clearly and precisely specifying both the independent and the dependent variables under investigation;
- Following firmly the original set of research goals, arriving at more objective conclusions, testing hypothesis, determining the issues of causality;
Achieving high levels of reliability of gathered data due to controlled observations, laboratory experiments, mass surveys, or other form of research manipulations (Balsley, 1970);

- Eliminating or minimizing subjectivity of judgment (Kealey & Protheroe, 1996);

- Allowing for longitudinal measures of subsequent performance of research subjects.

The weaknesses of the quantitative method include:

- Failure to provide the writer with information on the context of the situation where the studied phenomenon occurs;

- Inability to control the environment where the respondents provide the answers to the questions in the survey;

- Limited outcomes to only those outlined in the original research proposal due to closed type questions and the structured format;

- Not encouraging the evolving and continuous investigation of a research phenomenon.

Quantitative models is considered able describe social reality into the mathematical model. Underpinned this advantage, writer prefer to use quantitative model for this research.

### 3.2. Research Instrument

In this research, the research uses secondary data of twenty (20) companies enlisted in Indonesia Stock Exchange during the period within 2002 – 2007. Those companies are categorized as Small and Medium Enterprises. Those data are gathered from Indonesian Capital Market Directory and Indonesian Stock Exchange.

In this research, there are three variables used to evaluate the effect of capital structure towards performance as follows:

1. **Independent Variables**
   
   a. Short-term debt ratio is measured by comparing short-term debt with total capital of company that uses formula as follows:
b. Long-term debt ratio is measured by comparing long-term debt with total capital of company that uses formula as follows:

\[
\text{Long-term debt ratio} = \frac{\text{long term debt}}{\text{Total Assets}}
\]

c. Total debt ratio is measured by comparing total debt with total capital of company that uses formula as follows:

\[
\text{Total debt ratio} = \frac{\text{total debt}}{\text{Total Assets}}
\]

d. Trade credit ratio is measured by comparing trade credit with total capital of company that uses formula as follows:

\[
\text{Trade Credit Ratio} = \frac{\text{Trade credit}}{\text{Total Assets}}
\]

2. Dependent Variable

Performance is measured by comparing Gross Profit Margin with Sales; Return on Asset by comparing Net Profit/Net Income with Total Asset; and also is measured using Market-to-book value of Tobin’s Q regression model.

\[
\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}}
\]
The writer uses multi regression analyses which use *Ordinary Least Square* that is to see the effect of independent variable towards dependent variable, thus to see the effect of that variable the writer uses the regression equation as follow:

\[
\text{Performance}_{i,t} = \beta_0 + \beta_1 SDC_{i,t} + \mu_{it}
\]

\[
\text{Performance}_{i,t} = \beta_0 + \beta_1 LDC_{i,t} + \mu_{it}
\]

\[
\text{Performance}_{i,t} = \beta_0 + \beta_1 TDC_{i,t} + \mu_{it}
\]

\[
\text{Performance}_{i,t} = \beta_0 + \beta_1 TCC_{i,t} + \mu_{it}
\]

**Equation 3.1**

*Multi Regression Analysis*

Where:

- \( \text{Performance}_{i,t} \) = Performance of company i in period t
- \( SDC_{i,t} \) = Short-term debt/total capital of company i in period t
- \( LDC_{i,t} \) = Long-term debt/total capital of company i in period t
- \( TDC_{i,t} \) = Total debt/total capital of company i in period t
- \( TCC_{i,t} \) = Total credit/total capital of company i in period t
- \( \mu_{it} \) = The error term

\[
\text{ROA (Return on Asset)} = \frac{\text{Net Income}}{\text{Total Assets}}
\]

\[
\text{Market-to-book Value (Tobin’s Q)} = \frac{\text{market price per share of common stock}}{\text{Book value per share of common stock}}
\]
3.3. Sampling Design

In this research, the writer chooses the forms of non-probability sampling as the basis for selecting sample. The crucial and defining characteristics of non-probability sampling whatever from it takes, is that the choice of group or people to be included in the sample is definitely not a random selection. Streubert and Carpenter (1995) point out that there is no need to randomly select individuals because manipulation and control are not the purpose of the exercise. Technique used to choose the sample is *purposive sampling* technique. Purposive sampling is a sampling technique based on specific criteria or choosing the sample based on some characteristic. It is a form of non-probability sampling.

There are some criteria of companies grouping chosen to be sample in this research. First, the companies are not moving in nonfinancial industry and are listed in Indonesia Stock Exchange. Second, the companies have financial report during within 2002 – 2007. Third, the companies have total assets not more than IDR 100,000,000,000 (one hundred billion) which are categorized as the Small and Medium Enterprises (SMEs).

Those 20 Small and Medium Enterprises are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Company Name</th>
<th>Code of IDX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PT. Cipendawa Argoindustri</td>
<td>CPDW</td>
</tr>
<tr>
<td>2</td>
<td>PT. Ekadharma Internasional</td>
<td>EKAD</td>
</tr>
<tr>
<td>3</td>
<td>PT. Lapindo Internasional</td>
<td>LAPD</td>
</tr>
<tr>
<td>4</td>
<td>PT. Siwani Makmur</td>
<td>SIMA</td>
</tr>
<tr>
<td>5</td>
<td>PT. Betonjaya Manunggal</td>
<td>BTON</td>
</tr>
<tr>
<td>6</td>
<td>PT. Sugi Samapersada</td>
<td>SUGI</td>
</tr>
<tr>
<td>7</td>
<td>PT. Inter Delta</td>
<td>INTD</td>
</tr>
<tr>
<td>8</td>
<td>PT. Perdana Bangun Pusaka</td>
<td>KONI</td>
</tr>
<tr>
<td>9</td>
<td>PT. Pyridam Farma</td>
<td>PYFA</td>
</tr>
<tr>
<td>10</td>
<td>PT. Schering Plough Indonesia</td>
<td>SCPI</td>
</tr>
<tr>
<td>11</td>
<td>PT. Akbar Indo Makmur Stimec</td>
<td>AIMS</td>
</tr>
<tr>
<td>12</td>
<td>PT. Centrin Online</td>
<td>CENT</td>
</tr>
<tr>
<td>13</td>
<td>PT. Dyviacom Intrabumi</td>
<td>DNET</td>
</tr>
<tr>
<td>14</td>
<td>PT. Jasuindo Tiga Perkasa</td>
<td>JTPE</td>
</tr>
<tr>
<td>15</td>
<td>PT. Lionmesh Prima</td>
<td>LMSH</td>
</tr>
<tr>
<td>16</td>
<td>PT. Delta Dunia Petroindo</td>
<td>DOID</td>
</tr>
<tr>
<td>17</td>
<td>PT. Ciptojaya Kontrindoreksa</td>
<td>CKRA</td>
</tr>
<tr>
<td>18</td>
<td>PT. Imdoexchange</td>
<td>INDX</td>
</tr>
<tr>
<td>19</td>
<td>PT. Roda Panggon Harapan</td>
<td>RODA</td>
</tr>
<tr>
<td>20</td>
<td>PT. Karka Yasa Profilia</td>
<td>KARK</td>
</tr>
</tbody>
</table>

| Table 3.1 |
| Small and Medium Enterprises |
3.4. Testing Hypothesis

This research has already passed several stages to test hypothesis which are:

3.4.1. Normality Test

This tested is about to determine whether in regression model both independent and dependent variables are distributed normal or not. One of normality test used in this research is *Kolmogorov-Smirnov* test. Kolmogorov-Smirnov test (K-S test) is a form of minimum distance estimation used as a nonparametric test of equality of one dimensional probability distributions used to compare a sample with a reference probability distribution (one-sample K-S test), or to compare two samples (two-sample K-S test). The steps of test are as follows:

- **Ho**: distribution of population is normal
- **Ha**: distribution of population is abnormal

With the basic of decision taking based on profitability:

- Significant > 0.05 then Ho is accepted (data distributed is normal)
- Significant < 0.05 then Ho is rejected (data distributed is abnormal)

3.4.2. Classical Assumption Test

a. *Multi Co-linear Test*

In detecting whether the multi co-linear is available or not, the writer uses correlation matrix analyses between independent variable and tolerance, and also the value computation of *Variance Inflation Factor (VIF)*. Multi co-linear describes that between independent variable with tolerance has strong correlation.

Multi co-linear happens when VIF value is greater than 10 or the tolerance is lower 0.10. Hypothesis multi co-linear are:

- **Ho**: there is no multi co-linear
- **Ha**: there is multi co-linear

The basic of decision taken:

- If VIF > 10, then Ho is rejected (multi co-linear is available)
If VIF < 10, then Ho is accepted (multi co-linear is unavailable)

b. Auto Correlation

Auto Correlation test is a statistical test that determines whether a random number generator is producing independent random numbers in a sequence. Auto correlation test is conducted by using Durbin Watson.

The stages of auto correlation test are as follows:

- Ho : auto correlation is unavailable
- Ha : auto correlation is available

Decision:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Ho</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 &lt; Dw &lt; dl</td>
<td>Rejected</td>
<td>Auto correlation available</td>
</tr>
<tr>
<td>DL &lt; Dw &lt; DU</td>
<td>No decision</td>
<td>No decision</td>
</tr>
<tr>
<td>4-DL &lt; Dw &lt; 4</td>
<td>Rejected</td>
<td>Positive auto correlation</td>
</tr>
<tr>
<td>4-DU &lt; Dw 4-DL</td>
<td>No decision</td>
<td>No decision</td>
</tr>
<tr>
<td>Du &lt; Dw &lt; 4-DU</td>
<td>Accepted</td>
<td>Auto correlation unavailable</td>
</tr>
</tbody>
</table>

Table 3.2
Auto Correlation Stages

3.4.3. Coefficient of Determination (Fit Model Test)

Coefficient of determination is, $R^2$, is used in the context of statistical models whose main purpose is the prediction of the future outcomes on the basis of other related information. It is the proportion of variability in a data set that is accounted by the statistical model. It provides a measure of how well future outcomes are likely to be predicted by the model. In this case, where the values of coefficient of determination are vary from 0 and 1 which means the ability of independent variables in explaining dependent variables are very limited.
a. **T-test**

T-test assesses whether the means of two groups are statistically different from each other. This analysis is appropriate whenever you want to compare the means of two groups, and especially appropriate as the analysis for the posttest-only two-group randomized experimental design. The T-test is conducted by comparing the computation of statistic of significant with \( \alpha = 5\% \) (0.05). Where:

- \( p\)-value > 0.05 is not significant, then Ho is accepted
- \( p\)-value < 0.05 is significant, then Ho is rejected

b. **F-test**

F-test is a regression testing model of independent variable towards dependent variable to determine if significantly independent variable has effect towards dependent variable. Where:

- If F statistic is significant > 0.05, then Ho is accepted
- If F statistic is significant < 0.05, then Ho is rejected

It means if Ho is accepted then all independent variables simultaneously have no significant effect towards dependent variables. Meanwhile if Ho is rejected then all independent variables simultaneously have effect toward dependent variables.

### 3.5. Limitation

During the research, writer faces some limitations such as the limited time to analysis the data and also the writer only focus on twenty companies enlisted in Indonesia Stock Exchange during period 2002 – 2007. The writer limits her research in three variables which are independent variables (short-term debt, long-term debt, total debt, and trade credit), dependent variables (gross profit margin, return on asset, and market-to-book value or Tobin’s \( Q \).
IV. ANALYSIS OF DATA AND INTERPRETATION OF RESULTS

4.1. Data Presentation

4.1.1. Descriptive of Research Variables

1. *Short-term Debt Ratio*

Short-term debt ratio in this research is measured by comparing Short-term Debt with Total Capital of every company annually during the research. The computation results from short-term debt ratio of the non-financial companies during 2002 – 2007 stated a company which has the highest short-term ratio in 2002 is PT. Cipendawa Argo Industry Tbk with 2.6989, while the company which has the lowest short-term debt ratio is PT. Siwani Makmur with 0.

In 2003, company which has the highest short-term debt ratio is PT. Schering Plough Indonesia with 9.2444 and the lowest short-term debt ratio is PT. Siwani Makmur with 0. In 2004, company which has the highest short-term debt ratio is PT. Schering Plough Indonesia with 27.1903 and the lowest short-term debt ratio is PT. Siwani Makmur Tbk with 0.

In 2005, the highest short-term debt ratio is owned by PT. Schering Plough Indonesia with 65.8748 and the lowest short-term debt ratio is PT. Siwani Makmur Tbk with 0. In 2006, PT. Schering Plough Indonesia still has the highest short-term debt ratio with 64.4347, while PT. Siwani Makmur still also has the lowest short-term debt ratio with 0. In 2007, PT. Schering Plough Indonesia still has the highest short-term debt ratio with 65.7581 and the lowest short-term debt ratio is still PT. Siwani Makmur Tbk with 0.

2. *Long-term Debt Ratio*

Long-term debt ratio is measured by comparing Long-term Debt with Total Capital of company. From the computation of 20 samples in this research, it can be assumed during the research period within 2002 – 2007, company which has the highest long-term debt ratio in 2002 is PT. Cipendawa Argo
Industry with 0.2412 and the lowest long-term debt ratio are owned by PT. Schering Plough Indonesia, PT. Indoexchange, and PT. Karka Yasa Profilia with 0 each others.

In 2003, company which has the highest long-term debt ratio is PT. Schering Plough Indonesia Tbk with 0.9319, while companies which have the lowest long-term debt ratio are both PT. Indoexchange and PT. Karka Yasa Profilia with 0. In 2004, the highest long-term debt ratio is same as previous year which is PT. Schering Plough Indonesia with 2.5689 and the lowest are still the same both of PT. Indoexchange and PT. Karka Yasa Profilia with 0.

In 2005, PT. Schering Plough Indonesia still leads the highest long-term debt ratio with 4.4383 and the lowest are still PT. Indoexchange and PT. Karka Yasa Profilia with 0. Meanwhile in 2006, company which has the highest long-term debt ratio is also still PT. Schering Plough Indonesia with 4.5667 and the lowest one is PT. Indoexchange Tbk with 0.0082. Then, in 2007 PT. Schering Plough Indonesia remains to own the highest long-term debt ratio with 4.7458 and the company which has the lowest long-term debt ratio is PT. Akbar Indo Makmur Stimec Tbk with 0.0106.

3. **Total Debt Ratio**

Total debt ratio is measured by comparing Total Debt with Total Capital of the company. The computation of total debt ratio results during the research period within 2002 – 2007 of 20 samples explaining that company which has the highest total debt ratio in 2002 is PT. Cipendawa Argo Industry Tbk with 2.9401. Meanwhile, the lowest total debt ratio is PT. Ciptojaya Kontrindoreksa Tbk with 0.0226.

The highest ratio in 2003 is owned by PT. Schering Plough Indonesia Tbk with 9.3481 and the lowest ratio is PT. Ciptojaya Kontrindoreksa Tbk with 0.0203. Then, in 2004 company which has the highest ratio is still PT. Schering plough Indonesia Tbk with 29.7587, while the lowest one is also still PT. Ciptojaya Kontrindoreksa Tbk with -0.0181. In 2005, PT. Schering Plough Indonesia Tbk still has the highest ratio with 70.3131 and PT. Ciptojaya Kontrindoreksa Tbk is still has the lowest ratio with 0.0712.
In 2006, the highest ratio is still owned by PT. Schering Plough Indonesia Tbk with 69.0007 meanwhile the lowest one is PT. Roda Panggon Harapan Tbk with 0.0325. Then in 2007, company which has the highest total debt ratio is PT. Schering Plough Indonesia Tbk with 70.5044 and the lowest total debt ratio is still PT. Roda Panggon Harapan Tbk with 0.0486.

4. Trade Credit Ratio

Trade credit ratio is measured by comparing Trade Credit with Total Capital of the company. The computation of trade credit ratio of 20 samples during the research period within 2002 – 2007 can be assumed that company which has the highest ratio in 2002 is PT. Lion mesh Prima Tbk with 0.2910. Meanwhile company which has the lowest ratio is PT. Roda Panggon Harapan Tbk with 0.0003. In 2003, company which has the highest ratio is PT. Schering Plough Indonesia Tbk with 1.4304 and the lowest one is PT. Roda Panggon Harapan Tbk with 0.0002.

PT. Schering Plough Indonesia Tbk in 2004 has the highest ratio with 1.9800 and PT. Ciptojaya Kontrindoreksa Tbk has the lowest ratio with -0.0002. Then in 2005, the highest ratio is still owned by PT. Schering plough Indonesia Tbk with 2.8719 and the lowest one is PT. Roda Panggon Harapan Tbk with 0.0034. PT. Schering Plough Indonesia Tbk once again still has the highest ratio in 2006 with 2.7985 and PT. Ciptajaya Kontrindoreksa Tbk has the lowest ratio with 0.0042. In 2007, PT. Schering Plough Indonesia again successfully has the highest trade credit ratio with 3.9177 meanwhile the lowest trade credit ratio is PT. Indoexchange Tbk with 0.0059.

5. Gross Profit Margin (GPM)

Gross profit margin is measured by comparing Gross Profit with Sales. The computation of GPM of 20 (companies) samples during 2002 – 2007 stated that company which has the highest GPM in 2002 is PT. Akbar Indo Makmur Stimec Tbk with 0.9229, while company which has the lowest GPM in the same year is PT. Betonjaya Manunggal Tbk with 0.0004. In 2003, the highest GPM is owned by PT. Schering Plough Indonesia Tbk with 2.5614 and PT. Cipendawa Agroindustri Tbk has the lowest GPM with 0.0402.
Then PT. Akbar Indo Makmur Stimec Tbk has the highest GPM in 2004 with 0.9135 meanwhile the lowest GPM is owned by PT. Lapindo Internasional Tbk with 0.0737. PT. Inter Delta Tbk has the highest GPM in 2005 with 0.8170 and the lowest GPM is PT. Sugi Samapersada Tbk with 0.0038. Company which has the highest GPM in 2006 is PT. Betonjaya Manunggal Tbk with 0.9193 and the lowest one is PT. Delta Dunia Petroindo Tbk with 0.00149. In 2007, the highest GPM is owned by PT. Pyridam Farma Tbk with 0.6421 and the lowest GPM is owned by PT. Delta Dunia Petroindo with 0.0154.

6. **Return On Asset (ROA)**

ROA or return on asset is measured by comparing Net Profit/Net Income with Total Asset. From the computation of 20 samples during the research period within 2002 - 2007, it is found that in 2002 company which has the highest ROA is PT. Ekadharma Internasional Tbk with 0.17071, and the lowest ROA is owned by PT. Inter Delta Tbk with -0.4689.

In 2003, company has the highest ROA is PT. Inter Delta Tbk with 0.9380 and the lowest one is PT. Siwani Makmur Tbk with -0.5492. Then, PT. Cipendawa Argoindutri Tbk has the highest ROA in 2004 with 113.94 and the lowest ROA is owned by PT. Indoexchange with -0.91. While in 2005 PT. Lionmesh Prima Tbk has the highest ROA with 0.0974 and the lowest one is PT. Indoexchange Tbk with -0.5127.

Then PT. Centrin Online Tbk has the highest ROA with 0.0789 in 2006, while company which has the lowest ROA in the same year is still Indoexchange Tbk with -0.2256. PT. Betonjaya Manunggal in 2007 has the highest ROA with 0.1890 meanwhile the lowest ROA is still PT. Indoexchange Tbk with -987.77.

7. **Market-to-book value (Tobin’s Q)**

Tobin’s Q is the comparing of Market Price per Share with Book Value per Share. From the computation of 20 samples during research period within 2002 – 2007, it is found that company has the highest Tobin’s Q in 2002 is
PT. Lapindo Internasional Tbk with 3.8231, and company which has the lowest Tobin’s Q is PT. Ciptojaya Kontrindoreksa Tbk with 0.1866.

In 2003, company which has the highest Tobin’s Q is still PT. Lapindo Internasional Tbk with 3.7463 and once again PT. Ciptojaya Kontrindoreksa Tbk still has the lowest Tobin’s Q with 0.2403. While PT. Samapersada Tbk in 2004 has the highest Tobin’s Q with 3.6983 and the lowest one is still PT. Ciptojaya Kontrindoreksa with 0.3860. Then in 2005, the highest Tobin’s Q is owned by PT. Lapindo Internasiona Tbk with 3.2368, while the lowest Tobin’s Q is PT. Ciptojaya Kontrindoreksa Tbk with 0.2013.

Company which has the highest Tobin’s Q in 2006 once again is PT. Lapindo Internasional Tbk with 3.2120 and the lowest one is PT. Ciptojaya Kontrindoreksa Tbk with 0.2675. Then in 2007, PT. Indoexchange Tbk has the highest Tobin’s Q with 40.8516 and PT. Jasuindo Tiga Perkasa Tbk has the lowest Tobin’s Q with 0.3800.

4.1.2 Descriptive Statistic Analysis
The result of descriptive statistic of the research can be seen in table 4.1:

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Profit Margin</td>
<td>120</td>
<td>.00</td>
<td>2.56</td>
<td>.2975</td>
<td>.31022</td>
</tr>
<tr>
<td>ROA</td>
<td>120</td>
<td>-987.77</td>
<td>113.94</td>
<td>-7.6456</td>
<td>92.16586</td>
</tr>
<tr>
<td>Tobin's Q</td>
<td>120</td>
<td>.19</td>
<td>40.85</td>
<td>1.5965</td>
<td>3.72700</td>
</tr>
<tr>
<td>Short Term Debt Ratio</td>
<td>120</td>
<td>.00</td>
<td>65.87</td>
<td>2.5279</td>
<td>10.44398</td>
</tr>
<tr>
<td>Long Term Debt Ratio</td>
<td>120</td>
<td>.00</td>
<td>4.75</td>
<td>.2728</td>
<td>.77957</td>
</tr>
<tr>
<td>Total Debt Ratio</td>
<td>120</td>
<td>.02</td>
<td>70.50</td>
<td>2.8216</td>
<td>11.16613</td>
</tr>
<tr>
<td>Trade Credit Ratio</td>
<td>120</td>
<td>.00</td>
<td>3.92</td>
<td>.2920</td>
<td>.60468</td>
</tr>
<tr>
<td>Valid N (list wise)</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tabel 4.1

N: Total companies (20) multiply six (6) years

Source: (data conducted by SPSS)
Based on general description of table above, it can be explained as follows; variable *Gross Profit Margin* has the minimum score with 0.00, the maximum score with 2.56, the standard deviation score with 0.31022, and the mean score with 0.2975. While variable *ROA* has the minimum score -987.77, the maximum score with 113.94, the mean score with -76456 and the standard deviation score with 92.165586. Then variable *Tobin’s Q* has the minimum score with 0.19, the maximum score with 40.85, the mean score with 1.5965, and the standard deviation score with 3.72700.

Variable *Short-term Debt Ratio* has the minimum score with 0.00, the maximum score with 65.87, the mean score with 2.5279, and the standard deviation score with 10.44398. Variable *Long-term Debt Ratio* has the minimum score with 0.00, the maximum score with 4.75, the mean score with 0.2718, and the standard deviation score with 0.77957. Meanwhile, variable *Total Debt Ratio* has the minimum score with 0.02, the maximum score with 70.50, the mean score with 2.8216, and the standard deviation score with 11.16613.

Variable *Trade Credit Ratio* has the minimum score with 0.00, the maximum score with 3.92, the standard deviation score with 0.60468, and the mean score with 0.2920.

### 4.2. Analysis and Interpretation

#### 4.2.1. Multi Linear Regression Analysis

Multi linear regression is an analysis used to evaluate the effect of independent variable like *performance* towards dependent variable like *debt ratio*. From the statistic analysis, it results a regression equation shown in table 4.2:

**Table 4.2**

<table>
<thead>
<tr>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPM = 0.310+0.543SDC+0.373LDC-0.529TDC+0.020TCC</td>
</tr>
<tr>
<td>ROA = 0.599+60.382SDC-66.174LDC-53.107TDC+24.028TCC</td>
</tr>
<tr>
<td>TOBIN’S Q = 1.163-2.204SDC+3.483LDC+1.865TDC-0.711TCC</td>
</tr>
</tbody>
</table>

**F-test**

a. *Gross Profit Margin*
Table 4.3
Simultant Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.609</td>
<td>4</td>
<td>.402</td>
<td>4.701</td>
<td>.002a</td>
</tr>
<tr>
<td>Residual</td>
<td>9.843</td>
<td>115</td>
<td>.086</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.452</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio
b. Dependent Variable: Gross Profit Margin

Based on ANOVA table of regression test, Fstatistic is 4.701 with p-value 0.000 < α 0.05, then Ho is rejected. It means if it is tested simultaneously, all the independent variables like debt ratio altogether will affect dependent variable like gross profit margin.

b. ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>116698.358</td>
<td>4</td>
<td>29174.589</td>
<td>3.752</td>
<td>.007a</td>
</tr>
<tr>
<td>Residual</td>
<td>894152.654</td>
<td>115</td>
<td>7775.240</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1010851.012</td>
<td>119</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio
b. Dependent Variable: ROA

Based on ANOVA table of regression test, Fstatistic is 3.752 with p-value 0.000 < α 0.05, then Ho is rejected. It means if it is tested simultaneously, all the independent variables like debt ratio altogether will affect dependent variable like ROA.

c. Tobin’s Q

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<tr>
<td>Regression</td>
<td>229.016</td>
<td>4</td>
<td>57.254</td>
<td>4.624</td>
<td>.002a</td>
</tr>
</tbody>
</table>


Residual | 1423.959 | 115 | 12.382 |
Total    | 1652.975 | 119 |

a. Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio

b. Dependent Variable: Tobin's Q

Based on ANOVA table of regression test, Fstatistic is 4.624 with p-value 0.000 < α 0.05, then Ho is rejected. It means if it is tested simultaneously, all the independent variables like debt ratio altogether will affect dependent variable like Tobin’s Q.

**T-test**

In this research, the hypothesis is tested using T-test. This T-test is a test conducted to evaluate if there is significant effect between independent variable such as long-term debt, short-term debt, total debt, and trade credit towards dependent variable like performance. Based on t-sign score, if the probability < 0.05, then Ho is rejected and so is the against.

Here is the computation result:

<table>
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<tr>
<th>Coefficients</th>
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<tr>
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</tr>
<tr>
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</tr>
</tbody>
</table>

a. Dependent Variable: Gross Profit Margin

**Table 4.4 (T-test Result)**

Based on T-test shown on table 4.4 above, it is concluded as follows:
a. **Gross Profit Margin (GPM)**

Hypothesis 1: There is positive effect between *Short-term Debt* towards *Gross Profit Margin*.

Based on table 4.4, the significant of variable *Short-term Debt* is $0.000 < 0.05$ then H01 is accepted, so we can conclude there is effect between *Short-term Debt* towards *Gross Profit Margin* and has beta ($\beta$) coefficient 18.270 which means *Short-term Debt* has positive effect. This result matches with the previous section which found *Short-term Debt* has positive effect towards *GPM*.

Hypothesis 2: There is negative effect between *Long-term Debt* towards *Gross Profit Margin*.

Based on table 4.4, the significant of variable *Long-term Debt* is $0.008 > 0.05$ then H02 is rejected, so we can conclude there is effect between *Long-term Debt* towards *Gross Profit Margin* and has beta ($\beta$) coefficient 0.938 which means *Long-term Debt* has negative effect. This result match with the previous section which found *Long-term Debt* has negative effect towards *GPM*.

Hypothesis 3: Effects *Total Debt* towards *Gross Profit Margin*.

Based on table 4.4, the significant of variable *Total Debt* is $0.003$, where $0.000 < 0.05$ then H03 is rejected, so we can conclude there is effect between *Total Debt* towards *Gross Profit Margin* and has beta ($\beta$) coefficient -19.026 which means *Total Debt* has negative. This result matches with the previous section which found *Total Debt* has both positive/negative effects towards *GPM*.

Hypothesis 4: There is positive effect between *Trade Credit* towards *Gross Profit Margin*.

Based on table 4.4, the significant of variable *Trade Credit* is $0.813 > 0.05$ then H04 is rejected, so we can conclude there is no effect between *Trade Credit* towards *Gross Profit Margin* and has beta ($\beta$) coefficient 0.049 which means *Trade Credit* negative effect. Furthermore, it results there is negative effect between *Trade Credit* with *GPM*. This result does not match with the previous section which found *Trade Credit* has positive effects towards *GPM*.
b. ROA

<table>
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<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<td>Long Term Debt Ratio</td>
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<tr>
<td>Total Debt Ratio</td>
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<td>40.782</td>
<td>-6.434</td>
<td>-1.302</td>
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<td>Trade Credit Ratio</td>
<td>24.028</td>
<td>24.972</td>
<td>.158</td>
<td>.962</td>
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</table>

a. Dependent Variable: ROA

Hypothesis 1: There is positive effect between *Short-term Debt* towards ROA.

Based on table 4.4, significant of variable *Short-term Debt* is 0.149 > 0.05 then H01 is rejected, so we can conclude there is effect between *Short-term Debt* towards ROA and has beta (β) coefficient 6.842 which means *Short-term Debt* has negative effect. This result not matches with the previous section which found *Short-term Debt* has positive effect towards ROA.

Hypothesis 2: There is negative effect between *long-term Debt* towards ROA.

Based on table 4.4, significant of variable *Long-term Debt* is 0.117 > 0.05 then H02 is accepted, so we can conclude there is effect between *Long-term Debt* towards ROA and has beta (β) coefficient -0.560 which means *Long-term Debt* has negative effect. This results matches with the previous section which found *Long-term Debt* has negative effect towards ROA.

Hypothesis 3: Effects between *Total Debt* towards ROA.

Based on table 4.4, significant of variable *Total Debt* is 0.195 > 0.05 then H03 is rejected, so we can conclude there is effect between *Total Debt* towards ROA and has beta (β) coefficient -1.302 which means *Total Debt* has negative effect. This results
matches with the previous section which found *Total Debt* has positive/negative effect towards *ROA*.

Hypothesis 4: There is positive effect between *Trade Credit* towards *ROA*.

Based on table 4.4, significant of variable *Trade Credit* is 0.338 > 0.05 then H04 is rejected, so we can conclude there is effect between *Trade Credit* towards *ROA* and has beta (β) coefficient 0.158 which means *Trade Credit* has negative effect. This result does not match with the previous section which found *Trade Credit* has positive effect towards *ROA*.

c. Tobin’s Q

<table>
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a. Dependent Variable: Tobin's Q

Hypothesis 1: There is positive effect between *Short-term Debt* towards *Tobin’s Q*.

Based on table 4.4, significant of variable *Short-term Debt* is 0.187 > 0.05 then H01 is rejected, so we can conclude there is effect between *Short-term Debt* towards *Tobin’s Q* and has beta (β) coefficient -6.176 which means *Short-term Debt* has negative effect. This result not matches with the previous section which found *Short-term Debt* has positive effect towards *Tobin’s Q*.

Hypothesis 2: There is negative effect between *long-term Debt* towards *Tobin’s Q*.

Based on table 4.4, significant of variable *Long-term Debt* is 0.040 > 0.05 then H02 is accepted so we can conclude there is effect between *Long-term Debt* towards *Tobin’s
Q and has beta (β) coefficient 0.728 which means Long-term Debt has negative effect. This result match with the previous section which found Long-term Debt has negative effect towards Tobin’s Q.

Hypothesis 3: Effects between Total Debt towards Tobin’s Q.

Based on table 4.4, significant of variable Total Debt is 0.254 > 0.05 then H03 is accepted, so we can conclude there is no effect between Total Debt towards Tobin’s Q and has beta (β) coefficient 5.588 which means Total Debt has negative effect. This result matches with the previous section which found Total Debt has positive/negative effect towards Tobin’s Q.

Hypothesis 4: There is positive effect between Trade Credit towards Tobin’s Q.

Based on table 4.4, significant of variable Trade Credit is 0.477 > 0.05 then H04 is rejected, so we can conclude there is effect between Trade Credit towards Tobin’s Q and has beta (β) coefficient 0.115 which means Trade Credit has negative effect. This result not matches with the previous section which found Trade Credit has positive effect towards Tobin’s Q.

4.2.2. Interpretation

In this research, T-test results that short-term debt ratio has positive effect towards performance. This result matches with the research conducted by Abor (2005) where he explains that short-term debt has positive effect with performance. This research is similar with research conducted by Eriotis et al (2007, cited from Marsh, 1982) that explains the level target of debt determined by a firm decides the size of the firm, and also has positive effect towards firm’s debt ratio. Then, the result is supported by the research of Homaifar et al (1994) state there is effect between firm size with firm’s debt ratio. The small sized firm will find difficulties such as the firm will need more transaction cost to communicate with the creditor (Cassar and Holmes, 2003). This means if the firm is using more short-term debt, so the firm’s performance will be better.

The next test is conducted to test the effect between long-term debt with performance. However, the T-test result of the research is supported by Myers (1984) where in his research he states the large sized firms could take the disadvantage from economic scale in long-term debt releasing and have bargaining position from the creditors. In
other words, the large sized firms with its own stable clash flow the probability to be bankrupted is small rather than small sized firms. It shows that to gain firm’s performance, so the long-term debt ratio must be gained too.

In this research, total debt ratio is found to have significant effect towards performance. This matches with the research conducted by Abor (2005). This ratio theoretically is found as decisive factor of capital structure. The first analyses of firm’s debt ratio conclude that leverage does not affect the value of firm overall. In order to affect the value of firm, leverage should change the total cash flow which is returned from the current asset or investment of the new asset. The different result happens because of the difference data used. In this research, data used in only for nonfinancial firms which are listed in Indonesian Stock Exchange (IDX), while Abor (2005) used Small and Medium Enterprises (SMEs) listed in Ghana and South Africa as his data. Besides the difference of data used, companies which do not pay interest in specific period will also become the cause the difference.

In this research, the test is also conducted to evaluate the effect between trade credit with performance. In the previous section it is already explained that there is positive effect between trade credit with performance. Based on the research by Abor (2005) which states that trade credit is predicted possibly to give positive effect towards performance, because the trade creditors could give credit to company which has good financial perform.
V. CONCLUSION AND RECOMMENDATION

5.1. Conclusion
According to the analysis of data and interpretation of results done by the writer about factors that affect Gross Profit Margin, Return On Assets, and Tobin’s Q such as: Short-term Debt, Long-term Debt, Total Debt, Trade Credit. Then, the writer concludes that:

1. Short-term Debt has positive effect towards Gross Profit Margin and Return on Assets has negative effect. While Short-term Debt has negative effect towards Tobin’s Q.
2. Long-term Debt has negative effect towards Gross Profit Margin and Return on Assets. While Long-term Debt has negative effect towards Tobin’s Q.
3. Total Debt has positive effect towards Gross Profit Margin and Return Assets has negative effect. While Total Debt has negative effect towards Tobin’s Q.
4. Trade Credit has negative towards Gross Profit Margin and Return on Assets. While Trade Credit has negative effect towards Tobin’s Q.

However, the writer realizes this research is far beyond perfection. There were a lot of limitations faced during the research such as the limited of period during this research which is 6 years starting from 2002-2007, and also the limited samples to be observed which only focus on non-financial company.

5.2. Recommendation
5.2.1. Significant of Study:
Based on the research findings above, the writer intends to make some recommendations as follow:

1. For the company
   It is important for company to consider its policies to gain the performance seen from Gross Profit Margin, Return on Assets, and Tobin’s Q. It is also important to consider
other factors such as *Short-term Debt, Long-term Debt, Total Debt* that could affect company’s performance efficiently.

2. For the investor

It is important for investors to consider factors such as *Short-term Debt, Long-term Debt, Total Debt* of the company before doing the investment.

### 5.2.2. Implication for Further Study

In order to improve the quality of the research, the writer expresses these following recommendations as follows:

1. The period used for research is better using more than six (6) years to gain better accuracy.

2. Using much more sample to gain better accuracy.

3. Using other factors that could affect company’s performance such as sales stability, operating leverage, tax, management controlling, management attitudes, lender and rating agency attitudes, market condition, the company’s internal condition, financial flexibility in order to get best result.
REFERENCES

Books


Basley, 1970. High levels of reliability of gathered data due to controlled.


Periodicals


Tobin (1969). Measured by market value of the common shares and leverage. 

Hall et. all (2004). Defined short term debt as the proportion of total debts of company which could be paid in one year. 

APPENDICES
### Descriptives

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<sup>a</sup> All requested variables entered.

### Model Summary

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<sup>a</sup> Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio

### ANOVA<sup>b</sup>

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<sup>a</sup> Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio

<sup>b</sup> Dependent Variable: Gross Profit Margin

### Coefficients<sup>a</sup>

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<sup>a</sup> Dependent Variable: Gross Profit Margin
Regression2

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a. Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio

ANOVA

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a. Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio
b. Dependent Variable: ROA

Coefficients

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a. Dependent Variable: ROA
Charts 2

Histogram

Dependent Variable: ROA

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: ROA

Scatterplot

Dependent Variable: ROA
### Regression3

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<sup>a</sup> Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio

#### ANOVA<sup>b</sup>

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<sup>a</sup> Predictors: (Constant), Trade Credit Ratio, Long Term Debt Ratio, Short Term Debt Ratio, Total Debt Ratio

<sup>b</sup> Dependent Variable: Tobin’s Q

#### Coefficients<sup>a</sup>

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<td>-6.176</td>
<td>-1.328</td>
</tr>
<tr>
<td>Long Term Debt Ratio</td>
<td>3.483</td>
<td>1.674</td>
<td>.728</td>
<td>2.080</td>
</tr>
<tr>
<td>Total Debt Ratio</td>
<td>1.865</td>
<td>1.627</td>
<td>5.588</td>
<td>1.146</td>
</tr>
<tr>
<td>Trade Credit Ratio</td>
<td>-.711</td>
<td>.997</td>
<td>-.115</td>
<td>-.713</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: Tobin’s Q
Charts3