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The Effect of Company Fundamental Factor to the Firm Leverage

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ABSTRACT

This paper intended to study the influenced factors of company due to the firm leverage. Purposive sampling method was used to collect data in the period of 2005-2009. There were 44 firms that fulfill the criteria. Data of this research were analyzed by using path analysis method. Results showed that profitability, firm size, asset tangibility, inflation rate had positive influence to the firm leverage. For the other variables with exception the Gross Domestic Brute (GDP) Growth had negative influence to the firm leverage. The results can give the contribution of developing capital structure theory in agency problem and these can use as fundamental base in making decision by manager to act the disciplinary for optimizing the prosperity of stock share owner and holder.

Keywords: profitability, sales growth, firm size, asset tangibility, liquidity, GDP growth, inflation rate, interest rate, leverage.

INTRODUCTION

Every company is demanded to be able to reach the goal of firm and every reaching of company goal can increase the value of company. The value size of company is the whole number between market value of debt and market value of equity which is illustrated in the pie model or the pie model itself [1]. The increasing of company value is as an illustration on prosperity increasing of the shareholder through the devident which is payed and the increasing of share rate. Trade-off theory predicted that in finding the relation between capital structure and company value there was optimal debt ratio [2]. The usage of credit will increase company value until the certain limitation of leverage (optimal leverage), and then the usage of credit will decrease company value because the usage of credit after optimal leverage will cause the bigger bankcrupty cost. Based on this theory, the big companies generally have a small trend to be bankrupt, so that are easier to obtain the credit from bank than the small one.

The structure of asset is as an important issue for company because good or bad of asset structure will has a direct effect to the financial structure of a company. Optimal asset structure can change in time. There are some factors which influence asset structure such as long run viability, managerial conservatism, lender and rating agency attitudes, reserved borrowing capacity and financing flexibility, control asset structure, growth rate, profitability, and tax [3]. Fundamental factor is a factor in outside of asset market which will influence the incoming share rate. Analysis of share rate based on the fundamental factors are principal because the base reason that causes the moving of share rate is the anticipation about the changing in income or profit [4]. The fundamental factors are very wide and complex, they are not only including internal company (basic financial) but they also includes external company (basic economy). Fundamental analysis includes the analysis of economy and industry, evaluation of individual company by using devident and profitability evaluation model or asset evaluation model, and financial report like trend and ratio analysis [4]. Based on the description as above, fundamental factors can be differentiated into internal and external fundamental factor. The changes in external factors like inflation, interest rate, kurs, and economic growth will influence the market or systematic risk [5] as well as the internal fundamental factors which are as company performance that is predicted as profitability, selling growth, company size, asset tangibility, and liquidity.

The objective of this study was to evaluate the influenced factors due to the firm leverage. This study conducted in 44 firms by using secondary data. The expectation of this study was to contribute the develpment of capital structure theory in agency problem.

MATERIALS AND METHODS

This study used secondary data from Bursa Efek Indonesia (BEI) and data of share rate from Indonesia Securities Market Directory (ISMD) of Asset Market Data Centre (Pusat Data Pasar Modal-PDPM), Faculty of Economy, and University of Airlangga in the tear of 2005 until 2009 for the companies which move in manufacture.

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The procedure of data collecting

Archival was indirect method that was used in tis study in the procedure of data collecting such as data was collected from the note or available data base of secondary data [8]. Archival strategy was used for getting secondary data from publication report of BEI in www.idx.go.id and data of share rate from Indonesia Securities Market Directory (ISMD) of Asset Market Data Centre (Pusat Data Pasar Modal-PDPM), Faculty of Economy, and University of Airlangga. Observed data in this study was from some groups and sub-category in the same time (cross sectional). Purposive sampling was used for selecting the samples and it was based on the judgment sampling with the criteria as follow:

1. Manufacture company with finance report from 2005 to 2009.
2. It was registered in BEI from 2005 to 2009.
3. It has not negative equity total balance during 2005 to 2009.
4. It has not experienced the harmless during 2005 to 2009

The third and fourth criteria were added by some researchers that company with negative equity balance and experienced in harmless did not have a strong meaning in the determining process of asset structure. The procedure of sample selection was presented as in Table 1.

Table 1 Procedure of sample selection

No.	Sample selection	Total
1.	Manufacture company that was registered in BEI in 2005 – 2009	141
2.	Manufacture company that had negative equity saldo	(56)
3.	Manufacture company that experienced the harmless	(41)
4.	Sample – targeted population	44

Source: analysis of secondary data

Fundamental factor of company

a. Profitability

Profitability is a standard of company ability in producing profit and it will indicate the affectivity of company management in using asset to produce profit as big as possible [6]. The measurement of company profitability in this study used finance ratio ROA or ROI which was as an important ratio in analysis of company profitability. ROA or ROI is obtained by comparing the net income after tax to the average total asset as follow:

$$\text{ROA} = \frac{Net\ Income\ After\ Tax}{Average\ Total\ Assets}$$

b. Growth of selling

Growth of selling is defined as growth level of selling which is measured as the growth of company selling. Growth of selling as the difference between the selling in the year of t and t-1, then it is divided by the selling in the year of t-1 [9]. The formula is as follow:

$$Sales_{it} = \frac{Sales_{it} - Sales_{it-1}}{Sales_{it-1}}$$

c. Company size

Company size ia as the illustration on the big or small scale of a company which is determined from natural logarithm of total assets . The formula is as follow:

Company size = natural logarithm of total assets

d. Asset tangibility

Asset tangibility is as activa shaped belonging to the company. This activa shaped will be used by the company as a guarantee for getting credit. The measurement of activa shaped used the ratio total fixed assets compared with total assets [9][10] The formula is as follow:

$$\boldsymbol{Asset\ Tangibility} = \frac{Total\ Fixed\ Assets}{Total\ Assets}$$

e. Liquidity

The usage of current ratio for measuring the liquidity level of company is as the comparison result between current assets and current liabilities in a company {11][12]. The formula is as follow:

$$\textbf{\textit{Current Ratio}} = \frac{Current\ Assets}{Current\ Liabilities}$$

f. Growth of GDP

Growth of GDP which is reflected in the percentage per-year is as the economical growth indicator of a country [13]. This study used statistical data: Commulative Growth Rate of Brutto Domestic Product Based on Business Field from Statistical Center Department (Badan Pusat Statistik-BPS) through the website of http://www.bps.go.id

g. Level of inflation

Level of inflation is as the increasing in general rate level which the data is obtained from Statistical Center Department (Badan Pusat Statistik-BPS) through the website of http://www.bps.go.id: Consument Rate Index and Annual Inflation of Indonesia.

h. Level of iterest

This study used the interest of end year which was remained by Indonesia Bank (BI Rate). BI Rate was defined as the policy interest (rate) which reflected the behaviour or stance of moneter policy which was remained by Indonesia Bank (BI) and was announced to public, http://www.bi.go.id

Leverage

Leverage ratio measures how far the expenditure or budget being carried out by credit compared with the asset and ability for paying interest and the other fixed load. Leverage ratio in this study was measured by using Debt to Asset Ratio (DAR). It is due to DAR is one of credit ratio which is usually used for evaluating company condition. DAR can also evaluate that a company is good or bad in its credit management so that the risk level of the company can be better understood. DAR is one part of credit risk which is used for looking the credit asset structure that is used to lease total of activa [14]. Ratio scale is used for this variable. The formula of DAR is as follow:

$$\text{DAR} = \frac{Net\ \ Liabilities}{Total\ \ Assets}$$

Relation between the profitability, selling growth, company size, asset tangibility, liquidity and the leverage

Determinant conventional model of asset structure presents that credit ratio of activate (leverage) is influenced by basic earning power belonging to company like profitability, activate size, level of activate growth and selling, shaped activate which can be used as guarantee, etc. Qiu and La [15] expressed that profitability had negative influence to the company credit ratio. By the high level of probability, the company will have a trend to decrease the credit as the funding policy because internal funding of company profit is assumed to have been enough and cheap for company funding. This result is the same as the previous study of Kester [16], Friend and Lang [17], Titman and Wessels [18], Rajan and Zingales [19], Michaelas *et al* [20], Wiwattanakantang [21], Booth *et al* [13], Um [22], Huang and Song [23].

There were may studies which indicated the positive influence of company size due to the financial leverage. According to Rajan and Zingales [19], company size gave positive influence to te company credit ratio. It was the same as the research of Gupta [24], Titman and Wessels [18], Setiawan and Taib [25], Frank and Goyle [26], Qiu and La [15].

Company size which determines a company is big or small, becomes as one of the important determinacy in making funding policy. According to Sawir [27], company size became determinant in financial structure because the company size will determine company ease level in getting the fund. Company with big scale size will be easier getting fund. It is caused by the investor or creditor considerate the company size. Therefore, company with bigger size will be more able to make sure the creditor.

The relation between liquidity and leverage causes the controversy from some researchers which evaluated the determined factors of capital structure. Manos *et.al* [28] has evaluated the capital structure. In 2004, Bhole and Mahakud [29] found that liquidity had negative influence to the leverage with the reason that company with good liquidity had strong asset to make sure the creditor in requirement of credit. Some researchers had the opposite opinion. They argued that liquidity had negative influence to the leverage.

Company with good liquidity level by showing it through the financial ratio like current ratio, quick ratio, etc ought to have the capacity of current assets which was bigger than current liabilities. The expectant is the big current assets ought to cause the company has enough fund in leasing infestation of the whole activities.

The relation between GDP growth, level of inflation, and level of interest to the leverage

Risk points in the situation which there is more than one result possibility of decisions. Risk demands the manager to know the whole result possibilities of a decision and chance of the possibilities. As the previous sample, in launching the new product, manager can study chance of the possibilities by carrying out the survey on consumers, evaluation of market response, evaluation of product quality, the comparison between product rate and product of competitor. The more number result of possibility and product variation of a decision, so the decision has more risk. In finance, risk is often indicated by the distribution of result possibility from a decision of obtained return or earning. The wider distribution will cause the more risk of result possibility from a decision of averaged return.

Some factors or sources of uncertainty business which caused risk included: 1) general macro economical condition which caused business cycle of a company; 2) business cycle which occurred in certain industry was often related with economical crisis that happened in certain industry or industrial cycle, and the tiredness has reached the maturity level; 3) the action and reaction of competitor company could not be certain predicted and this action-reaction would determine competition level among the companies in industry; 4) the change of unpredictable consumers willingness like being happened in some industries with fast living cycle; and 5) the uncertainty from bargaining side, the change of cost and the spending which was related with input rate change that was used in production process. The change of raw material rate, the increasing of electrical and telephone rate, the change of BBM rate, the increasing of minimum salary which was unpredictable could cause the uncertainty for the company.

The manager behaviour to the risk is classified into three groups such as risk averter, risk neutral, and risk seeker or risk lover. Risk averter manager more liked the choice which gave certain usage with the lowest risk. They felt psichologically uncomfortable and nervous because of the uncertainty. Risk averter manager would still responsed the bigger risk if the expected returd value was bigger. Risk neutral manager was a manager which was indifferent to the two decisions which gave the same usage even though one of them gave a risk. Risk neutral had a trend to make decision which maximized the usage without attending the variation of decisions. In the other hand, risk seeker manager looked the risk as a satisfaction and he was going to sacrifice a number of usage for the bigger risk.

There were some conflicts among the researchers about the relation between inflation level and leverage. The positive relation by argument which was expressed by Taggart [30] was by being high inflation level so the company chance for using the tax deductibility in credit was higher. It was different with Taggart; Mateus which evaluated listed companies in Europe in 2006 found negative significantly relation between inflation level and leverage. The same founding was presented by Cheng and Siu in 2007. Inflation which was indicated by the increasing of goods and service rate in market was as negative signal for company output cycle. In addition, the company made an effort to decrease their spending as well as possible outside the interest cost of available credit. Therefore, higher inflation rate will make the company decreases their plan to increase debt.

RESULTS AND DISCUSSION

The curve of leverage rate development from 2005 until 2009 is presented as in Figure 1 below. Company leverage rate in this study was only one time decreased in 2006. After that, company leverage rate always increased from year to year and in 2009 it reached 0.3842.

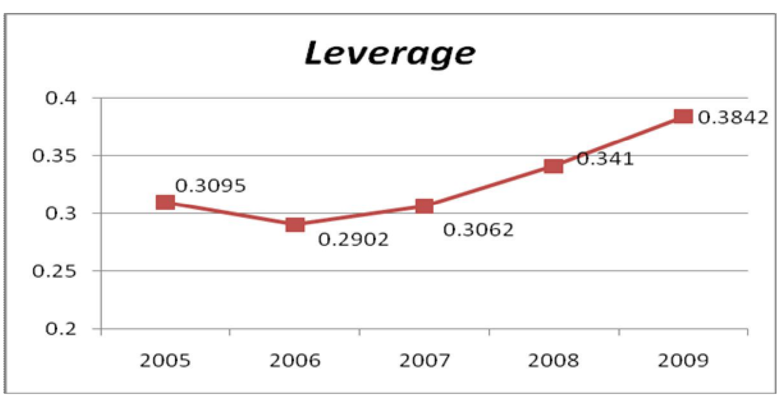

Figure 1 Leverage development
Source: Analysed secondary data in 2011

The influence of profitability to the leverage

Probitability had positive influence of +0.043 to the leverage. Because of the significant value was 0.0490 < 0.05, it was concluded that profitability had influence to the leverage. The thinking scheme of the result is the high profitability rate will cuase the company is willing to carry out refinancing or repurchasing as one of the efforts to increase the company ability for producing profit. Therefore, it will be needed the external fund.

The influence of selling growth to the leverage

Selling growth had negative significant influence of -0.395 to the leverage. Because of the significant value was 0.395 < 0.5, it was concluded that selling growth had influence to leverage. Analysis result which indicated negative influence confirmed the previous research of Carleton and Siberman [31], Barton *et.al* [32] and Kaaro [33]. If the acceptance of fund increased, the company would decrease the usage of leverage.

The influence of company size to the leverage

Company size had positive significant influence of +0.00475 to the leverage. Because of the significant value was 0.00475 < 0.05, it meaned that company size had influence to the leverage. Analysis result indicated positive influence and it confirmed the previous study of Gupta [23], Titman and Wessels [17], Setiawan and Taib [25], Frank and Goyle [26], Qiu and La [15].

Company size which determined big or small of a company became as an important determinance in making funding policy. According to Sawir [27], company size became determinant in financial structure because company size would determine the ease level of company in getting the fund. Company with big scale of size would easily get the fund because investor or creditor considerated the company size. Therefore company with bigger size would be more able to make sure the creditor.

The influence of asset tangibility to the leverage

Asset tangibility had positive significant influence of +0.000 to the leverage. Because of the significant value was 0.000 < 0.05, it meaned that asset tangibility influenced the leverage. Analysis result which indicated the positive influence confirmed the previous study of Myers [33], Friend and Lang [17].

Guarantee was needed as the factor for making sure the creditor in fund leasing for the debitor. The usage of firm activa as the guarantee and would function important in the policy of company credit. The bigger firm activa of company which could be guaranted would cause the ability of company to get fund from creditor. Company with firm activa belonging which could be used as guarantee would have a trend to use credit [34]. The unpayed credit risk would decrease because the company was able to bargain the firm activa as guarantee.

The influence of liquidity to the leverage

Liquidity had negative significant influence of -0.0114 to the leverage. Because of the significant value was 0.0114 < 0.05, it meaned that liquidity influenced the leverage. Analysis result which indicated the negative influence confirmed the previous study with the reason that company with good liquidity had strong asset to make sure the creditor in requesting the credit. This result was opposite with the previous research that presented liquidity had negative influence to the leverage. Company with good level of liquidity by indicating through financial ratio like current ratio, quick ratio, etc. was ought to have bigger capacity of current assets than current liabilities. The expectation was with the big current assets, company was ought to have enough of fund in leasing the whole activities of infestation.

The influence of GDP grwoth to the levrage

GDP (Gross Domestic Brutto) growth had negative significant influence of -0.079 to the leverage. Because of the significant value was 0.079 > 0.05, it meaned that GDP growth did not influence the leverage. This result was opposited with the previous studies of Mateus [35] and Booth *et.al*. [13].

GDP was used by a country as a main size for the growth activity of national economic. The higher GDP level of a country which was illustrated in agregate output by four compenents such as consumption, investation, government buying, and netto export indicated that there was good chance for the company to develop. It was expected that by the effort of company development would increase the bigger usage of credit. Hence, there was positive relation between GDP growth with the selection of proper asset structure.

The influence of inflation rate to the leverage

Inflation rate had negative significant influence of -0.0115 to the leverage. Because of the significant value was 0.0115 < 0.05, it meaned that inflation rate influenced the leverage. Analysis result which indicated the negative influence confirmed the previous studies of Booth *et.al.* [13].

Inflation which was indicated by the increasing of goods rate and service in the market was as the negative signal for company output cycle. In addition, company made effort to decrease their output as able as possible outside the interest cost of available credit. Hence, higher inflation rate would make the company decreased their willingness to increase the debt.

The influence of interest rate to the leverage

Interest rate had negative significant influence of -0.00114 to the leverage. Because of the significant value was 0.000114 < 0.05, it meaned that interest rate influenced the leverage. Analysis result which indicated the negative influence confirmed the previous studies of Ooi [36] and Antoniou *et.al.* [11].

Company which was willing to use credit as the alternative of external funding was faced to the higher interest payment. In the next of day, interest of credit could become as big problem for the company related with cash flow management. In the condition like this, there was good for the company to use equity alternative as the funding source. In addition, the credit would be used if the interest rate was low.

CONCLUSION

Based on the research which has been carried out, it could be concluded that some factors which influences leverage were as follow:

1. Profitability with the significant value of +0.0490.
2. Selling growth with the significant value of -0.0490.
3. Company size with the significant value of +0.0475.
4. Asset tangibility with the significant value of +0.000.
5. liquidity with the significant value of -0.014
6. GDP (Gross Domestic Brute) with the significant value of +0.709.
7. Inflation rate with the significant value of +0.0115.
8. Interest rate with the significant value of -0.0114

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