

# PROFITABILITY, GROWTH OPPORTUNITY, CAPITAL STRUCTURE AND THE FIRM VALUE

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## Abstract

*This paper examines the influence of profitability, growth opportunity, and capital structure on firm value. We apply Structural Equation Model (SEM) on 150 listed companies on the Indonesia Stock Exchange during 2006 to 2010. The result shows that profitability, growth opportunity and capital structure positively and significantly affect the company's value. Secondly, the capital structure intervene the effect of growth profitability on company's value, but not for profitability.*

*Keywords: profitability, growth opportunity, capital structure, firm value, SEM.*

**JEL Classification: C51, G32, L25**

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## I. INTRODUCTION

The main goal for a firm going public is to increase the shareholder welfare by increasing the value of a firm (Salvatore, 2005). The firm value is very important, as higher firm's value will increase the welfare of the stockholder (Brigham and Gapensi, 2006). The increase of stock price will also increase the value of the firm. The welfare of the shareholder and value of the firm are commonly represented on the stock price, which implicitly represent the investment decision, financing and asset management.

Weston and Brigham (1998) underline the financial leverage as the way to finance the activa; the right side of balance sheet, while the capital structure represents the permanent financing mainly as long term debt, preferred stock and common stock, and part of short term debt. This emphasizes that the capital structure is only part of financial structure of the firm.

Many factors may influence the value of the firm; among others are profitability, growth opportunity, and capital structure. Profitability shows the ability of the firm to gain profit during certain period. Husnan (2001) define profitability as the ability of the firm to raise profit from sales, asset, and certain capital stock. On the other hand, Shapiro (1991) defines profitability as the ability of the firm to gain profit using all capital they have; "*Profitability ratios measure management's objectiveness as a indicated by return on sales, assets and owners equity*".

Profitability is important on maintaining the firm activity in the long run, and reflects the prospect of the firm. This way all firms will try to increase their profitability on assuring their business continuance. Profitability also reflects the efficiency of management, measured with the yield of return. Profitability ratio may be indicated by profit margin, basic earning power, return on asset, and return on equity. On this paper, we measure profitability with return on equity (ROE). The ROE shows the ability of the firm to gain net profit for the shareholders; the greater ROE the greater the performance of the firm is. The increase of ROE represents an increase of management efficiency on managing the fund and operational activities to create profit. The growth of ROE indicates higher profit potency and better prospect of the firm. This will be good signal for the investors, increase their trust, and therefore enable the management to increase equity capital of the firm. On the other side, when the demand for firm's stock increase on the market, it will increase its equilibrium price.

Growth opportunity is the probability of the firm to grow (Mai, 2006). Firms which are expected to grow highly in the future tend to use stock to finance their operational activity. On the opposite, for this reason the firms with low growth opportunity usually use long term debt as their source of financing. Since the growth opportunity varies across firms, their financing decision my management will also vary. Firms with good growth opportunity tend to use their own capital to avoid under investment; a condition where positive value investment projects failed to implement, (Chen, 2004). In addition, the effect of capital ownership and debt policy may influence on firm value is subject to tax, agency cost, and financial difficulty due to the use

of debt. Based on trade off model, optimal capital structure is a balance between tax savings and the debt fee, since the cost and the benefit of debt will cancel out. The optimal debt is gained when the interest tax-shield reach the limit of the cost of financial distress. We may expect the firm to reach its optimum value on optimum debt condition. When the value of debt exceeds its optimum or exceed financial distress cost, the debt will negatively affect the firm value.

Based on the capital structure theory, as the capital structure exceeds its optimum, and then each additional debt will reduce the value of the firm. Decision on targeted capital structure depends on corporate management, and this proportion of debt financing represent the leverage of the firm. The capital structure should be the key to improve the efficiency and performance of the firm.

The capital structure theory underline that financing policy on capital structure is aimed to optimize the value of the firm. Optimal capital structure will maximize the stock price. On certain condition, the management may change their target on capital structure hence will vary overtime. Determinant of the target includes sale stability, structure of activa, leverage, growth opportunity, profitability, income tax, and management policy. Another determinant includes the size of the firm; the larger the size the easier to attract debt relative to small firm. This debt enable large firm to grow better (Mai, 2006).

Based on trade off theory, the manage may cause the debt ratio to maximize the value of the firm. Fama (1978) argue that the value of the firm will be reflected on their stock price. Jensen (2011) explained that on maximizing the value of the firm, management should consider not only equity, but also other source of financing including debt, warrant, and preferred stock. Fama and French (1998) argue that optimizing the firm value can be attained by financial management.

Capital structure theory explains the effect capital structure on firm value. It may be intrepreted as expectation of investment value of shareholder (equity market price) and or expectation of firm total value (equity market share added to debt market value or expectation of asset market value) (Sugihen, 2003).

Profitability gauges firm capability in order to get relative profit on owned sales, total asset, and equity (Sartono, 2001). Firm with maximized return tends to use loan much more in gaining tax benefit. This case occurs regarding with diminishing of revenue by loan interest will be fewer than firm utilizing non-interest fund. On the profitability variable, the finding of Mai (2006) as well as Suwarto and Ediningsih (2002) states that profitability has the influence toward the capital structure

Explicitly, the aim of this research is to find out the influence of profitability toward the capital structure, the influence of growth opportunity toward the capital structure, the influence of profitability toward the firm value, the influence of growth opportunity toward the firm value, and the influence of capital structure toward the firm value.

The second part of this paper will discuss about the theory and hypothesis and the third part will discuss about the methodology and the data used. The fourth part will discuss about result and analysis, meanwhile the conclusion will be presented on the fifth part and becomes the closing part.

## **II. THEORY**

### **The Firm Value**

Firm is an organization combines and organizes many kinds of resources with a purpose to produce goods and or services to be sold (Salvatore, 2005). A firm exists because this would be inefficient and expensive for an entrepreneur to come in and create a contract with labors and capitalist, land, and other resources for every stage of separate production and distribution. On the other hand, an entrepreneur will include in a big contract in the long run with labors to do many duties with certain payments and other allowances. Firm exists in order to save those cost of transactions. By internalizing kinds of transaction, a firm can also save the sales tax and to avoid the price control as well as the government policy which applies only for the transaction between companies.

Firm value is the investor's perception toward the value of the success of firm related to its stock price (Sujoko and Soebiantoro, 2007). A high stock price makes the firm value is also high, and it increases the market trust not only toward the work performance of the firm but also toward the prospect of the firm in the future. The stock price used commonly points out on the closing price, and is the price which occurs during the stock is traded in the market (Fakhruddin and Hadianto, 2001).

The firm value can be estimated by price to book value (PBV), which is the comparison between the stock price and the book value per share (Brigham and Gapenski, 2006). Other indicators relate to book value per share are common equity and shares outstanding (Fakhruddin and Hadianto, 2001). In this case, PBV can be translated as the result of the comparison between the price of stock market and price to book value. The highest PBV will increase the market trust to the prospect of the firm and indicate the prosperity of the high shareholder (Soliha and Taswan, 2002). PBV is also the ratio which shows whether the stock price traded is overvalued or undervalued of that price to book value or not (Fakhruddin and Hadianto, 2001).

### **Profitability**

Profitability is the ability of a firm to produce profit and to measure its own operational efficiency value and efficiency to use its own property (Chen, 2004). According to Petronila and Mukhlisin (2003) profitability is the picture of the management performance in controlling the firm. The measurement of profitability can be in the form of operational profit, net income, level of return on investment/assets, and level of the capitalist's return on equity.

Ang (1997) stated that profitability and rentability ratio show the success of a firm to get profit. The ability of a firm to get profit on its operational activity is the main focus on the measurement of the achievement of a firm. Besides as the indicator of the ability of a firm in fulfilling its obligation for its shareholders, the profit is also the element to determine the firm value. The effectivity is measured by relating the net income defined as the ratio toward the assets, such as profitability ratio. The analysis of profitability emphasizes on the ability of firm to use its wealth to create profit along certain period of time measured through ratios of profitability, (Riyanto, 1999). The other proxies used are Gross Profit Margin, Net Profit Margin, Return on Investment (ROI), Return on Equity and Earning Power, (Brigham and Houston, 2001). For example, ROI shows profit ratio after tax toward the total assets, ROE which is commonly calls as equity rentability, is used to measure how much profit which belongs to the capitalist, and the last, earning power or rentability, measures the ability to earn profit by the assets used. This ratio is calculated by dividing the profit (profit before interest and tax) with total assets.

## **Growth Opportunity**

Growth opportunity is the development opportunity of a firm in the future (Mai, 2006). The other definition of growth opportunity is the change of the firm total assets (Kartini and Arianto, 2008). This quantity measures how far earnings per share of a firm can be inclined by leverage. Firms with rapid growth sometimes must increase its fixed assets. Therefore, firms with rapid growth need more fund in the future and more retained earnings. Retained earnings from firms with rapid growth will increase and those firms will deal more with debt to maintain the targetted equity ratio (Mai, 2006).

Firm which is predicted to have rapid growth in the future tends to choose using stock to finance the operational of the firm. In contrast, firms which is predicted to have low growth will effort to divide the risk of low growth with the creditor through the issuance of debt which is in the form of long term payable (Mai, 2006). One of the basic reason of this pattern is the floating price on the stock emission higher than bond. Thus, firm with rapid growth level tends to use more debt compared to the low growth firm.

## **The Capital Structure**

Capital structure is part of financial structure which reflects the ratio (absolute or relative) between the whole external capital (both in short term and in long term) with the total of capital (Riyanto, 1999). Per definition, modal structure is the combination of debt and equity in the long term financial structure of firm.

According to Brigham and Houston, (2001) there are some factors influence the capital structure, first is the stability of sales; the firm and the sales are relatively stable can be more save to get more loan and bear the fixed expense higher than that of firm with unstable sales.

Second is the assets structure, firm which its assets appropriate to be credit assurance tends to use more debt. The third factor influences the capital structure is the leverage operation. In this case, firms with lower leverage operation tend to be more able to increase the financial leverage because they have small business risk. The fourth factor is the growth level; firm which grow rapidly has to depend more on external capital. However, at the same time, firm with a rapid growth tend to face bigger uncertainty that make it lessen its willingness to use debt.

Besides those four factors, the other determiner of the capital structure is the profitability. In reality, sometimes research shows that firm with a high return on investment only use a relatively small debt. Even though there is no theoretic justification on this, practically, firm which is very profitable actually does not need much financing on debt. The high return possible them to finance most of their needs of financing through the internal fund.

The management attitude is also a factor that can influence to the choice of the capital structure of firm. This is because of the less fact of certain capital structure will make the stock price higher than the other capital structure, thus, management can create its own consideration toward the capital structure that will be chosen. Still related to management attitude, other variables which also influence the capital structure is the attitude of the lenders and the institution of value assessor. Without considering the analysis of managers toward factors of the right using of debt, the attitude of lender and the institution of value assessor sometimes influence the decision of the financial structure. In most of the case, firm discuss about its capital structure by giving loan and the institution of value assessor will give attention to the input taken.

Related with market, then, three factors determiner of capital structure which are identified by Brigham and Houston (2001) are the market condition, internal condition of firm and financial flexibility. The condition of stock market and obligation market which change both in a short term and in long term, will influence the capital structure of optimum firm, meanwhile, the condition of the internal firm also influences the targetted capital structure. Last, maintaining the financial flexibility, if seen from the operational point of view, it means that firm holds out the adequate substitution capacity, and this will influence the choice of capital structure which assumes to be optimum for the firm.

## **Profitability and Capital Structure**

As what have been mentioned in the beginning, profitability measures the ability of a firm to get profit on its relation to sales, total assets and its capital (Sartono, 2001; Mai, 2006). Firms with high tend to use more loan to gain benefit on tax aspect. This is because of the subtraction of profit by loan interest will be less than if firm use the non interest capital, but taxable income will be higher (Mai, 2006).

The inaccurate decision of funding will cause the fixed price in the form of high capital expense that in the future will cause the low of firm profitability (Kartini and Arianto, 2008). In other word, the decision of funding or capital structure really influences the high or low of a firm profitability. Based on pecking order theory, firm with high level of profit has bigger funding source and has the needs of investment funding through smaller external funding (Schoubben and Van Hulle, 2004; Adrianto and Wibowo, 2007). Therefore, this theory indicates that profitability influences negatively toward the capital structure.

Firm with high rate of return tend to use relatively small debt proportion, because by a high rate of return, the needs of funding can be gained from the retained profit. Firm with high profitability will have more internal funding than one with low profitability. If in the composition of the capital structure, the using of own capital is more than the using of debt, then, the ratio of capital structure will be smaller. Thus, based on the theory above, the higher profitability level, the lower ratio of capital structure and it states that profitability influences negatively toward the capital structure. Based on that explanation, the first hypothesis that will be tested is that profitability influences the capital structure negatively.

## **Growth Opportunity and Capital Structure**

Growth opportunity is the chance of growth of a firm in the future (Mai, 2006). The growth opportunity is the measure of how far earnings per share of a firm can be increased by leverage. Firms with rapid growth some times must increase its fixed assets. Therefore, firms with rapid growth need more fund in the future and more retained earnings. Retained earnings from firms with rapid growth will increase and those firms will deal more with debt to maintain the targetted equity ratio (Mai, 2006). Empirically, the growth opportunity influences positively toward the capital structure (Rakhmat Setiawan, 2006), and in this research, the second hypothesis that will be tested is that the growth opportunity which influences positively toward the capital structure.

## **Profitability and Firm Value**

Profitability is measured by the indicator return on equity (ROE). The growth of ROE shows the better firm prospect that will be captured by investor as a positive signal from the firm which lately will easier the management to get capital in the form of stock. If there is an increase of stock demand of a firm, then, indirectly, this will increase that stock price in the capital market. Sari (2005) proves that factors influence toward the firm value are the managerial ownership, leverage ratio, leverage interaction with investment and interaction of profitability with investment. Based on that explanation, the third hypothesis that will be tested is that profitability influences the firm value positively.

## **Growth Opportunity and Firm Value**

Related to leverage, firm with rapid growth should use equity as the source of financing to avoid the agency cost between the shareholders and firm management. In contrast, firm with low growth should use debt as its financing source because the using of debt makes the firm to pay the interest regularly.

The growth potency can be measured from the amount of research and development cost. The higher R&D cost means that there is a prospect of firm to grow (Sartono, 2001). Referring to this, the fourth hypothesis that will be tested is that growth opportunity influences firm value positively.

## **The Capital Structure and Firm Value**

The capital structure which shows the comparison between long term external capital and capital is an important aspect for every firm because it has direct impact toward the firm financial position. Firm with big assets tend to use more debt compare to that of firm with small assests even though this small assets firm has better growth opportunity. This is easy to be understood because a firm which only has good will but without adequate assets, its work performance prospect will be uneasy to be predicted.

Solihah and Taswan (2002) in their research show that the obligation policy influences positively but insignificant toward the firm value. This research is consistent with the findings from Modigliani dan Miller (1963) state that by inserting income tax of firm, then the using of debt will increase the firm value. If the approach of Moddigliani Miller is in the condition of the existence of the income tax, then, the firm value will increase continuously because of the greater using of debts. This indicates that the optimum capital structure can be gained by balancing the benefit of tax shield with the cost responsibility because of the greater using of debt.

There is trade off between cost and benefit toward the using of debt. The more debt proportion, the more tax shield gained, but the cost of bankruptcy that may happen may also increase. Debt can be used to control the use of over cash flow by management and so it avoids useless investment (Jensen, 1986).

The capital structure relates with the stock price. The policy of conservative financial structure wants the firm not to have bigger debts than the amount of its own capital in any kind of conditions. On the other side, the concept of cost of capital states that firm will effort to get the capital structure which can minimize the average cost of capital. The minimization of this average cost of capital does not force the composition of the total of external capital



less than the firms' own capital to exist.

When manager has a strong faith on the future prospect of firm and wants the stock price increase, then manager can use more debt as the more trusted signal for the investor. Empirically, the debt policy (measured by debt to equity ratio, DER) and the measurement of the size of firm (measured by total asset) influence positively and significantly toward the price book value (Sujoko and Soebiantoro, 2007). Therefore, we can formulate the fifth hypothesis that will be tested in this paper is that capital structure influences the firm value positively.

### **III. METHODOLOGY**

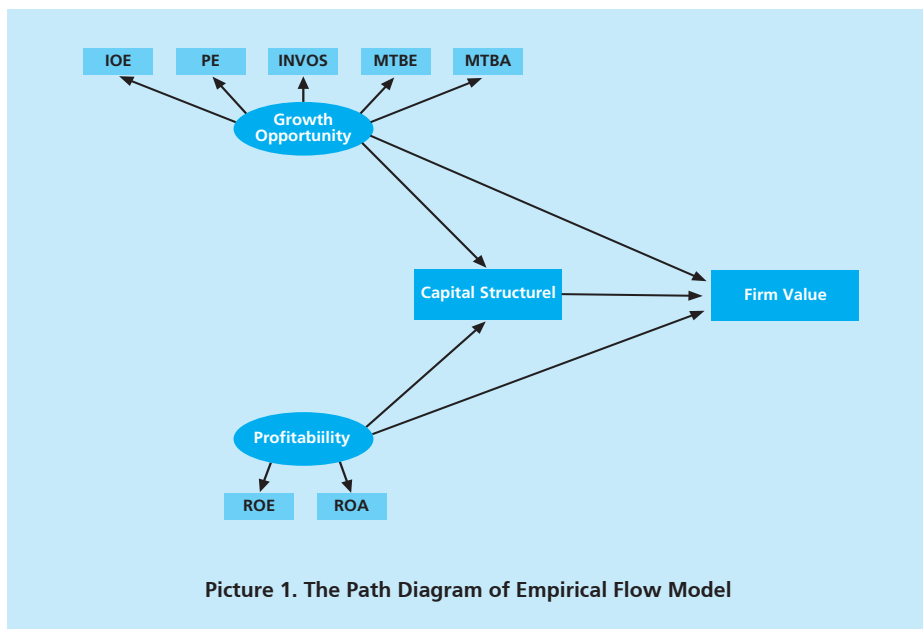
#### **Estimation Technique**

This paper applies Structural Equation Model (SEM) approach which is quite new compared to regression or factor analysis, such as SEM appeared in the late of 1960s and nowadays is still developed. This technique can be applied in several shapes. The first shape is path analysis or causal model which is hypothesizing the relation of cause effect among variables. The second shape is confirmatory factor analysis which tests the hypothesis of structure of factor loadings and its correlation. The tendency of using SEM for confirmatory rather than for exploratory has caused SEM to be usually used for conducting validation of a model instead of using it for finding the best model.

Other SEM application is a regression model that can be assumed as the development from regression model which has been generally known. It is because of the possibility in determining a restriction within regression weighted. The fourth application is the test of hypothesis about the covariance structure from certain variables, and the fifth application is a correlation structure model which tests the correctness of correlation matrix shape which is hypothesized.

Technically, this approach simulates the measurement error explicitly then finding the estimator which is unbiased for the relation among variables (in general variable which can not be observed or known as latent construct variable). SEM is also known as the analysis of covariance structures because SEM analyzes the relation among variables by using variance and covariance analysis from these variables. In the initial phase, SEM approach assumes that a certain covariance matrix structure is made from the shape of path diagram. When the result of parameter estimation is gathered, then covariance matrix structure from the model is compared to the real data of covariance matrix. If the structures of these both matrixes are consistent one and another, then this SEM model is assumed to be valid

The path diagram used in this paper is as follow:



Picture 1. The Path Diagram of Empirical Flow Model

### Empirical Model

Referring to the path diagram above, then the empirical model estimated are these two equations:

$$Struct Mod = \beta_{11}.Profit + \beta_{12}.Growth + \epsilon \tag{1}$$

$$Nilai Pers = \beta_{21}.Profit + \beta_{22}.Growth + \beta_{23} StructMod + \epsilon \tag{2}$$

Where *Nilai Pers* is firm value; profit is profitability; growth is growth opportunity; *Struct Modal* is capital structure; and  $\epsilon$  is residual.

Firm value is measured by Tobin'Q which is the ratio between the market value of firm stock and the book value of firm equity. The formula is:

$$Q = \frac{(EMV+D)}{(EMB + D)}$$

Where  $Q$  = firm value;  $D$  = the book value from total debt;  $EMV$  = equity market value; dan  $EBV$  = equity book value.  $EMV$  is gathered from the multiplying result of closing stock price with the number of out standing stock.  $EBV$  is gotten from the difference between total assets and total liability.

The second variable is profitability (X1) and it can be measured by two indicators which are Return on Equity (ROE) and Return on Asset (ROA). The formulas for calculating these indicators are as follow:

$$ROE = \frac{\text{Net Profit}}{\text{Capital}} \qquad ROA = \frac{\text{Net profit}}{\text{Total Assets}}$$

The variable of growth opportunity is measured by Investment to Sales (IOE), price earning ratio (PE), Investment to Sales (INVOS), Market to Books Total Assets (MTBA) dan Market to Books Total Equity (MTBE). The calculation formula is below:

$$IOE = \frac{\text{Investment}}{\text{Profit}} \qquad PE = \frac{\text{Stock Price}}{\text{Profit per share}}$$

$$INVOS = \frac{\text{Investment}}{\text{sales}}$$

$$MTBA = \frac{[\text{Debt Book Value} + (\text{out standing stock} \times \text{stock price})]}{\text{Total Assets}}$$

$$MTBE = \frac{(\text{oustanding stock} \times \text{stock price})}{\text{Total equity}}$$

In empirical model that is estimated, the variable of capital structure is validated as intervening variable and it is calculated with this formula:

$$\text{Capital Structure} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

## Data

The population in this research are the entire companies listed in Bursa Efek Indonesia 2006-2010. The sample selection is conducted by using purposive sampling method and the sample result are 150 companies. The description of quantitative variable from total sample is presented in following table.

**Table 1**  
**Variable Statistic Description**

Variabel	Min.	Max.	Mean	Std. Deviation
Firm Value	0.05	60.31	10,8061	12,53519
ROE	0.00	3.96	0,4225	0,76528
ROA	0.00	4.11	0,2260	0,53279
MTBA	0.09	7.11	1,4843	1,56453
MTBE	0.01	6.90	1,6879	1,54115
INVOS	0.01	5.64	1,0681	1,20868
PE	2.00	67.10	17,8909	12,81100
IOE	0.04	37.31	7,3097	9,18070
DTA	0.01	1.91	0,4687	0,25708
DTE	0.01	2.24	0,5374	0,50906

Valid N (listwise) = 150

## Model Validation

There are 3 (three) steps in conducting validation of estimated model which are (i) validity and realibility model test, (ii) significance and valuability model test and (iii) fit model test. The last step of the three steps in this validation method can be seen from the fit of estimation result with theory, parameter significance and correlation among variables as explained in the analysis chapter.

A validity test is conducted with construct validity which measures how far the variable used is able to represent the theoretical variable that is meant in model. There are 4 (four) components in construct validity; the first is convergent validity which measures how far the indicators for one similar construct can have similarity in variation; the second is discriminant validity which measures how far a construct is really different from other constructs; the third is nomological validity which measures whether the correlation among constructs has reasonable theoretical base (generally tested by covariance matrix among constructs) and the fourth is face validity which measures the consistency between construct definition given by the researcher with indicator used.

On the other side, construct reliability (CR) measures the internal reliability and consistency based on square of the total of factor loadings for a construct. The realibility and validity of model used has been conducted in model phase by referring to the existing theory and literature. Therefore, model validation explained in this section is validation in the third steps which is fit test.

The fit test model is conducted by using goodness of fit criteria. This test measure the fit of the real observation input with the prediction of proposed model. In this SEM, technically, the goodness of fit test measures the model ability in replicating the structure of covariance matrix among variables.

In general, there are 3 (three) fits measurement. The first, Absolute Fit Measures, is how good a model enables to replicate the data; the second, Incremental Fit Measures, is how good a model is compared to baseline model. This baseline model assume that all variables that is observed are not correlate between one and other and it is meant that this model only has all single item scale. The third, Parsimony Fit Measures is the scale that show whether the tested model is the simplest model without losing its performance (parsimony) or not.

Included in the first type (absolute GOF) is Chi-square statistic with zero hypothesis = there is no difference between two covariances matrix from two tested model. This statistic of  $\chi^2$  is hoped to be insignificant ( $p > .05$ ) so that the chosen model is better than the baseline model. The other units are GFI (Goodness of Fit Index) and AGFI (Adjusted GFI) which are expected to have a value of more than 90 percentages.

For the second type (incremental GOF), some parameters that can be used are CFI (Comparative Fit Index), NFI (Normed Fit Index), RFI (Relative Fit Index) and IFI (Incremental Fit Index). These parameters compare the performance between two models. For instance CFI, if defined as  $d = \chi^2 - df$ ; where  $df$  is the degree of freedom then the value of CFI is given with following equation:

$$CFI = [d(\text{Baseline Model}) - d(\text{Chosen Model})] / d(\text{Baseline Model})$$

Those statistic quantities are located between zero and one, if the calculation result  $> 1$ , then it will be calculated as 1 and if the value is less than zero, it will be assumed as 0. The bigger quantity, the better model. The general guidance for these statistics are bigger than 0,90.

Besides the goodness model, validation can also be used to see how bad a model is. The statistic used is RMSEA (Root Mean Squared Error of Approximation) which shows how big the error of model specification is compared to the error of sample taken. The general criteria for RMSEA is less than 0,10.

The third of fit test is measuring how simple a model (parsimony) can be seen by using Parsimonious Goodness of Fit Index (PGFI  $\geq 0,90$ ) or Tucker Lewis Index (TLI  $\geq 0,95$ ) or Non-normed Fit Index (NNFI). Basicly, these statistics measure the penalty because of the addition of parameter.<sup>2</sup> In general, the guidance used in this research is referring to the previous research (Ghozali, 2011).

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<sup>2</sup> In the general econometric model, this is an analog with AIC which is the measurement of marginal cost of information.

#### IV. RESULT AND ANALYSIS

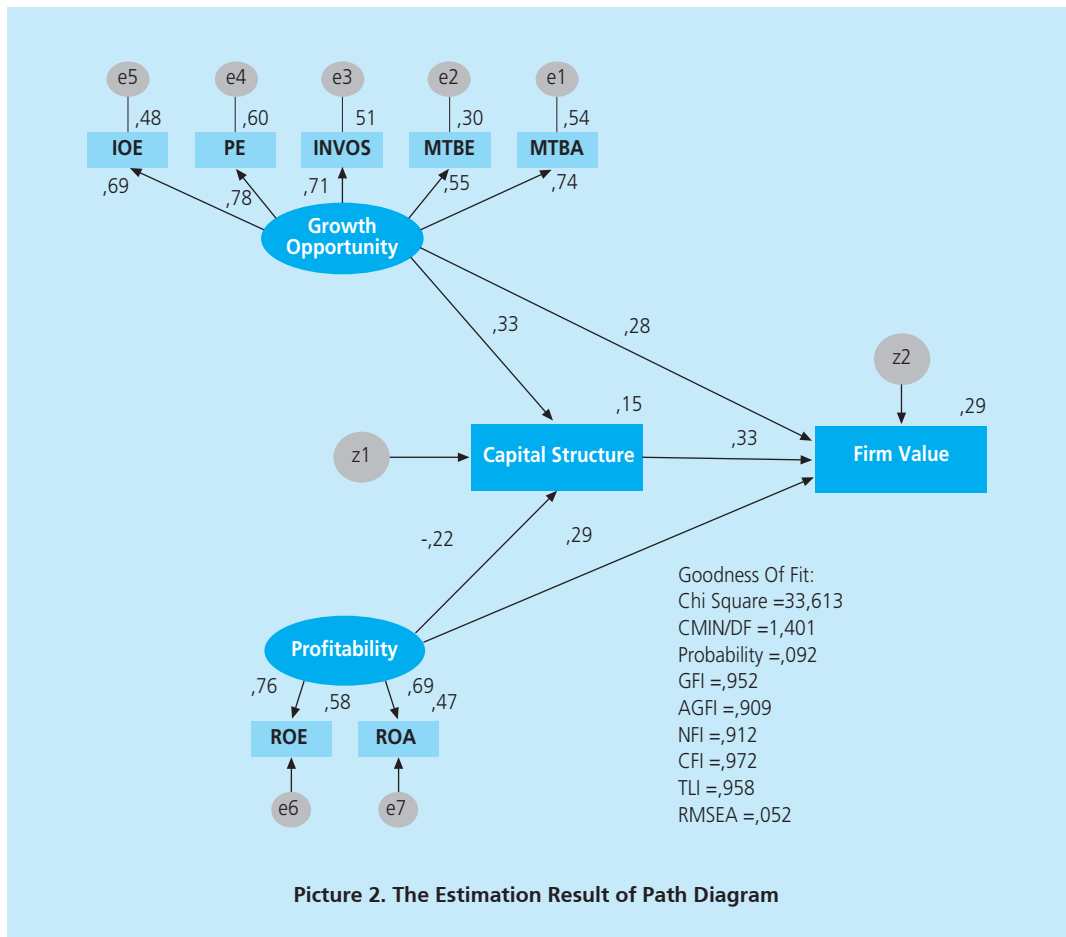
Referring to the criteria of model validation, it can be shown that the performance of the chosen model is classified as a good model. The result of chi-square statistic is 33,613 and probability is 0,092. This condition shows that the model is better than the baseline model. The other fit criterias which are GFI, AGFI, NFI, CFI, TLI and RMSEA need to be seen to see the goodness of fit model.

The value of CMIN/DF 1,401 shows that the fit model is suitable with the recommended value which is less than 2. The value of GFI = 0,952, AGFI = 0,909, NFI = 0,912, CFI = 0,972, and TLI = 0,958 supports the requirement of general criteria of good model and adequate parsimony. The last criteria of validation model is RMSEA = 0,052 ( $< 0,10$ ) which shows that the model has relatively specified in a good way.

In general, empirical model estimated has fulfilled the limitation that is recommended. In addition, this empirical model is suitable with the data and it can be continued to the hypothesis test (Table 2). The direct effect analysis is to evaluate the direct effect for each represented construct by all coefficient lines with one arrow side. The estimation result of variable cross connection is presented in Picture 2 and Table 3.

<b>Goodness of Fit Index</b>	<b>Benchmark</b>	<b>Result</b>	<b>Explanation</b>
Ch Square	Expected to be insignificant	33,613	Good
CMIN/df	$\leq 2,00$	1,401	Good
Significance	$\geq 0,05$	0,092	Good
GFI	$\geq 0,90$	0,952	Good
AGFI	$\geq 0,90$	0,909	Good
NFI	$\geq 0,90$	0,912	Good
CFI	$\geq 0,95$	0,972	Good
TLI	$\geq 0,95$	0,958	Good
RMSEA	$\leq 0,08$	0,052	Good

Based on the values coefficient above that fulfill the requirement of fit model, it can be concluded that in general, the gathered model have a good level of fit so that they can be continued to the next level of fit test model.



Hypothesis	Independent Variable	Dependent Variable	Estimation	Coefficient			Explanation
				Standardize	p-value	CR	
H1	Profitability	Capital Structure	-0,299	-0,217	0,036	-2,100	Significant
H2	Growth Opportunity	Capital Structure	0,026	0,327	0,000	3,636	Significant
H3	Profitability	Firm Value	9,889	0,285	0,003	2,945	Significant
H4	Growth Opportunity	Firm Value	0,552	0,276	0,002	3,140	Significant
H5	Capital Structure	Firm Value	8,325	0,331	0,000	4,138	Significant

## Direct Influence

Referring to the path diagram made, there are 3 (three) variables with direct influence toward firm value which are profitability, growth opportunity, and capital structure. This capital structure is potential as the intermediary variable for the other two variables.

The result of estimation model shows that profitability has a positive direct influence and significant toward firm value ( $t$ -calculation = 2,945 and  $p = 0,001$ ). A high profitability shows a good condition of firm so it will trigger to the stock demand by investor. The positive responds from these investors will increase the stock price then it will increase the firm value.

Growth opportunity has a positive direct influence and significant toward firm value. The result of test model shows CR or  $t$ -calculation = 3,140 with value  $p = 0,002$ . This result is consistent with Fama's opinion (1978). The direct influence of investment decision toward firm value is the result of this investment activity itself through project selection or other policies such as new product creation, the change of machine which is more efficient, the improvement of research and development and merger with other firms.

The third variable which is capital structure has a positive direct influence and significant toward firm value ( $t$ -calculation = 4,138 and  $p = 0,000$ ). This condition shows that the policy of liabilities addition is a positive signal for investor and influence firm value. For firm, liability can help to control the using of cash flow freely and excessive in side of management. This control improvement can increase firm value that is reflected from the increasing of stock price. This result is linear with Mas'ud (2008) which states that the capital structure has a positive influence and significant toward firm value.

## Indirect Influence

As mentioned before, capital structure is influenced by 2 (two) variables which are growth opportunity and profitability. If both variables have significant influence toward capital structure, then significant capital structure toward firm value will determine whether capital structure can be functioned as intervening variable in facilitating the indirect effect of growth opportunity and profitability toward firm value or not.

In the previous analysis, it has been ensured that capital structure is influenced significantly toward firm value, then next step is by investigating whether profitability and growth opportunity influence capital structure significantly or not. The result of estimation model shows that profitability influences negatively and significantly toward capital structure ( $t$ -calculation = -2,100  $p = 0,036$ ). It means that, firm with a high rate of return tends to use a small proportion of liabilities because with a high rate of return, capital needs can be gathered from retained earnings. With a high profitability, firm internal funding will be higher so that the composition of capital using is higher than the using of liabilities/debt (the ratio of capital structure gets smaller).



The test of hypothesis 2 shows that growth opportunity is influenced positively and significantly toward capital structure ( $t=3,636$  and  $p=0,000$ ). Basically, growth opportunity reflects firm productivity and an expectation of chance for the internal of firm, investor and creditor. On the other sides, the cost of stock issue is more expensive than bond issue and this condition become an additional reason for firm with a high growth to depend more on liabilities within the composition of firm capital structure. This estimation result is linear with Brigham and Houston (2001) where they state that a firm with a high growth tend to depend on external capital.

In determining whether capital structure can be functioned as intervening variable or not, then it can be seen from 2 equations in constructed empirical model in order to make its reduction equation. By inserting equation (2) and (1), and rearranging its equation, the result of reduction shape is as follow:

$$Firm\ Value = (\beta_{21} + \beta_{23}\beta_{11}) Profit + (\beta_{22} + \beta_{23}\beta_{12}) Growth \quad (3)$$

If the quantity of  $(\beta_{21} + \beta_{23}\beta_{11}) > \beta_{21}$ , then capital structure is functioned as intervening variable for profitability. With the same way, if  $(\beta_{22} + \beta_{23}\beta_{12}) > \beta_{22}$ , it can be concluded that variable structure is functioned as intervening variable for growth opportunity.

The calculation result shows that total coefficient is  $0,213 < 0,285$  which gives conclusion that capital structure is not functioned as intervening variable for firm profitability. On the other side, total coefficient for growth opportunity is  $0,384 > 0,276$  which shows that the variable of capital structure is functioned as intervening variable for firm growth opportunity.

## V. CONCLUSION

By applying the measurement of Structural Equation Model (SEM) on 150 firms listed in *Bursa Efek Indonesia* (BEI) during 2006-2010, this paper gives some empirical findings. The first, profitability variable, growth opportunity and capital structure are influenced positively and significantly toward firm value. It means that the bigger the profitability, the higher the growth opportunity and the bigger the liabilities proportion in the structure of firm funding, the bigger the firm value. The second, capital structure variable is an intervening variable for growth opportunity and not intervening for profitability. The last condition occurs because profitability has a contrast influenced with capital structure. It means that capital structure will increase the positive effect of firm profitability toward the firm value.

This research has some limitations. The first, companies that become sample in this research are only companies that inserted in LQ45 category. Therefore, the next research is expected to involve the entire industry sectors. The second, model used in this research only uses profitability, growth opportunity and firm value thus the further research can internalize other variables which are relevant in determining firm value. The third, estimation technique

used in this research is Structural Equation Model (SEM) which is quite new and it gets many critics from researchers. It is hoped that the next research can conduct robustness test toward the selection of technique model.

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