



# The Determination of Probability : The Effect of Capital Structure, Aset Growth, and Price earning on Market Value

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## **Abstract**

*Along with industry competition, takes the company's ability to generate good profits. Profit of the company itself, one of which is a good Profitability. Profitability proves the company's ability to improve the welfare of the stakeholders as well as the ability of the invested capital in the total assets held to generate income. Profit itself is profitability that can be measured through company's Return of Assets (ROA).*

*This study aims to determine the capital structure, asset growth and earnings per share effect on the profitability of companies in the property and real estate sector, which is the business sector insufficiently developed during the period 2008-2011. The population of the study was the companies in the property and real estate sector registered at Indonesia Stock Exchange which was studied from 2008 up to 2011 . The method used to determine samples was using purposive sampling method with some fixed criteria with the total number of 20 samples companies. Researchers used quantitative analysis so that the numbers listed to represent the results of this study. Data analysis method used is multiple linear regression.*

*The result of the study shows that capital structure, asset growth and price earning ratio has significant effect towards profitability. Predictable of this variable toward ROA is 55% as indicated by adjusted R square that is 27,5% while the rest 72,5% is affected by other factors is not included into the study model.*

*Keyword : profitability, capital structure, asset growth, price earning ratio*

## **INTRODUCTION**

Financial performance of a firm can be interpreted as a prospect or future, a developing potential growth for the company. Financial performance information is necessary to assess a potential change of economic resources, which may be controlled in the future and to predict the production capacity of existing



resources. While the analyzed of financial statements are very necessary to company's leader or management to serve as a decision-making tool for the further future.

Financial performance evaluation can be done by using analysis of financial statements. In this case, financial statement analysis can be done using financial ratios. Ratios are used to assess the financial performance of companies such as activity ratios, solvency ratios, and profitability ratios. Financial ratio analysis allows managers and interested parties to evaluate the financial condition and interested parties to evaluate the financial condition, would indicate a healthy condition or failure of a company. The ratio analysis also connects elements of the plan and the profit and loss account to assess the effectiveness and efficiency of the company.

Along with industry competition, takes the company's ability to generate good profits. Good profit proves the company's ability to improve the welfare of stakeholders. Profit of the company itself, one of which is the profitability that can be measured by Return on Assets (ROA) of the company. ROA is used to measure a company's effectivity in generating profits by exploiting company's equity. Profitability is the company's success in generating profit in a given period. In order to maximize the profits earned by the company, financial managers need to know the factors that have a major influence on the profitability of the company. By knowing the influence of each factor on profitability, companies can determine the steps to maximize corporate profits.

One of the factors that affect the profitability is capital structure. Financing with debt or financial leverage by Brigham and Houston (2006) has three important implications. First, to raise funds through debt makes the shareholders to retain control of the company with a limited investment. Second, creditors look at equity or funds paid by the owner to provide a safety margin, so if shareholders give only a small part of the total financing, the company risk mostly in creditors. Third, if firms obtain a greater return on investments financed with borrowed funds than interest payments, then the return on owners' equity will be greater. Basically, if the company increases the amount of debt as a source of funds, it can increase financial risk. If the company can not manage the funds raised from debt productively, it can give a negative influence and impact on the declining profitability of the company. Conversely, if the debt can be managed properly and used for productive investment projects, it can provide a positive influence and impact to the profitability of the company. The influence of capital structure on probability is reinforced by research conducted by Nurhasanah (2012) and Nur Azlina (2009).

Asset Growth is expressed as the growth of total assets where past of total assets will describe future profitability and future growth (Taswan, 2003). Asset



growth illustrates the growth of the company's assets will affect the company's probability which believe that the change of percentage in total assets is a better indicator in measuring the growth of the company (Putrakisnanda, 2009). The greater the assets of the company is more likely to make a profit. Greater company profits would certainly increase the value of the assets as well and can continue to convince the creditors of the company. It is based on the belief creditors on funds invested in the company secured by the amount of assets owned by the company.

Companies with a high growth rate opportunities typically have high price earnings ratio as well, and this suggests that the market expects earnings growth in the future. Instead companies with low growth rates tend to have a low price-earnings ratio as well. The lower the price-earnings ratio of a stock, the better or less costly to invest. price earnings ratio could be undervalued because the stock price tends to go down or due to increased net income.

In this study, researchers chose property and real estate sector. A growing phenomenon in today illustrates that property and real estate sector is a developing business sector. This is proven by the crisis that occurred in parts of the continent of Europe and America, which do not impact on the development of the property business in Indonesia. Crisis in Europe and America did impact on the global market in general, however, in terms of property and real estate business, Indonesia and some other Asian countries such as China, India, and Singapore are not too badly affected. This is because these countries have their own outlook and market expectations in Asia. The high demand or the demand for the availability of the building is still much higher than the supply or offer provided by the developer.

Business property currently provides opportunities to develop. Some factors which is influence include: procurement of home is always less than the house needs, the level of mortgage interest rates are relatively low and tends to be unstable. In addition, this business is supported by the development of a regional and macroeconomic growth (Kompas, 2010). That opportunity, of course, be an opportunity to invite foreign and domestic investors to invest in the country, so that funds will flow to Indonesia through foreign investment, and to provide a profit to help the growth of the real estate business in Indonesia and provide positive impact on investment activities in Indonesia and economic development in general.

Based on the above background, researchers interested in studying the factors that affect the profitability of the company in the property sector and the real estate listed in the Indonesia Stock Exchange (BEI) in the period 2008-2011.



## RESEARCH OBJECTIVES

1. To determine the capital structure, asset growth and price earning ratio partial effect on the profitability of the company.
2. To determine the capital structure, asset growth and price earning ratio effect simultaneously affect the profitability of the company.

## THEORETICAL FRAMEWORK AND HYPOTHESIS

### Profitability

One measure of the success of management in managing the company is profitability. Profitability ratios are used to measure the company's ability to earn profits. Company profits can be identified from the magnitude of the net profit after tax. According Sutrisno (2009), Profitability of a company can be measured by connecting the gains or profits derived from the primary activities of the company's property or assets to generate profits. Profitability ratios measure management effectiveness is shown through profit generated on sales and company investment. A measure of financial performance using return on assets (ROA) indicates the ability of the invested capital in the total assets held to generate income. The bigger ROA means the better of company cover the needs of its assets.

Based on some opinions that have been expressed, concluded that profitability is a tool that describes the performance of management or the views of the company's ability to create profit. According to those opinions profitability is the ratio used to measure a company's ability to streamline and streamline management or investment company through sales and profits they generate.

In this study the ability of earnings represented by Return on Assets (ROA), ie by comparing net income to total assets of the company. Formulation of return on assets or ROA is as follows:

$$\text{ROA} = \frac{\text{Profit after tax}}{\text{Total Asset}} \times 100\%$$

### Capital Structure

Leverage associated with decision-making about getting funds to retain a company related to its business operations. Leverage indicates the proportion using debt for investment. Companies that do not have the means to use their own capital leverage 100%. Companies with low financial leverage ratios have a smaller risk of loss



if the economy is declining, but also have lower returns results when economic conditions improve. In contrast, firms with high financial leverage ratios carry a greater risk of loss, but also have the opportunity to earn high profits.

Leverage is a measure that indicates the extent to which fixed-income securities (debt and preferred stock) are used in the company's capital structure (Brigham and Houston, 2006).

Financial leverage reflects on the condition of the loan that is funded by external parties and guarantee payment based on overall assets. Financial leverage is the addition or reduction of the impact on the return on equity resulting from the use of debt in the capital structure.

Leverage ratios are used to measure how much the company is funded by debt. The lenders who give attention to equity security boundary, but with the increase in funds through debt to benefit the owners can maintain control of the company with a limited investment.

The ratio is used as a basis for discussion in this research is the financial leverage ratio, known as DER (debt to equity ratio). Debt ratio is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company assets. it measures the degree to which the assets of the business are financed by the debts and the shareholders' equity of a business. Debt to equity ratio is calculated using the following formula :

$$\text{Debt to equity ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

### **Asset growth**

Asset growth illustrates the growth of the company's assets will affect the profitability of the companies, which believe that change of percentage in total assets is a better indicator in measuring the growth of the company (Putrakrisnanda, 2009). Asset growth is measured by comparing the assets in the previous year with assets in the year of observation. Asset growth indicates the growth rate of the company, an opportunity which is still owned by the company to generate higher revenues.

Large companies will have rapid asset growth as well, finance staff will help determine the optimal growth rate and decide what specific assets to be acquired (Brigham and Houston, 2009). Sartono (2009) states that, growth means measuring how much the company's ability to maintain its position in the economic development. Asset Growth is calculated using the following formula : (Wiwik Utami, 2006)



$$\text{Asset Growth} = \frac{\text{Asset}_{it} - \text{Asset}_{it-1}}{\text{Asset}_{it-1}}$$

### Price Earning Ratio

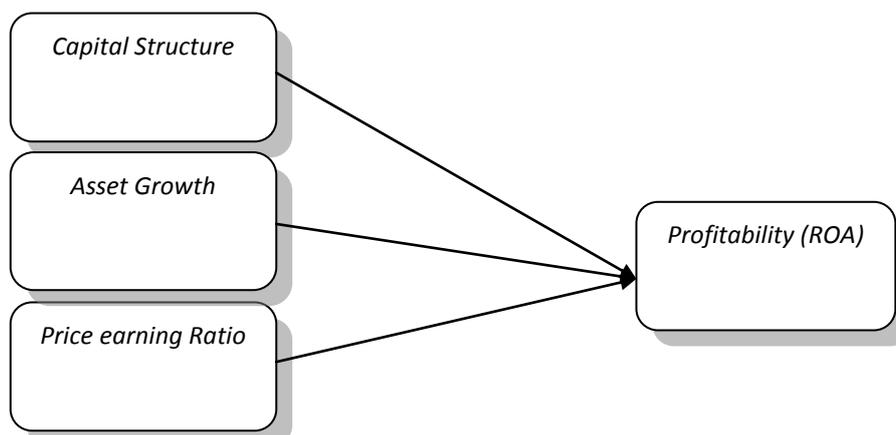
Price earnings ratio illustrates the market appreciation illustrates of the company's ability to generate earnings (Darmaji, 2008). Meanwhile, according to Ang (1997), "Price-earnings ratio is the ratio between the market price of a stock by the earnings per share (EPS) of the its stock". Price earnings ratio is the relationship between the stock market with earnings per share is now widely used by investors as a general guide for measuring the value of the shares (Garrison, 2001) High price-earnings ratio suggests that investors are willing to pay the premium to the company's stock price.

Based on the above understanding of the opinion that the price earnings ratio is referred to in this study is to compare the ratio between the stock price per share of outstanding common stock by earnings per share. A Benefits of Price Earning Ratio is to see how the market appreciates company's performance that reflected the company's performance by its earnings per share. price earning ratio shows the relationship between the market shares of common stock with earnings per share. The greater the price-earnings ratio of a stock then the stock price will be more expensive to net income per share. This ratio typically used by investors to predict the company's ability to generate earnings in the future (Prastowo, 2002). Price earning ratio formula is :

$$\text{Price Earning Ratio} = \frac{\text{Stock Price}}{\text{EPS (Net Income/Number of Shares)}}$$

Based on the explanation of variables above, theoretical framework for this study are as follows :

**Figure 1 : Theoretical Framework of The Study**





In this research, would be tested four hypothesis as it seems in model here :

$$\text{ROA} = a + b_1 \text{ DER} + b_2 \text{ AG} + b_3 \text{ PER} + e$$

- H<sub>1</sub>: Capital structure partially affect the Profitability (ROA).**
- H<sub>2</sub>: Asset Growth partially affect the Profitability (ROA).**
- H<sub>3</sub>: Price earning ratio partially affect the Profitability (ROA).**
- H<sub>4</sub>: capital structure, Asset growth, and price earning ratio simultaneously affect profitability (ROA).**

#### **PREVIOUS RESEARCH REVIEW**

1. David Sukardi (2009) in his research titled “impact of capital structure on profitability” concluded that the decision of capital structure is an important decision in the company. This study evaluated the role of capital structure on profitability of real estate companies listed on the Indonesia Stock Exchange for 9 years (1994-2002). The results showed that the use of both short-term debt and long-term effect on the company's profitability decline.
2. Mandy Retnaningsih (2008) in her study entitled “Analysis of Factors Affecting Profitability of Manufacturing Companies Listed on the Surabaya Stock Exchange” concluded based on F-ratio test results proved that the industry variables ROA, debt leverage, intensity of capital, market share and business risk jointly affect the dependent variable (firm profitability as measured by ROA). From the results of the profitability of each independent variable that proved significant variable affecting the dependent variable is the variable X1 (ROA Industries), Business Risk (X2), because the profitability of the variables {<0.5}. This means that the profitability of the company is not affected by capital intensity as measured by their own capital, Debt Leverage as measured by debt and Market Share as measured by sales.
3. Yulia Fitri (2008) in her study entitled “Effect of Market Share, Leverage Ratios, and Capital Intensity Ratio To Profitability In Real Estaste and propery Company Listed on the Jakarta Stock Exchange” concluding that market share is the only variable that influence on ROA, while the variable leverage and intensity capital has no effect on ROA. Then the market share and leverage variables that affect ROE variable capital intensity but no



significant effect on ROE. But simultaneously, the entire variable market share, leverage and capital intensity simultaneously influence on ROA and ROE.

4. Nur Azlina (2009) in her study entitled “Effect of Working Capital Turnover, Capital Structure and Scale on the profitability of the Company” has concluded that the turnover rate of working capital and capital structure effect on profitability, while the scale does not affect the company's profitability.

## RESEARCH METHODOLOGY

### Population and Research Sample

Population in this research is the property and real estate sector companies are listed in the Indonesia Stock Exchange in 2008-2011 as many as 83 companies. The sample in this research is the the property and real estate sector companies are listed in the Indonesia Stock Exchange in 2008-2011 as many as 20 companies. The sampling technique is purposive sampling. Purposive sampling method, which is based on specific goals or targets in selecting a random sample with certain criteria. The criteria for the sample in this study using the following criteria:

1. company in the property and real estate sector listed in the Indonesia Stock Exchange in 2008-2011.
2. Publish financial statements for the years
3. Have a complete and clear financial statements for the period.  
So from the above-mentioned criteria selected 20 companies in the property and real estate sector are listed in the Indonesia Stock Exchange as follows:

**Table 3. 1: List of Study Sample**

NO	Code	Company Name
1	ASRI	Alam Sutera Realty Tbk
2	BCIP	Bumi Citra Permai Tbk
3	BSDE	Bumi Serpong Damai Tbk
4	CTRA	Ciputra Development Tbk
5	CTRP	Ciputra Property Tbk
6	CTRS	Ciputra Surya Tbk
7	COWL	Cowell Development Tbk



8	DART	Duta Anggada Realty Tbk
9	DUTI	Duta Pertiwi Tbk
10	GMTD	Gowa Makassar Tourism Development Tb
11	DILD	Intiland Development Tbk
12	JRPT	Jaya Real Property Tbk
13	LAMI	Lamicitra Nusantara Tbk
14	LPCK	Lippo Cikarang Tbk
15	LPKR	Lippo Karawaci Tbk
16	MKPI	Metropolitan Kentjana Tbk
17	GPRA	Perdana Gapuraprima Tbk
18	SMRA	Summarecon Agung Tbk
19	BAPA	Bekasi Asri Pemula Tbk
20	MDLN	Modernland Realty Ltd. Tbk

### **Types and Sources of Data**

Data used in this study is secondary data from 2008 through 2011.

### **Method of Analysis**

The first test conducted in this research is descriptive statistical tests. These descriptive statistical tests intended to determine the distribution of research data. Tests performed include finding the mean, maximum and minimum value of research data. Furthermore using the assumptions of classical test before testing the hypothesis using multiple regression analysis.

## **RESULTS AND DISCUSSION**

### **Descriptive Statistics Analysis**

Output from descriptive statistics can be seen that during the period 2008 to 2011 the average value of profitability with the amount of data as much as 80. The value of profitability (Y) has an average value of 0.0464 with a standard deviation of 0.03569.

At capital structure variable ( $X_1$ ) shows that the average value during the year 2008-2011 amounted to 1.0668 with a standard deviation of 0.70527. The maximum value of 3.83 and a minimum value of 0.07. In the variable Aset growth ( $X_2$ ) shows that the average value of the variable asset growth during 2008-2011 amounted to 0.1872. Maximum value of 1.15 and a minimum value of 0.00 with a standard



deviation of 0.23068 . Furthermore PER variable ( $X_3$ ) have a mean value of 17.6599. With maximum values of 75.42 and a minimum value of 0.47 with a standard deviation 14.18391.

### Normality Test

Based on calculations using the computer program SPSS 19.0 for windows can be Seen from the data obtained normality test of Kolmogorov-Smirnov test, where the value of asymtot unstandardized residuals of  $0.524 > 0.05$ , which means the regression model are normally distributed.

### The Asumption of Classical Test

If value of tolerance  $> 0.10$  can be concluded in this research multicollinearity does not exist. Based on calculation, value of tolerance from each of variable capital structure, asset growth and price earning ratio as much as 1.025, 1.031, 1.049 which means value of tolerance  $> 0.10$  . And if we refer to Variance Inflation Factor (VIF), if value of VIF  $< 10$ , the multicollinearity does not exist. Using test heterocedasticity, Based on the chart can be seen the points spread randomly and do not form a particular pattern that clearly spread above zero on the y-axis , so can be concluded that heterocedasticity in model of regression does not exist.

### Multiple regression test.

Based on calculations by the program SPSS for Windows version 19.0 on the coefficients obtained by multiple linear regression equation as the following table:

**Table 4. 1 The values of the coefficients on the linear regression equation**

Model		Coefficients <sup>a</sup>					Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
B	Std. Error	Beta						
1	(Constant)	.072	.008		8.662	.000		
	Capitalstructure	-.011	.005	-.223	-2.296	.024	.976	1.025
	assetgrowth	.043	.015	.278	2.860	.005	.970	1.031
	Per	-.001	.000	-.496	-5.050	.000	.953	1.049

a. Dependent Variable: roa

According to the result of analysis of regression from table above, so the model of regression can be written as follow :



$$Y = 0.072 - 0,223X_1 + 0,278X_2 - 0,496X_3$$

From the equation above, can be explained as follow :

Coefficient of regression capital structure variable ( $X_1$ ) is -0.223, it means if another independent variable is constant and value of capital structure decreases 1 point, so profitability will increase about 0.223. The coefficient is negative means happens negative relationship between capital structure and profitability. Coefficient of regression from asset growth ( $X_2$ ) is 0.278, it means if another independent variable is constant and value of asset growth increasing 1 point, profitability will increase about 0.278. The coefficient is positive means there are positive relationship between asset growth and profitability. Coefficient of regression price earning ratio variable ( $X_3$ ) is -0.496, , it means if another independent variable is constant and value of price earning ratio decreases 1 point, so profitability will increase about 0.496. The coefficient is negative means happens negative relationship between price earning ratio and profitability.

#### Coefficient of Determination

Value of R or  $R^2$  can be seen in the following table:

**Table 4. 2 Model Summary**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.550 <sup>a</sup>	.303	.275	.03039

a. Predictors: (Constant), per, capitalstructure, assetgrowth

b. Dependent Variable: roa

Based on the above table, it can be seen that all the independent variables having relationship on the probability of the company in property and real estate sector are listed in the Indonesia Stock Exchange (Y). it can be proven through multiple correlation coefficient (R) of 0.550.

The tables also can be seen that the coefficient of adjusted R square of 0.275. showed that three independent variables jointly influence on the probability of the company's property and real estate sector are listed in the Indonesia Stock Exchange amounted to 27.5%.



## Hypothesis Testing

### a. Effect of capital structure on probability.

In the t-test was used back coefficient following table.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.072	.008		8.662	.000		
	capitalstructure	-.011	.005	-.223	-2.296	.024	.976	1.025
	assetgrowth	.043	.015	.278	2.860	.005	.970	1.031
	per	-.001	.000	-.496	-5.050	.000	.953	1.049

1. At capital structure/X1, t-calculated value is -2.296 with a significance level of 0.024. This value is smaller than - t table (-2.296 < -1.990) . This leads to Ho rejected and H1 is accepted that the asset structure significantly affect the probability of the companies listed in Indonesia Stock Exchange.
2. **Effect of asset growth on the probability.** At asset growth /X2, t-calculated value is 2.860 with a significance level of 0.005. This value is greater than t-table. This leads to Ho rejected and H2 is accepted that asset growth /X2 significantly affect profitability on companies listed in Indonesia Stock Exchange.
3. **Effect of price earning ratio on the probability.** On price earning ratio/X3, t-calculated value is -5.050 with a significance level of 0.000. This value is smaller than – t table (-5.050 < -1.990). This leads to Ho rejected and H2 is accepted that price earning ratio significantly affect the capital structure on companies listed in Indonesia Stock Exchange.

From the results of the statistical test is known that among the three independent variables of capital structure, asset growth and asset price earnings ratio affects the probability of the company's property and real estate sector are listed in the Indonesia Stock Exchange.



***b. Effect of capital structure, asset growth, price-earnings ratio simultaneously on probability.***

**Table 4. 4 F-Count**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.030	3	.010	10.992	.000 <sup>a</sup>
	Residual	.070	76	.001		
	Total	.101	79			

a. Predictors: (Constant), per, capitalstructure, assetgrowth

b. Dependent Variable: roa

F-count value is greater than the F-table, so it can be said that the capital structure, asset growth, price-earnings ratio simultaneously affect the probability of firms in the property and real estate sector are listed in the Indonesia Stock Exchange.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **A. Conclusion**

1. Of simultaneous hypothesis testing indicate that the variable structure of assets, sales growth and profitability simultaneously affect the profitability of the companies listed in Indonesia Stock Exchange.
2. Of hypothesis testing each variable partially known that among the three independent variables affects the probability of the company's property and real estate sector are listed in the Indonesia Stock Exchange. Where the influence of the capital structure and price earning ratio negatively affect on probability.

### **B. Recommendations**

1. For go public companies in property and real estate sector is expected to continue to maintain a level of profitability to improve internal financial resources, in order to meet the financing needs for the future
2. In this study the samples used company property and real estate sector are listed in the Indonesia Stock Exchange, so the conclusions resulting from this study is limited to company's property and real estate sector. Therefore, next researchers can be expand the sample so that the sample used is not confined to the sub-sectors of the property and real



estate sector, but also others with the financial reporting period more than one year.

3. For other researchers who will conduct further research examining other variables that have not been included in this study. Given the many factors - other factors that have the possibility to have a greater influence on the probability

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