

FIRM PERFORMANCE AND MARKET REACTION

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Abstract: *This research objective was to examine the effects of company's performance that measured using profitability ratios and market ratios against market reaction at manufacture company. Using data taken from Indonesia Stock Exchange consists of manufacture companies published period 2010 to 2013. Firm performances are measured with Return On Asset (ROA), Net Profit Margin (NPM), Earning Per share (EPS) and Price to Book Value (PBV). Market reaction proxied by abnormal Return. This research used multiple regression analysis. The result of this research shows that Return On Asset (ROA) and Net Profit Margin (NPM) has positive effects but not significant to Abnormal Return. While Earning Per Share (EPS) has negative effect but not significant to Abnormal Return. Nevertheless Price to Book Value (PBV) has negative effect and significant to Abnormal Return.*

Key Words: *Return On Asset (ROA), Net Profit Margin (NPM), Earning Per Share (EPS), Price to Book Value (PBV) and Abnormal Return.*

INTRODUCTION

Economic development supported by increased communication will increase the company's efforts to expand its business and activities in order to raise funds for business expansion in various ways so that investors get benefit more. Capital market is the most effective for investors to invest their capital in order to make a profit and to mobilize funds from various sectors of society to carry out the investment. The main requirement is desired by investors to be willing to channel funds through the capital market is the investment will secure feeling. In the capital market, the company's financial statements that go public are essential for the company's performance appraisal.

The financial report is a crucial information for investors in making investment decisions. Benefits of the financial statements to be optimal for the investor if the investor can analyze further through financial ratio analysis. Financial ratios are useful to predict the company's financial difficulties, results of operations, financial condition

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of the company's current and future, as well as a guide for investors regarding the performance of the past and the future. Investment activity is an activity placed funds in one or more assets for an indefinite period with the hope to earn income or increase in the value of the initial investment (capital) that aims to maximize yield / profit (return) is expected within the limits of acceptable risk for investor (Jogiyanto, 2000). Investors use various ways to obtain the expected return, either through its own analysis of the behavior of stock trading, or by utilizing a tool provided by the capital market analysts.

Patterns of behavior that are trading in the stock market may contribute to the behavioral patterns of stock prices in the capital market. Stock price behavior patterns will also determine the pattern of returns to be received by investors from the stock. In this case the stock returns reflect market reaction. Market efficiency is tested by looking at abnormal returns of a security that occur in a particular event announcements. Abnormal return is the difference between the return actually happens to the expected return of investors.

According to Eljelly and Alghurair (2001), managers and investors have a tendency to find indicators that can be used in measuring the performance of the company. In investing in the stock market can undertake investment approach broadly divided into two approaches: technical analysis and fundamental analysis. Technical analysis is an attempt to predict stock prices by observing the change in the stock price in the past. While fundamental analysis is an analytical technique that shares learn about basic financial and economic facts of the company as the company's share price valuation measures. Financial ratios derived from the financial statements often called the company's fundamentals.

Indonesia Stock Exchange (IDX) is one of the fastest-growing stock exchanges to become the preferred alternative companies to find the funds needed. The development of the stock exchange as well be seen by the increasing number of members of the exchange can also be seen from the price changes traded. Previous description describes the fundamental factors as the performance of the company is able to consider in making investment decisions in the capital market. This will cause the market reaction which can be seen from the abnormal return of the company's securities. Chosen manufacturing industry is based on the premise that the manufacturing industry is one of the primary sector in the Indonesia Stock Exchange so that the industry better reflect the state of the capital markets. Many investors prefer to invest in companies manufacturing for industrial manufacturing company's stock price increases every year. Therefore, this area is still a problem that is interesting to study. Based on the background of the problems that have been described previously, the key problem research discussed in this study is: How does the performance of the company on the market reaction to the companies listed in Indonesia Stock Exchange? This study aims to determine the effect of the company's performance as measured by ROA, NPM, EPS and PBV to abnormal return on companies listed in Indonesia Stock Exchange.

THEORETICAL AND DEVELOPMENT OF HYPOTHESES

Arbitrage Pricing Theory (APT)

Concepts used in the Arbitrage Pricing Theory is the law of one price. When assets are the same characteristics that are sold at different prices, there will be an opportunity to do arbitrage by buying valuable assets cheap at the same time sell at a higher price to make a profit without risk (Husnan, 2001). Ross (1975) formulated a theory called the Arbitrage Pricing Theory (APT), this theory is based on the premise that two investment opportunities that have identical characteristics can not be sold at different prices (the law of one price), further theory assumes that The profit rate can be affected by various factors in the economy and in the industry. The correlation between the level of profit occurred because the two securities are securities influenced by the same factors (Husnan, 2001).

APT theory states that do not explicitly mention the factors that affect the expected return, the analysts are welcome to formulate his own about the factors that affect the expected return (Suad Husnan, 2001). Copeland (2003) states that there are at least three (3) or four (4) factors affecting the development of the price of securities. This shows that the theory APT encourage the development of research based on the variables or factors suspected to affect change in a security that is of fundamental performance of the company, the performance of stocks in the market, or the state of the market and the economy.

Until now, many studies using the APT approach, because rationally and also theoretically that the price development is strongly influenced by the demand and supply of stock. Demand and supply of shares is influenced by expectations of investors (Westondan Copeland, 2003). Further hope or courage to bargain for an investor's share price is determined by market conditions, economic conditions and the value of the company itself (Sartono, 2002). Then the theoretical basis used in this study is the Arbitrage Pricing Theory (APT).

Company Performance

Corporate performance is the level of achievement of results in order to achieve company goals. A formal business of the company to evaluate the efficiency and effectiveness of the activities that have been implemented in a specific time period.

Performance measurement used by the company to make improvements on their operations in order to compete with other companies. While financial performance is a formal business conducted by the company to measure the success of the company to generate profits, so that they can see prospects, growth and development potential of the company to rely on existing resources (Toto Prihadi, 2009). Analysis of financial performance is a critical review process to review the data, calculate, measure, interpret, and provide financial solutions to companies in a given period. Financial performance can be assessed by analysis of financial ratios. Financial ratio analysis is a financial

analysis techniques to determine the relationship between a particular post in the balance sheet and income statement, both individually and simultaneously.

Financial Ratios

Fundamental factors are factors related to the condition of the company which includes conditions of management, organization, human resources and financial condition of the company are reflected in the firm's financial performance. The financial performance of the company is shown in the financial statements Ratio analysis is a common method used in the analysis of financial statements to measure the strength or weakness of the company faced financial sector. Benefit analysis of financial ratios used prospective investors or creditors who will invest their funds in companies through capital markets by buying shares of the company. In general, financial ratios can be grouped into five (5) types based on the scope or objectives to be achieved:

1. Liquidity Ratios: is used to measure the ability of short-term (less than one year) in the company to meet its maturing obligations. This ratio consists of the Current Ratio (Current Ratio), Quick Ratio and Net Working Capital.
2. Activity Ratios : demonstrated the ability and efficiency of the company in utilizing its assets. This ratio is composed of Total Asset Turnover, Fixed Asset Turnover, Accounts Receivable Turnover, Inventory Turnover, Average Collection Period, and Days Sales in Inventory.
3. Profitability Ratios: shows the company's success in generating profits. This ratio is composed of Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Assets (ROA), Return on Equity (ROE) and Operating Ratio.
4. Solvency Ratio: shows the company's ability to meet its long-term liabilities. This ratio is also called leverage ratios. This ratio is composed of Debt Ratio, Debt to Equity Ratio (DER), Long-Term Debt To Equity Ratio, Time Interest Earned Ratio and Cash Flow.
5. Market ratios: indicates important information that is disclosed in the company per share basis. This ratio is composed of dividend yield (DY), Dividend Per Share (DPS), Earning Per Share (EPS), Dividend Payout Ratio (DPR), Price Earning Ratio (PER), Book Value Per Share (BVS) and Price to Book Value (PBV).

Financial ratios are often used as a proxy for investors and financial experts. Aspects that are reflected in the financial ratios associated with the purpose of analysis. If the analysis conducted by the creditor, which is perceived to be different aspects of the assessment made by the investor. According to Suad Husnan (2001), the lender will be more concerned with the ability of the company to pay off financial obligations on time, while investors will be more concerned with the ability of the company making a profit. Similarly, the stock investors who invest in stocks will be more interested in the long-term profitability and efficiency.

Stock Return

Every investment both short term and long term has the main goal to benefit the so-called return, either directly or indirectly (Jogiyanto, 2000). In a simple investment can be defined as an activity placed funds in one or more of the assets during a certain period in the hope of obtaining income or increase in value of investments. Stock return is the result obtained from investment activities that can be seen from the change in the stock price. High stock returns indicates that the stock is actively traded. Stock returns is one of the factors that motivate investors to invest and also a reward for the courage of investors bear the investment risk does. In portfolio theory requires that if the risks are borne by the shareholders increases, the stock will gain great stock returns. So there is a positive relationship between risk and stock returns.

Return is the result obtained from the investments in the form of realized return and expected return. Realized return is the return that has occurred which is calculated based on historical data and used as one measure of corporate performance. Realized return is also useful as a basis for determining the expected return which is the return expected by investors in the future. Realized return measured using total return, relative return, return cumulative, and adjusted return. Market reactions that occur on the date of announcement of financial statements that reflected with stock return. Return is used as a proxy in this study is the abnormal return. Abnormal return is the excess of the return actually happens to return to normal (Jogiyanto, 2000). Abnormal returns is the difference between realized returns with expected return. Jogiyanto (2000) estimated abnormal return using three model, namely: the mean adjusted model, market models, and market adjusted model.

Effect of Return on Assets (ROA) Abnormal Return on Equity

Return on Assets (ROA) is a profitability ratio that used to measure the effectiveness of the company in the profit from the use of its assets (Jogiyanto, 2000). The Company will make efforts to encourage an increase in income, indicating the company's operations are healthy and well. Increasing ROA shows the better performance of the company and its shareholders will benefit from dividends received. Increasing dividends received by shareholders will be the main attraction for investors. Investors will feel safe by investing in companies that have these characteristics. This condition leads to a higher stock price, which in turn will boost stock returns.

Research by Ulupui (2006) found results that ROA has a positive and significant impact on stock returns to next year. In research Hardiningsih et al. (2002) also showed that the ROA has a positive and significant effect on stock returns in manufacturing companies large capacity. So it can be concluded that the ROA has a positive and significant effect on stock returns. This hypothesis is also supported by research conducted by Ratnasari (2003), Annisa Citra Masulili (2005), Saniman Widodo (2007) and Hartati (2010) so as to obtain the first hypothesis is as follows:

H1: ROA has positive effect on abnormal returns.**Effect of Net Profit Margin (NPM) Abnormal Return on Equity**

Net Profit Margin (NPM) is used to measure the rate of return net profit to net sales (Husnan, 2001). The increasing profits will reflect the share of profits in the form of dividends and capital gains received by the shareholders are also getting bigger. Good news in the form of an increase in the ratio of NPM expected increase investor confidence in the company. The confidence can change the demand or supply company's stock price will further affect the company's stock price increases.

Research conducted Ratnasari (2003) on the effect of net profit margin (NPM) on stock returns in the Jakarta Stock Exchange case study padaperusahaan manufacturing and banking showed that NPM positive effect on stock returns. In addition, research conducted by Nicky Nathaniel (2008), shows that the NPM positive effect on stock returns, but not significant. Research conducted by Shirley Kenya (2005) also showed that NPM significant effect on stock returns in bullish and bearish conditions. Based on the description of the obtained second hypothesis is as follows:

H2: NPM has positive effect on abnormal returns**Effect of Earning per Share (EPS) with Abnormal Stock Return**

Earning per share (EPS), according to Prihadi Toto (2009) is the amount of profit in a period that is available for any ordinary shares outstanding during the reporting period. One indicator of the success of a company indicated by the EPS of the company concerned. The investors will pay attention to its influence in the future by looking at the company's prospects are good. Hartati (2010) conducted a study on the effect of EPS on stock returns in manufacturing companies on the Stock Exchange show that EPS is not shown to have an effect on stock returns. However, the research conducted by Eljelly and Alghurair (2001) results show that the EPS is a significant variable explaining changes in stock returns.

In general, investors will expect to benefit from its investment in the form of earnings per share. While the EPS amount to be distributed to investors shares depending on the company policy in terms of dividend payments. It can be concluded EPS positive and significant effect on stock returns. This hypothesis is supported by research conducted by Nicky Nathaniel (2008) and Saniman Widodo (2007), the third hypothesis can be formulated as follows:

H3: EPS has positive effect on abnormal returns.**Effect of Price to Book Value (PBV) with Abnormal Stock Return**

Price to Book Value (PBV) is one of the market ratio is used to measure the performance of the stock market price to book value (Toto Prihadi, 2009). In general, companies that can operate well will have a ratio of Price to Book Value (PBV) above 1, where it

shows the value of a company's stock, valued above its book value. The lower the PBV ratio indicates that the stock price is cheaper (underprice) compared to other similar stock prices. These conditions provide opportunities for investors to achieve capital gains when the stock price rebounded back price increases.

The higher PBV ratio of a company indicates that higher the investors' assessment of the company, the relative when compared to the funds invested. This will result in increasing the stock price of a company, thus also expected to raise the level of return (return). This statement is supported by the results of research on Political Risk, Risk and Financial Risk Ekonomik conducted by Claude et al. (1996). In this study it was found that PBV positive and significant effect on stock returns. Based on these descriptions can be obtained hypothesis that PBV has a positive correlation with stock returns. This hypothesis is supported by, Hardiningsih et al. (2002), Ratnasari (2003), Saniman Widodo (2007), Nicky Nathaniel (2008) and Wahyu (2012) that showed that the fourth hypothesis as follows:

H4: PBV has positive effect on abnormal returns.

RESEARCH METHODOLOGY

Data and Sample

The population in this study are listed or manufacturing companies listed in Indonesia Stock Exchange at the end of 2013. The number of companies listed on the Stock Exchange as many as 140 manufacturing companies. The sampling technique was conducted by the method of "purposive sampling" with the criteria used to determine the sample in this study, as follows:

- a. Listed company or issuer listed on the Stock Exchange as the period 2010 to 2013.
- b. Shares of issuers actively traded each month during the period 2010 to 2013.
- c. Publish and always present financial statements with the rupiah during the observation period is 2010 to 2013.

Companies that have the characteristic of the sample as many as 95 companies manufacturing per year. The number of observations for the year 2010 to 2013 is for 4 (four) years. So the sample of this study as many as 380 companies. The sample that used in this study is a manufacturing company that consists of Basic Industry and Chemical, Miscellaneous Industry and the Consumer Goods Industry.

Operational Definition of Variables

This study uses the dependent variable that is measured by the market reaction to abnormal return. While the independent variables used are the manufacturing company's financial performance as measured by the ratio of profitability (ROA and

NPM) and the ratio of the market (EPS and PBV). These variables are described as follows:

1. Market Reaction

Market reaction to the abnormal return measured as the difference between the return actually happens to the expected return of investors. Abnormal return is calculated by Market-Adjusted Model By using Market-Adjusted Model, it is not necessary to use the estimation period to establish a model estimation, because the return of securities to be estimated is the same as the market index return (Jogiyanto, 2000). So the expected return of a security equal to the market index return on the same day.

- a. Calculate the actual return by using the formula:

$$Rt(\text{Actual return}) = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Specification:

P_t = stock price at the time of publication of financial statements

P_{t-1} = stock price the day before the publication of financial statements

- b. Calculate the expected return by using Market-Adjusted Model:

$$E(Rt) = \text{Market Index Return} = \frac{IHS_t - IHS_{t-1}}{IHS_{t-1}}$$

Specification:

IHS_t = Index on the day of publication of financial statements

IHS_{t-1} = Index the day before the publication of financial statements

- c. Calculate the abnormal return is obtained from the equation:

$$ARt (\text{Abnormal Return}) = Rt - E (Rt)$$

Specification:

Art = Return Not Normal

Rt = Return Realization

E (Rt) = Return Expectations

2. Firm Performance

Firm performance is measured by the profitability ratio and market ratios. This study aims to provide information for potential investors share the researchers only focused on two aspects of the financial ratios and profitability ratios, the ratio of market value. In contrast to the ratio used for the benefit of creditors, namely liquidity and solvency ratios. Type the ratio of profitability to be

considered by prospective investors and selected researchers to be tested, namely ROA and NPM. As for the market ratio, the researchers chose EPS and PBV to tested in the study. Another reason in the selection of the independent variables of financial ratios because these ratios can be used for all kinds of industries and generally accepted to be a proxy for investors in assessing the company's financial performance. The ratio is described as follows:

- a. Return on Assets (ROA) is the ratio of net profit after tax in the income statement for the period ended December 31, against the total assets on the balance sheet as of December 31. ROA is defined as follows (Jogiyanto, 2000):

$$\text{Return on Asset (ROA)} = \frac{\text{Net Income After Tax}}{\text{Total Asset}}$$

- b. Net Profit Margin (NPM) is the ratio of net profit after tax to total sales is based on the income statement period ended Dec. 31. Formulated as follows:

$$\text{Net Profit Margin (NPM)} = \frac{\text{Net Income After tax}}{\text{Net Sales}}$$

- c. Earning Per Share (EPS) is the amount of profit that is available on a period for any ordinary shares outstanding during the reporting period. EPS is formulated as follows:

$$\text{Earning per Share (EPS)} = \frac{\text{Net Income After Tax}}{\text{Outstanding Stock}}$$

- d. Price to Book Value (PBV) is the ratio of stock market price to book value per share. Formulated as follows (Toto Prihadi, 2009):

$$\text{Price to Book Value (PBV)} = \frac{\text{Stock Market Value}}{\text{Book Value}}$$

DATA ANALYSIS METHODS

Data analysis techniques to obtain a comprehensive picture of the influence of ROA (Return on Assets), NPM (Net Profit Margin), EPS (Earnings per Share) and PBV (Price to Book Value) to abnormal stock returns using multiple linear regression analysis and test hypotheses (coefficient of determination, f test and t-test) with SPSS version 20 for Windows. Multiple linear regression method is formulated as follows:

$$AR_{i,t} = \alpha + \beta_1 ROA_{i,t} + \beta_2 NPM_{i,t} + \beta_3 EPS_{i,t} + \beta_4 PBV_{i,t} + \varepsilon_{i,t}$$

Specification:

AR : Abnorma Return firm *i*, year *t*

ROA : *Return on Assets firm i, year t*

NPM : *Net Profit Margin firm i, year t*

EPS : *Earnings per share firm i, year t*

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistics is a general statistical test that aims to see the data distribution of the variables that are used as samples in this study.

Table 4.2
Descriptive Statistics
Descriptive Statistics

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
Abnormal Return	380	-62.00	31.47	.3291	5.46824
ROA	380	-75.58	71.51	6.7453	12.63469
NPM	380	-939.59	81.87	-3.4659	70.54528
EPS	380	-7061.21	16515.00	588.1067	2115.42014
PBV	380	-9.03	40.09	2.5699	4.70846
Valid N (listwise)	380				

Based on the above table the amount of data used in this study were 380 samples of data before Ln transformation of 95 companies for 4 years ie in the period 2010 to 2013. The results for the period of observation showed that the abnormal stock returns has the lowest value (minimum) that is equal to - 62.00 and the highest value (maximum) of 31.47. From these data it can be seen that the abnormal return on average experienced a positive change in the average abnormal return of 0.3291. Whereas the standard deviation of 5.46824 abnormal stock returns exceed the average value, indicating a high fluctuation variable data abnormal return during the period of observation.

Return On Assets (ROA) in the table was obtained by an average of 6.7453 with the lowest value of -75.58 and a high of 71.51. Whereas the standard deviation of 12.63469 greater than the average. This shows the data used in the ROA has a large distribution and fluctuation ROA on the Indonesia Stock Exchange (IDX) during the observation period.

Value of Net Profit Margin (NPM) low of -939.59 and a high of 81.87. In addition, NPM has an average value of -3.4659 while the standard deviation of 70.54528. Seeing the value of standard deviation greater than the average then show that the data used in the variable NPM has a large distribution. This condition also showed large fluctuations NPM on the Stock Exchange during observation period.

Earning Per Share (EPS) in the table was obtained by an average of 588.1067 with the lowest value of -7061.21 and a high of 16515.00. Whereas the standard deviation of 2115.42 which is greater than the average. This shows the data used in the variable EPS also has a large distribution and also fluctuations EPS great on Indonesia Stock Exchange (IDX) during the observation period.

Based on the calculation results in Table 4.1 show that the Price to Book Value (PBV) has the lowest value of -9.03 and a high of 40.09. While the average value of the variable that is equal to 2.5699 PBV with a standard deviation of 4.70846. The average rate of more than 1 indicates the average manufacturing company sampled own shares at a price that is greater than the value of the book.

Normality Test

Test Statistics Kolmogorof- Smirnov (K-S)

K-S test to test the normality of the data residuals, if the significance value above 0.05. Normality test results as follows:

Table 4.3
Statistics Kolmogorof- Smirnov
One-Sample Kolmogorov-Smirnov Test

		<i>Standardized Residual</i>
N		146
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	.98611044
Most Extreme Differences	Absolute	.089
	Positive	.029
	Negative	-.089
Kolmogorov-Smirnov Z		1.071
Asymp. Sig. (2-tailed)		.201

a. Test distribution is Normal.

b. Calculated from data.

Based on the results in the table above indicate that the data used in this study was normally distributed. This is indicated by Kolmogorof-Smirnov test which has a significance level of 0.201 which is above 0.05.

Multicollinearity Test

Multicollinearity test is used to determine the correlation between the independent variables. Good regression model is the model that there is no correlation between the independent variables or correlation between the independent variable low. In general, a regression model was declared free of multicollinearity is if it has a greater tolerance value of 0.1 and has a VIF value less than 10. The results of multicollinearity in this study is presented in the following table:

Table 4.4
Test Results Multicollinearity
 Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	LN_ROA	.134	7.471
	LN_NPM	.167	5.986
	LN_EPS	.479	2.086
	LN_PBV	.620	1.614

a. Dependent Variable: LN_AR

Noting the calculation results obtained from the above table shows that the tolerance value of each independent variable has a value above 0.1 and the value of Variance Inflation Factor (VIF) of each independent variable has a value below 10. This suggests that the regression model used in this study declared free of multicollinearity between the independent variables.

Heteroscedasticity Test

Heteroscedasticity test aims to test whether the regression model occurs inequality variant of the residuals of the observations to other observations. If the variance of the residuals of the observations fixed, then called homoscedasticity and if different will be called heteroscedasticity. Good regression model is a model that heteroscedasticity does not exist. Glejser test for heteroscedasticity test conducted by the absolute value of residuals regressed against independent variables.

Table 4.5
Glejser Test
 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	1.058	.195	5.421	.000	
	LN_ROA	.173	.172	.229	1.002	.318
	LN_NPM	-.246	.173	-.289	-1.416	.159
	LN_EPS	.030	.051	.072	.593	.554
	LN_PBV	-.036	.089	-.042	-.400	.690

a. Dependent Variable: ABSRES

The results in the table above show that the influence of the independent variables to dependent variable in the form of the absolute value of the residual is not significant (significance > 0.05), so we can conclude there is no heteroscedasticity in regression models.

Autocorrelation Test

Autocorrelation test aims to test whether the linear regression model is no correlation between bullies error in period t-1 (previously). Good regression model is a regression that is free of autocorrelation. The data used for this autocorrelation test is data after transformation of Ln. Autocorrelation test performed using the Durbin-Watson test, the results are as in the following table:

Table 4.6
Autocorrelation Test
Model Summary^b

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>Durbin-Watson</i>
1	.254 ^a	.065	.038	1.38042	1.964

a. Predictors: (Constant), LN_PBV, LN_EPS, LN_NPM, LN_ROA

b. Dependent Variable: LN_AR

Hypothesis Testing

Multiple Regression Analysis

The results of multiple linear regression analysis using SPSS version 20 and tested with a significance level of 5% can be seen in the following table:

Table 4.7
Results of Regression Analysis
Coefficients^a

<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>T</i>	<i>Sig.</i>
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
1	(Constant)	.370	.324		1.143	.255
	LN_ROA	.283	.286	.220	.989	.324
	LN_NPM	.141	.288	.098	.492	.624
	LN_EPS	-.127	.084	-.178	-1.510	.133
	LN_PBV	-.398	.148	-.277	-2.681	.008

a. Dependent Variable: LN_AR

1. Test of Hypothesis 1

The first hypothesis states that there is a positive influence between the return on assets (ROA) of the abnormal stock return. From the calculation results obtained for the regression coefficient of 0.283 ROA with a significance level of 0.324 which indicates the value is not significant because it is greater than 0.05. These results indicate that the ROA has a positive but not significant effect on abnormal stock returns. Noting the value of the t test (t count) is 0.989 and the value of t table is 1.976, so t count smaller than the t table. It is also explained that the first hypothesis in this study that states ROA influence to abnormal stock returns can not be accepted.

ROA chosen as a proxy for the profitability ratio because the greater the profits from the company, then the company can add assets to improve company performance. However, the results of this study allow that the ability of the company increase profits by using its assets may not be able to attract investors to buy shares at a higher price because there are other considerations that are owned by investors. So ROA cannot be used as a benchmark for predicting market reaction occurs. However, the present invention is different from the results of research conducted by Hardiningsih (2002), Ratnasari (2003) and Ulupui (2006) which concluded that the ROA positive and significant effect on stock returns, which means increasing the value of the company's performance in gaining profit by using the assets of the company is also expected to boost stock returns will be accepted.

2. Test of Hypothesis 2

The next hypothesis states that there is a positive effect of net profit margin (NPM) of the abnormal stock return. The result of the calculation, the regression coefficient for the NPM of 0.141 with a significance level of 0.624 which indicates this value is not significant because it is greater than 0.05. The results of this study indicate that NPM has a positive but not significant effect on abnormal stock returns. Noting the value of the t test (t count) of 0.492 whereas t table value of 1.976, the value t count is smaller than the t table. It is concluded that the hypothesis of NPM effect on abnormal stock returns cannot be accepted.

NPM chosen as a proxy for the profitability ratio because the greater the profits from the company, then the company can further increase the sales so as to improve the performance of the company. These results are supported by research conducted by Nicky Nathaniel (2008) which states that a high NPM shows the company has the ability to generate net income with a high percentage in operating income, but this is not necessarily able to attract investors to buy shares at a price high because investors have other considerations. So it can be concluded that the NPM variables cannot be used as a benchmark for predicting market reaction occurs. However, in contrast to the results of research conducted by Ratnasari (2003) and Shirley Kenya (2005) which states NPM positive and significant effect on stock returns in bullish and bearish conditions.

3. Test of Hypothesis 3

The third hypothesis states that the Earning Per Share (EPS) positive effect on abnormal stock returns. Regression coefficient for EPS obtained from the calculation is equal to -0.127 with a significance level of 0.133. This value is not significant because it is greater than 0.05 indicating that EPS has a negative effect but not significant abnormal stock returns. Value of t test (-t count) obtained at -1.510 greater than the value that is equal to -1.976 -t table means it can be concluded that the hypothesis that the EPS effect on abnormal stock returns can not be accepted.

EPS chosen as a proxy for the market because the larger the ratio of profits from the company, the greater the profits of investors for each share owned. However, the results of this study indicate that EPS can not be used as a benchmark for predicting market reaction occurs. Low EPS less attract investors to invest their shares in the company for assessing the benefits for each share, its so low that the risk is higher.

These results are supported by research conducted by Hartati (2010) and Nicky Nathaniel (2008) which concluded that the EPS has no significant effect on stock returns. However, these results differ from the results Saniman Widodo (2007) which states EPS changes will contribute to changes in stock returns sharia in Jakarta Islamic Index (JII).

4. Test of Hypothesis 4

The fourth hypothesis claimed that the Price to Book Value (PBV) positive effect on abnormal stock returns. Regression coefficient for PBV obtained from the calculation is equal to -0.398 with less significance value of 0.008. This value is smaller than 0.05, thus indicating that the PBV has a negative and significant effect on the abnormal stock returns. Value t test (-t count) obtained at -2.681 smaller than the value that is equal to -1.976 -t table. This means that the hypothesis PBV effect on abnormal stock returns may be accepted, but a negative effect.

The results of this analysis different from the results of the analysis of Hardiningsih (2002), Claude *et al.* (1996) and Nicky Nathaniel (2008) which states that the PBV has a positive effect on stock returns. PBV chosen as a proxy for the market ratio due to the higher of stock price to book value means the higher the investors' assessment of the company's stock market performance.

The result of this analysis is also supported by research Saniman Widodo (2007) and Ratnasari (2003). Research on the negative influence of PBV on stock returns showed anomalies in stock trading. This anomalous occurrences indicate in effesience market in relation to stock trading. This analysis shows that changes in the value of Price Book Value (PBV) will give a negative and significant contribution to changes in stock returns. According to Fama and French (1992) states that the PBV has a negative correlation with stock returns. Thus the higher PBV, so the lower stock returns are concerned. These findings indicate a possibility that the PBV ratio is a measure of non-diversifiable factors. Rational explanation for this finding is that firms with high PBV values have higher financial performance (good) it will reduce the level of risk that stock returns would be lower. In accordance with the concept of low risk - low return, high risk - high return.

CONCLUSIONS, LIMITATIONS AND SUGGESTIONS

Conclusion

Based on the analysis that has been carried out and the description in the previous chapter, we can conclude the following matters, Return on Assets (ROA) have positive

effect and no significant on abnormal returns. The results of this study indicate that ROA change information obtained from the financial statements do not affect the abnormal return which means it can not be used to predict abnormal returns (market reaction). However, these results are not consistent with results supporting a research conducted by Hardiningsih (2002), Ratnasari (2003) and Ulupui (2006) which concluded that the ROA has positive and significant impact on stock returns. Net Profit Margin (NPM) have positive effect and no significant on abnormal returns. This analysis indicates that the NPM change information obtained from the company's financial statements do not affect the abnormal return which means it can not be used to predict abnormal returns (market reaction). The results of this study are consistent with the results Nicky Nathaniel (2008). Earning Per Share (EPS) have negative effect and no significant on the abnormal returns. These results indicate that EPS obtained from the company's financial statements do not affect the abnormal return which means it can not be used to predict abnormal returns and indicates that companies that have less value decreased EPS attract investors to invest their shares in the company it because assessing the benefits for each share, its low so the risk is higher. The results of this analysis in line with Hartati (2010) and Nicky Nathaniel (2008). Price to Book Value (PBV) have significant negative effect on the abnormal returns. This study shows any increase of unit times of PBV will cause a decrease of the abnormal returns. This is consistent with studies of Fama and French (1992) with a rational explanation that companies with high PBV values have higher financial performance (good) it will reduce the level of risk that stock returns would be lower. The result of this analysis is also supported by the results of research Saniman Widodo (2007) and Ratnasari (2003).

Limitation and Further Research

Relatively short observation period is only 4 years old with a limited number of companies that still is only 95 manufacturing companies. Only use 2 ratio of each of the profitability ratio (ROA and NPM) and the ratio of the market (EPS and PBV). Calculation of abnormal returns using the market adjusted model, where the search for the expected return on the observation period is equal to the market return during the observation that at the date of publication of the financial statements.

Further research may use the period of observation of relatively longer with the company broader sample of the types of other industries. The ratio used more to determine the effect of other ratios than those used in this study. Calculation of expected abnormal return should use the mean adjusted model or market model.

References

- Claude, Campbell Harvey, and Tadas Viskanta. (1996), *Political Risk, Economic Risk, and Financial Risk*. Financial Analysis Journal, Nov Dec: pp. 29 45.
- Eljelly, A., Alghurair, K. (2001), *Performance Measures and Wealth Creation in An Emerging Market: The Case of Saudi Arabia*. International Journal of Commerce & Management, Vol 11, No. 3 & 4.

- Fama and French. (1992), *The Cross – Section of Expected Stock Returns*. The Journal of Finance, Vol XLVII, No.2.
- Gujarati, Damodar. (2006), *Dasar-Dasar Ekonometrika*. Erlangga. Jakarta.
- Hardiningsih, Pancawati. (2002), *Pengaruh Fundamental dan Resiko Ekonomi terhadap Return Saham pada Perusahaan di BEJ*. Jurnal Bisnis Strategi, Vol3, September.
- Hartati. (2010), *Pengaruh Return on Asset, Debt to Equity Ratio. Earning Per Share, Price Earning Ratio terhadap Return Saham (Studi pada Perusahaan Manufaktur yang Terdaftar di BEI)*. Universitas Sebelas Maret, Surakarta.
- Husnan, Suad. (2001), *Dasar - Dasar Portofolio dan Analisis Sekuritas*, Edisi 3. Yogyakarta: UPP AMP YKPN.
- Jogiyanto H.M. (2000), *Teori Portofolio dan Analisis Investasi*, Edisi 2. Yogyakarta: BPFE UGM.
- Kenya, Shirley. (2005), *Analisis Pengaruh Variabel Makroekonomi dan Rasio Keuangan terhadap Return Saham di BEJ pada Kondisi Bullish dan Bearish*. Universitas Indonesia.
- Masulili, Annisa Citra. (2005), *Pengaruh Faktor Ekonomi dan Rasio Keuangan terhadap Imbal Hasil Saham Properti di BEJ*. Universitas Indonesia.
- Nathaniel, Nicky. (2008), *Analisis Faktor-faktor yang Mempengaruhi Return Saham (Studi pada Saham-saham Real Estate di BEI Periode 2004-2006)*. Tesis Program Pasca Sarjana Magister Manajemen Universitas Diponegoro.
- Padan, Wahyuni Peni. (2012), *Pengaruh Informasi Keuangan terhadap Return Saham pada Perusahaan Manufaktur yang Terdaftar di BEJ*. Universitas Hasanuddin, Makassar.
- Priyatno, Dwi. (2008), *Mandiri Belajar SPSS*. Medikom. Yogyakarta.
- Ratnasari. (2003), *Analisis Pengaruh Faktor Fundamental, Volume Perdagangan dan Nilai Kapitalisasi Pasar terhadap Return Saham di BEJ (Studi Kasus pada Perusahaan Manufaktur dan Perbankan)*. Tesis Program Pasca Sarjana Magister Manajemen Universitas Diponegoro.
- Sartono, Agus. (2002), *Manajemen Keuangan :Teori dan Aplikasi*. Edisi 4, Cetakan Pertama. Yogyakarta : BPFE UGM.
- Sunyoto, Danang. (2013), *Metodologi Penelitian Akuntansi*. Refika Aditama. Bandung.
- Toto, Prihadi. (2009), *Investigasi Laporan Keuangan & Analisis Rasio Keuangan*. PPM. Jakarta.
- Ulupui, IG. K. A. (2006), *Analisis Pengaruh Rasio Likuiditas, Leverage, Aktivitas, dan Profitabilitas Terhadap Return Saham (Studi Pada Perusahaan Makanan dan Minuman dengan Kategori Industri Barang Konsumsi di Bursa Efek Jakarta)*.
- Widodo, Saniman. (2007), *Analisis Pengaruh Rasio Aktivitas, Rasio Profitabilitas dan Rasio Pasar terhadap Return Saham Syariah Dalam Kelompok Jakarta Islamic Index (JII)*. Tesis Program Pasca Sarjana Magister Manajemen Universitas Diponegoro.
- Weston, J. Fred dan Thomas, E, Copeland. (2003), *Dasar – Dasar Manajemen Keuangan*. Erlangga. Jakarta.