



## International Journal of Economic Research

ISSN : 0972-9380

available at <http://www.serialsjournals.com>

© Serials Publications Pvt. Ltd.

Volume 14 • Number 15 • 2017

# The Effect of Price Earnings Ratio (PER) and Institutional Ownership on Stock Returns of LQ45 Stocks in Indonesia Stock Exchange

Salsa Andiani<sup>1</sup> and Budi Frensidy<sup>2</sup>

<sup>1</sup>E-mail: [andianisalsa@gmail.com](mailto:andianisalsa@gmail.com)

<sup>2</sup>Corresponding author. E-mail: [budi.frensidy@ui.ac.id](mailto:budi.frensidy@ui.ac.id)

**Abstract:** The purpose of this study is to examine the effect of price earnings ratio (PER) and institutional ownership on stock returns. Stock returns are proxied by actual stock returns and abnormal stock returns. The samples used in this study are LQ45 stocks in Indonesia Stock Exchange from 2008 to 2013. The results show that PER has negative relationship with stock returns. Low price-earnings-ratio stocks outperform stocks with high price- earnings-ratio. Besides, this study shows that institutional ownership has no significant relationship with stock returns.

**Keywords:** Price earnings ratio, ownership structure, institutional ownership, stock returns, abnormal stock returns.

## 1. INTRODUCTION

Price earnings ratio (PER) is an indicator used by investors and investment managers for stock selection. This ratio is commonly used and becomes one of the favorite indicators for stock valuation because of its advantages. First, it is easy to calculate PER, which is only by dividing the stock price by firm's earning per share (EPS). Second, PER is an approach in relative valuation which can be used to compare stocks. Third, this ratio also can be assumed as a payback period, which shows how long the investors can get their investment back (Frensidy, 2010).

Prior studies document systematic tendency from stocks with low PER to earn higher returns and stocks with high PER to earn lower returns. In other words, stocks with low PER outperform stocks with high PER (Basu, 1977; Dreman and Lufkin, 1997; Fama and French, 1998; Houmes and Chira, 2014). In Japan, Chan, Hamao and Lakonishok (1991) provide evidence that low PER stocks are potential to earn returns above average or earn excess returns.

Houmes and Chira (2014) study the effect of PER on stock returns by adding the effect of ownership structure as independent variable. Houmes and Chira (2014) stratify PER from the lowest to the highest PER and use the highest and lowest quintile to examine each different effect on stock returns. This study shows that there is a negative relation between PER and stock returns. Moreover, stocks with low PER earn higher return than stocks with high PER. Additionally, Houmes and Chira (2014) also examine the effect of ownership structure, proxied by managerial ownership, on stock returns. They document that managerial ownership gives positive effect on stock returns. This finding can be explained more by agency theory which explains the conflict of interest between principal and agent.

According to Jensen and Meckling (2014), institutional ownership and managerial ownership are corporate governance mechanisms which can reduce the agency conflict. Both institutional and managerial ownership give an alignment effect and monitoring role which are expected to increase firm performance and reduce manager's opportunistic behavior (Jensen and Meckling, 2014). Han and Suk (1988) give evidence that institutional ownership gives positive effect on stock returns.

The purpose of this study is to examine the effect of price earnings ratio (PER) and ownership structure on firm performance. The model used in this study refers to Houmes and Chira's study (2014). Firm performance is proxied by returns and abnormal returns. The proxy of ownership structure in this study is institutional ownership. Houmes and Chira (2014) use managerial ownership in their study. Managerial ownership variable is modified and changed into institutional ownership because managerial ownership in Indonesia is too low so it does not give a significant effect (Suryana, 2010; Rebecca, 2012; Roshanawaty, 2012).

## **2. LITERATURE AND HYPOTHESES**

### **2.1. Stock Return**

The main objective in investing is to get high return of invested funds. Investors may earn returns from dividend and capital gain (Ross, 2003). Capital gain is the return from the difference between buying price and selling price.

When investors get return which exceeds the expected return, they will get abnormal return. Abnormal return is the difference between actual and expected return based on its risk (Jones, 2009).

### **2.2. Price Earnings Ratio**

PER is calculated by dividing stock price with firm's earnings per share (EPS). According to its calculation, PER gives external information which is stock price and internal information which is firm's EPS (Simon, 1999). Brealey (2003) states that PER can be used to value the stock whether the stock is fairly priced, underpriced, or overpriced.

PER is widely used in stock selection with different investor's preference. Stock with low PER is classified as value stock which is used in value investing strategy (Altfest, 2008). Besides, in growth investing strategy, investor will choose growth stock which is characterized by high price earnings ratio (Kline and Buchwald, 1996). According to Levy (2005), PER is one of market anomalies in which low PER stocks tend to earn higher returns instead of stocks with high PER. Empirical study by Basu (1977), Dreman and Lufkin (1997), and Campbell and Shiller (2001) prove PER anomaly by giving evidence which shows that

stocks with low PER give higher returns than stocks with high PER. Low PER can earn higher return because stocks with low PER indicate the prices are cheaper relative to the earnings. So that, underpriced stocks or stocks with low PER have higher expected return because they are expected to rise in the future (Ball, 1978).

### **2.3. Agency Theory**

In stock investment, investors as a principal provide fund to be managed by management as an agent. Agency theory explains that there is a different interest between the principal and the agent, so that the agent can act differently from principal's interest at the investors' disadvantages (Jensen and Meckling, 1976). According to Shleifer and Vishny (1997), an agent can bring disadvantages to the investors because they have private information in running the company. Related to this agency conflict, Jensen and Meckling (1976) explain that the existence of institutional and managerial ownership can reduce agency conflict.

### **2.4. Institutional Ownership**

Beiner *et al.* (2004) explain that institutional ownership is the percentage vote right owned by institution. According to Juniarti and Sentosa (2009), institutional ownership is stocks owned by governance, investment firm, bank, foreign institution, and other institutions.

Institutional ownership gives an alignment effect which encourages management to adjust their act and decision based on shareholders' interest (Chaganti and Damanpour, 1991; Solomon and Solomon, 2004). Short *et al.* (2002) states that institutional ownership can reduce the agency cost by its monitoring role. Institutional investors give better monitoring role than individual investors because they have better access of firm information (Utama and Cready, 1997). By institutional monitoring, managers are encouraged to optimize firm value and increase firm performance (Brancato, 1997). Koh (2003) proves that high institutional ownership can reduce firm's earning management. Jarrell and Poulsen (1987) also Han and Suk (1998) document positive effect of institutional ownership on stock returns.

### **2.5. The Effect of Price Earning Ratio on Stock Returns**

Several studies document that *price earnings ratio* (PER) has a negative relationship with stock returns (Aydogan and Gursoy, 2000; Lam, 2002). Houmes and Chira (2014) provide evidence that PER is negatively related to stock returns and abnormal stock returns. Houmes and Chira (2014) classify PER by high and low PER and find that stocks with low PER earn higher returns and stocks with high PER earn lower returns. This finding is similar to prior studies which report low PER stocks outperform high PER stocks (Basu, 1977; Campbell and Shiller, 2001; Chan, Hamao, and Lakonishok, 1991). In Indonesia, Napitupulu (2012) and Meythi and Mathilda (2012) also find negative relation between PER and stock returns.

Ball (1978) explains stock with low PER earn higher return because it indicates its stock price is relatively cheaper compared to the firm's earning. Moreover, underpriced stock which is indicated by low PER has higher expected return because the stock price is expected to go up in the future. Based on prior findings, this study hypothesizes price earnings ratio (PER) has negative effect on stock returns.

***H1: Price earning ratio (PER) has negative effect on stock returns.***

Furthermore, this study examines the different PER effect on stock returns in a more specific way. PER is classified into two parts: 20% PER at the top quintile and 20% PER at the bottom quintile. Houmes and Chira (2014) do this classification in order to examine whether stocks with low PER outperform stocks with high PER. In other words, stocks with low PER earn higher returns than stocks with high PER.

***H2: Stocks with low price-earnings-ratio earn higher returns than stocks with high price-earnings-ratio.***

## **2.6. The Effect of Institutional Ownership on Stock Returns**

Chaganti and Damanpour (1991) and Solomon and Solomon (2004) state that institutional ownership provides an alignment effect which encourages management to adjust its objectives in accordance with shareholders' interest. Intensive monitoring by the institution encourages management to optimize firm's value and performance (Brancato, 1997).

Associated with market perceptions, the existence of institutional shareholders would send a signal to the market that agency costs can be reduced. In addition, institutional shareholders usually have high concern about the prospects of the company so that the existence of institutional shareholders in the company can give a signal to the market that the company has good future prospects (Short *et al.*, 2002). Expectations on the future firm's prospect can attract the market to invest so that stock prices will rise to give high returns.

Several studies suggest that institutional ownership has positive effect on stock returns. Empirical study conducted by Han and Suk (1998) and Tan and Hooy (2004) prove that there is a positive effect of institutional ownership on stock returns. Both studies explain this positive relation because of the active monitoring role by institutions which indirectly increases firm's performance. This study examines whether institutional ownership has positive effect on stock returns.

***H3: Institutional ownership has positive effect on stock returns.***

## **3. RESEARCH METHOD**

### **3.1. Sample**

The sampling method in this study is purposive sampling. Samples used are the stocks which are included in the LQ45 stocks group from 2008 to 2013 or twelve semesters. The scope of the study is limited to LQ45 stocks group and firms from financial industry are excluded to avoid bias. Samples taken are the stocks which are included in the LQ45 stocks at least four times throughout the twelve semesters and has a positive EPS throughout the years of the study.

This study uses panel data sourced from Thomson Reuters, Bloomberg, and Indonesian Capital Market Directory. The data is processed using Microsoft Excel 2010 and Generalized Least Square in Stata 12.

### 3.2. Research Model

The models used in this study follow Houmes and Chira (2014) study which examines the effect of price earnings ratio (PER) and ownership structure on stock returns and abnormal stock returns. There are six models to test three hypotheses. Model I and II are used to test two hypotheses, H1 and H3, by using the nominal value of PER. Model III, IV, V, and VI are used to test the second hypotheses, H2, by using dummy variable to differentiate the PER groups. In these models, PER is classified into 20% PER at the bottom quintile and 20% PER at the top quintile.

Model I

$$RET_{it} = \alpha_0 + \alpha_1 IO_{it-1} + \alpha_2 PER_{it-1} + \alpha_3 \lnASET_{it} + \alpha_4 LEV_{it} + \alpha_5 DEL_{it} + \alpha_6 DEL_{it-1} + \varepsilon_{it}$$

Model II

$$ARET_{it} = \alpha_0 + \alpha_1 IO_{it-1} + \alpha_2 PER_{it-1} + \alpha_3 \lnASET_{it} + \alpha_4 LEV_{it} + \alpha_5 DEL_{it} + \alpha_6 DEL_{it-1} + \varepsilon_{it}$$

Model III

$$RET_{it} = \alpha_0 + \alpha_1 IO_{it-1} + \alpha_2 PERbottom_{it-1} + \alpha_3 \lnASET_{it} + \alpha_4 LEV_{it} + \alpha_5 DEL_{it} + \alpha_6 DEL_{it-1} + \varepsilon_{it}$$

Model IV

$$RET_{it} = \alpha_0 + \alpha_1 IO_{it-1} + \alpha_2 PERtop_{it-1} + \alpha_3 \lnASET_{it} + \alpha_4 LEV_{it} + \alpha_5 DEL_{it} + \alpha_6 DEL_{it-1} + \varepsilon_{it}$$

Model V

$$ARET_{it} = \alpha_0 + \alpha_1 IO_{it-1} + \alpha_2 PERbottom_{it-1} + \alpha_3 \lnASET_{it} + \alpha_4 LEV_{it} + \alpha_5 DEL_{it} + \alpha_6 DEL_{it-1} + \varepsilon_{it}$$

Model VI

$$ARET_{it} = \alpha_0 + \alpha_1 IO_{it-1} + \alpha_2 PERtop_{it-1} + \alpha_3 \lnASET_{it} + \alpha_4 LEV_{it} + \alpha_5 DEL_{it} + \alpha_6 DEL_{it-1} + \varepsilon_{it}$$

Where:

$RET_{it}$ : actual return of stock  $i$  year  $t$

$ARET_{it}$ : abnormal return of stock  $i$  year  $t$

$PER_{it-1}$ : price earnings ratio of stock  $i$  prior year ( $t-1$ )

$PERbottom_{it-1}$ : dummy variable, one for 20% price earnings ratio at the bottom quintile and zero otherwise

$PERtop_{it-1}$ : dummy variable, one for 20% price earnings ratio at the top quintile and zero otherwise

$IO_{it-1}$ : institutional ownership of stock  $i$  prior year ( $t-1$ )

$\lnASET_{it}$ : natural log of firm total asset firm  $i$  year  $t$

$LEV_{it}$ : long term debt to total asset firm  $i$  year  $t$

$DEL_{it}$ : absolute change in percentage of institutional ownership firm  $i$  year  $t$

$DEL_{it-1}$ : absolute change in percentage of institutional ownership firm  $i$  prior year ( $t-1$ )

### 3.3. Dependent Variable

This study examines the effect of price earnings ratio and institutional ownership on two dependent variables: returns and abnormal returns. Return is the rate of return on stock investment. Return is calculated based on the difference of price between two periods and divided the price on the first period.

$$RET_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Where:

$RET_{it}$ : actual return of stock  $i$  year  $t$

$P_{it}$ : price of stock  $i$  year  $t$

$P_{it-1}$ : price of stock  $i$  prior year ( $t-1$ )

Abnormal return is stock return that exceed expectations of return on the basis of its risk. Abnormal returns are equal to firm's actual returns less firm's expected return:

$$ARET_{it} = RET_{it} - E(R_{it})$$

Where:

$ARET_{it}$ : abnormal return of stock  $i$  year  $t$

$RET_{it}$ : actual return of stock  $i$  year  $t$

$E(R_{it})$ : expected return of stock  $i$  year  $t$

Expected return is calculated by Capital Asset Pricing Model (CAPM). Expected return is equal to risk free rate plus risk premium.

$$k_i = \text{Risk Free Rate} + \text{Risk Premium}$$

$$k_i = RF + [\beta_i(E(Rm) - RF)]$$

Where:

$k_i$ : required rate of return stock  $i$

$E(Rm)$ : expected rate of return market portfolio using IHSG

$\beta_i$ : systematic risk of stock  $i$

$RF$ : risk free rate using BI (Bank Indonesia) rate

### 3.4. Independent Variable

Two independent variables in this study are price earnings ratio (PER) and institutional ownership. This study uses lagged PER or PER in the prior year ( $PER_{t-1}$ ). PER is calculated by dividing year-end closing price by year-end earning per share (EPS).

$$PER = \frac{P}{EPS}$$

Where:

PER : price earnings ratio

$P$ : year-end closing price

EPS : annual learning per share

To test the second hypotheses (H2) by Model III, IV, V, and VI, PER is classified into quintiles. The bottom quintile ( $PER_{bottom_{it-1}}$ ) is the lowest 20% PER and the top quintile ( $PER_{top_{it-1}}$ ) is the highest 20% PER (Houmesdan Chira, 2014).

Institutional ownership is the percentage of ownership by institutions (Brancato, 1997). Institutional ownership consists of government ownership, investment firm, bank, foreign institution, and other institutions (Juniartidan Sentosa, 2009). The institutional ownership which is used in the models is lagged institutional ownership in the prior year.

### 3.5. Control Variable

The control variables in this study are total asset, long term debt, and the changes in of institutional ownership in the current year and prior year.

Total asset is the sum of the firm's current assets and non current assets. Natural log of total asset ( $\ln ASSET_{it}$ ) is used to control the size effect on the dependent variables.

Long term debt is used in order to control the effect of debtholders' monitoring and the changes of earning. Long term debt is proxied by the ratio of long term debts to total assets ( $LEV_{it}$ ).

The absolute changes in percentage of institutional ownership in the current year ( $DEL_{it}$ ) and prior year ( $DEL_{it-1}$ ) are used to control the endogeneity because institutions have better information access than individual investors. The institutions may change their percentage of their stock ownership as they get the private information and the changes may affect firm's financial performance.

## 4. RESULTS AND ANALYSIS

### 4.1. Descriptive Analysis

This study uses 22 samples which are included in LQ45 stocks group in 2008-2013. The descriptive statistics in this study are provided in Table 1.

Total samples in this study are 22 while the periods are six years from 2008 to 2013. Therefore, the total observations are 132 observations. There is a difference in the total observation in the abnormal returns variable ( $ARET_{it}$ ). It is caused by the difference in periods of the abnormal returns in this study. Abnormal returns are studied from 2009 to 2013. Abnormal returns in 2008 are excluded because in 2008, IHSG dropped drastically which made the expected return calculation not realistic.

Both returns ( $RET_{it}$ ) and abnormal returns ( $ARET_{it}$ ) have higher standard deviation compared to the averages. It indicates there is a high variance of returns and abnormal returns.

The average of PER ( $PER_{it-1}$ ) is 19.7 and the standard deviation is 23.7. The minimum and maximum of PER respectively 1.88 and 258.7. Both the minimum and maximum value of PER differ greatly from its standard deviation and average. The high value of PER indicates two possibilities. The possibilities are the stock price is too expensive relative to EPS or the EPS is too low relative to the stock price.

Institutional ownership variable ( $IO_{it-1}$ ) has average 0.648. It indicates that the stocks in LQ45 group are dominated by institutions. On other hand, the standard deviation is low at 0.139 relative to its average.

**Table 1**  
**Descriptive Statistic**

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>SD</i>
$RET_{it}$	132	0.2973	0.137	-0.8285	4.1724	0.8717
$ARET_{it}$	110	0.2123	0.03	-0.6324	3.5385	0,7170
$PER_{it-1}$	132	19.6918	15.7	1.8879	258,70	237,057
$IO_{it-1}$	132	0.6484	0.65	0.1812	0.9434	0.1389
$LnASSET_{it}$	132	29.0027	30.055	21.3348	32.997	3.2781
$LEV_{it}$	132	0.1079	0.097	0	0.5048	0.1115
$DEL_{it}$	132	-0.0067	0	-0.2578	0.1769	0.0447
$DEL_{it-1}$	132	-0.0076	0	-0.2578	0.1769	0.0485

It shows that the institutional ownership in this study tends to have low variance. The low variance of institutional ownership is also indicated by the changes in institutional ownership in the current year ( $DEL_{it}$ ) and prior year ( $DEL_{it-1}$ ). Both variables have average less than 1% which indicate that the changes in ownership are very low.

#### 4.2. Regression Analysis

Based on the overall regression results, PER has significant negative effect on returns and abnormal returns. The bottom PER has significant positive effect on returns and abnormal returns. Besides, the top PER has no significant effect on dependent variables. Furthermore, the regression results in all the models show that institutional ownership has no significant effect on returns and abnormal returns. The overall regression results are presented in Table 2.

After the regression, sensitivity analysis is applied on Model III, IV, V, and VI. The cutoff point in classifying PER in this sensitivity analysis is 25%. The bottom PER is the lowest 25% PER and the top PER is the highest 25% PER.

The regression results in sensitivity analysis do not have much difference, although there is a difference in coefficient and *p*-value of the bottom PER ( $PER_{bottom_{it-1}}$ ) and top PER ( $PER_{top_{it-1}}$ ) in each model. The main difference is in the Model IV. By increasing the cutoff point from 20% to 25%, the highest PER at the top PER has significant negative effect on returns. The *p*-value and coefficient of top PER are respectively 0.066 and -0.36. For top PER, or the highest 25% PER, returns will decrease by 0.36 from the non-top group. The regression results of Model III, IV, V, VI after changing the cutoff point are represented by Table 3.

#### **H1: Price earnings ratio has negative effect on stock returns.**

Hypotheses 1 is tested by regressing Model I and Model II. The regression results of these two models show that PER has negative effect both on returns and abnormal returns. In Model I, PER is significant



**Table 2**  
**Regression Analysis**

<i>Model</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
<i>Variable</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>
$IO_{it-1}$	0.03949 (0.946)	0.19114 (0.725)	0.10801 0.836	0.15151 (0.798)	0.07233 (0.883)	-0.08237 (0.869)
$PER_{it-1}$	-0.00682 (0.027)**	-0.01657 (0.018)**				
$PERbottom_{it-1}$			1.01683 (0.000)***		0.46425 (0.009)***	
$PERtop_{it-1}$				-0.28987 (0.112)		-0.14338 (0.334)
$LnASSET_{it}$	0.01499 (0.546)	0.03740 (0.101)	0.05274 (0.020)**	0.01982 (0.425)	0.05083 (0.017)**	0.03474 (0.100)
$LEV_{it}$	-0.32886 (0.674)	-0.02298 (0.977)	-0.12087 (0.862)	-0.52573 (0.501)	-0.16039 (0.824)	-0.44558 (0.545)
$DEL_{it}$	-4.65072 (0.004)***	-3.40084 (0.016)**	-4.26822 (0.003)***	-4.50697 (0.006)***	-3.60289 (0.006)***	-3.49863 (0.009)***
$DEL_{it-1}$	1.35363 (0.372)	1.12007 (0.409)	0.52140 (0.703)	1.31009 (0.392)	0.44376 (0.725)	0.49062 (0.705)
Adjusted $R^2$	0.0831	0.095	0.2611	0.0672	0.4217	0.3414
Prob > $F$ -stat	0.0094	0.0117	0.0000	0.0220	0.0000	0.0000
Prob > chi2	0.0044	0.0049	0.0000	0.0122	0.0000	0.0000
N	132	110	132	132	110	110

\*\*\*significant in alpha 1%; \*\* significant in alpha 5%, \* significant in alpha 10%

with  $p$ -value 0.027 and coefficient  $-0.0068$ . Besides, in Model II PER is significant with  $p$ -value and coefficient respectively, 0.018 and  $-0.0166$ . By comparing the regression results of Model I and II, it can be concluded that PER has more significant effect on abnormal returns instead of actual returns.

By regressing Model I and II, PER is proven has negative effect on returns and abnormal return. Therefore, hypotheses 1 is accepted that if PER increases, the future returns and abnormal returns will decline.

These findings are consistent with prior studies conducted by Aydogan and Gursoy (2000) and Lam (2002). Ball (1978) in Lam (2002) explains that PER has negative effect on returns because stocks with low PER indicate the stock price is relatively cheaper than the firm's earning. Therefore, underpriced stocks has

**Table 3**  
**Sensitivity Analysis**

<i>Model</i>	<i>III</i>	<i>IV</i>	<i>V</i>	<i>VI</i>
<i>Variable</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>	<i>Coefficient</i> <i>(p-value)</i>
$IO_{it-1}$	0.03665 (0.946)	0.10041 (0.863)	-0.01873 (0.970)	-0.10054 (0.841)
$PERbottom_{it-1}$	0.79023 (0.000)***		0.32041 (0.066)*	
$PERtop_{it-1}$		-0.35861 (0.030)**		-0.14212 (0.294)
$LnASSET_{it}$	0.04644 (0.049)	0.01934 (0.433)	0.04837 (0.027)**	0.03560 (0.091)*
$LEV_{it}$	-0.06380 (0.930)	-0.49794 (0.520)	-0.12971 (0.861)	-0.44255 (0.547)
$DEL_{it}$	-4.57354 (0.002)***	-4.44226 (0.006)***	-3.47868 (0.009)***	-3.51533 (0.009)***
$DEL_{it-1}$	0.58562 (0.681)	1.24947 (0.410)	0.52937 (0.679)	0.53841 (0.677)
Adjusted R <sup>2</sup>	0.2004	0.0820	0.3810	0.3388
Prob > F-stat	0.0000	0.0099	0.0000	0.0000
Prob > chi2	0.0000	0.0047	0.0000	0.0000
N	132	132	110	110

\*\*\*significant in alpha 1%; \*\* significant in alpha 5%, \* significant in alpha 10%

higher expected return, that the stock price is expected to increase in the future. Additionally, this study also examines the PER's effect on abnormal return. PER does not only have negative effect on returns but also negative effect on abnormal returns.

***H2: Stocks with low price earnings ratio earn higher returns than stocks with high price earnings ratio.***

Model III, IV, V, and VI are used to test the second hypotheses. In these models, PER are stratified into quintiles and PER is classified into two classifications. First is the bottom quintile which is the lowest 20% PER and the second classification is the top quintile which is the highest 20% PER. This classification is done to compare the effect of stocks with low PER and stocks with high PER on stock returns. The regression results show that the bottom PER or stocks with low PER has significant and positive effect on returns and abnormal returns. On the other hand, the top PER has no significant effect on returns although it has negative coefficient as expected in hypotheses.

The fact that the top PER has no significant effect on returns can be caused by the samples which only classify PER by the lowest 20% and the highest 20% PER. By this presumption, this study also examines PER by sensitivity analysis. In sensitivity analysis, the cutoff point of PER is changed into 25%. The bottom PER is the lowest 25% PER and the top PER is the highest 25% PER. The regression results of model IV in sensitivity analysis by 25% cutoff point of PER show that the top PER has significant negative effect on *return*, while other results remain the same as 20% cutoff point. Although there is not enough evidence to prove that stocks with high PER have negative effect on abnormal stock returns, this study proves that stocks with high PER have negative effect on stock returns. Three out of four hypotheses are proven that the bottom PER has positive effect on stock returns and abnormal stock returns and the top PER has negative effect on stock returns. By these results, the hypotheses 2 is accepted that stocks with low PER earn higher returns than stocks with high PER.

These findings are in line with the prior studies which document systematic tendency of low PER stocks to earn higher stock returns than high PER stocks. In other words, the low PER stocks outperform the high PER stocks (Basu, 1977; Campbell and Shiller, 2001; Fama and French, 1998). Moreover, our findings which show that low PER stocks earn higher abnormal stock returns than high PER stocks are consistent to Houmes and Chira (2014).

According to Basu (1977), the stocks with low PER tend to earn higher stocks returns compared to stocks with high PER because the stock prices do not reflect the available information. Besides that, Ball (1978) in Lam (2002) explains low PER stock indicates price is cheaper than firm's earning. Related to this issue, Lakonishok, Shleifer, and Vishny (1992) explain that it is a matter of the mispricing of stocks in the market. In the future, market will adjust the price while investors realize that the stocks are mispriced. The overpriced stocks will be corrected by the market to the equilibrium price.

Based on the Hypotheses 1 and 2, the value investing strategy can be used in selecting LQ45 stocks. According to Anggryeny (2013), BEI is still a developing market and the market appreciation of the fair value of stocks is relatively low.

### ***H3: Institutional ownership has positive effect on stock returns.***

The overall models in this study show that there is no significant effect of institutional ownership on stock returns and abnormal stock returns. Therefore, there is no evidence to reject  $H_0$ . In other words, the third hypotheses in this study is not accepted.

This finding contradicts the prior study by Han and Suk (1988) and Tan and Hooy (2004) which find that institutional ownership is positively related to stock returns. It can be caused by the different objects or samples of this study and the difference in institutional ownership structure in Indonesia.

Although this finding contradicts the prior studies (Han and Suk, 1988; Tan and Hooy, 2004), this finding is consistent to Gee and Ming's (2008) and Suryana's (2010). In their study, both of them (Gee and Ming's, 2008; Suryana's, 2010) classify returns by capital gain and dividend yield. Institutional ownership has positive effect on dividend yield but has no significant effect on capital gain. Both Gee and Ming (2008) and Suryana (2010) explain that the institutional ownership has no significant effect on returns because the institutions fail to monitor the firms.

In this study, the average percentage of institutional ownership is 64.84%, while the maximum is 94.34%. McKnight and Weir (2009) explain that if the institutional ownership is too high, it will reduce their management oversight and they are likely influence the firm's decisions without considering the minority shareholder's interest. It can be concluded that the other reason why institutional ownership has no significant effect on returns because the institutional ownership in this study sample is too high.

The other reason of the insignificant effect of institutional ownership is the institutional ownership has very low variance and some institutional ownership tends to remain unchanged year-to-year. The average of changes in institutional ownership is 0.067% or less than 1%. It indicates that the variance of institutional ownership is too low. Therefore, the variance of institutional ownership variable cannot explain the variance of returns and abnormal returns. Moreover, the samples used in this study are the LQ45 stocks which have high liquidity and the stock prices are significantly affected by market condition.

This study also documents the negative effect of changes in institutional ownership in the current year on stock returns and abnormal stock returns. The significance and coefficient sign are consistent in all models which show its negative effect on stock returns and abnormal stock returns.

Houmes and Chira (2014) use the changes in institutional ownership in their study as the control variable because the insiders or managers have better information access about the firm's condition than the public investors so they can exploit the firm. The same thing does happen on institutions. The institutions are well informed and has better access of information compared to individual or public investors so the institutions have the firm's private information and know the future prospect of the firm (Utama and Cready, 1997). Moreover, the samples in this study are highly dominated by single and concentrated institution which has the average of ownership of 64.48%. The percentage of ownership which exceeds 50% indicates the high voting power and control of the firm.

Houmes and Chira (2014) explain negative effect of changes in ownership in returns as the strategy of "selling into strength and buying into weakness" by using the private information. Market, with limited information, continues to increase the stock demand, thereby making the stock price rise. By the private information benefit, the institutions will sell their stocks while the stock prices continue to rise before the stock prices fall down and harm the institutions. Vice versa, with their private information, the institutions buy the stocks while the stock price continues to fall because they know that in the future the stock price will increase. On the other hand, this action can be considered as an expropriation act against the minority shareholders (Cleassens, 1999).

## **5. SUMMARY AND CONCLUSIONS**

The purpose of this study is to examine the effect of price earnings ratio (PER) and institutional ownership on stock returns. Stock returns used are actual stock returns and abnormal stock returns. The samples in this study are the LQ45 stocks in the six-year period from 2008 to 2013.

This study documents that PER has negative effect on stock returns and abnormal stock returns. Additionally, this study also classifies PER into two classifications, the lowest quintile of PER and the highest quintile of PER to compare the different effect on returns. Stocks with low PER or the bottom quintile of PER earn higher return than the stocks with high PER. These findings are consistent with prior

studies by Basu (1977) and Houmes and Chira (2014) which document the low PER stocks outperform the high PER stocks.

This study find no significant effect of institutional ownership on stock returns. This finding is contradictory with the results of Han and Suk (1988) and Gee and Ming (2008) but consistent with Suryana's (2008) in Indonesia. The institutional ownership has no significant effect on returns because samples' institutional ownership has low variance and tends to remain unchanged in the periods studied. Moreover, the samples are LQ45 stocks which have high liquidity and are much affected by market conditions.

The other finding in this study is the changes in institutional ownership in the current year have negative effect on returns. It can be caused by the information asymmetry in the market and the institutions have private information from the firm. The institutions have better information access about the firm compared to individual investors. The private information can influence the institutions to sell the stock while the price continues to rise and to buy the stock while the price continues to fall. Houmes and Chira (2014) explain this action as the strategy of "selling into strength and buying into weakness".

This study has limitations. The study period is only six years from 2008 to 2013. The extension of period will provide more representative result. Related to the object of observation, the samples are limited to LQ45 stock. Although the aim of limiting the scope of study to LQ45 stocks to avoid bias, further study is expected to conduct wider scope by examining the overall stocks in Indonesia Stock Exchange. Furthermore, the data source of institutional ownership is the annual reports. Bapepam regulation number X.K.6 only requires the disclosure of share ownership by the percentage of 5% or more. It limits the data because the institutional ownership which is less than 5% cannot be traced. Further study is expected to use the other source of institutional ownership data.

## REFERENCES

- Altfest, Lewis J. (2008), Your money: Value investing still makes sense. *Medical Economics*, 85, 21.
- Anggryeny, Viany Indah. (2013), *Analisis pengaruh price earnings ratio and price to book value pada keputusan strategi investasi terhadap return dari value stocks and growth stocks*. Tesis: Universitas Indonesia.
- Aydogan, K. Dah G. Gursoy. (2000), P/E and price-to-book ratios as predictors of stock returns in emerging equity markets. *Emerging Markets Quarterly*, 4, 60–67.
- Ball, Ray. (1978), Anomalies in relationships between securities yields and yield surrogates. *Journal of Financial Economics*, 6(2), 103-126.
- Basu, S. (1977), Investment performance of common stocks in relation to their price to earnings ratios: A test to the efficient market hypothesis. *Journal of Finance*, 32, 663-682.
- Brancato, Carolyn Kay. (1997), *Institutional Investors and Corporate Governance*. USA: McGraw Hill.
- Brealey, R., and Marcus J. Alan. (2003), *Principles of Corporate Finance*. New York: McGraw-Hill.
- Campbell, J.Y., and Shiller, R.J. (2001), Valuation ratios and the long-run stock market outlook: An update (Cowles Foundation Discussion Paper No. 1295), *New Haven, CT: Cowles Foundation for Research in Economics, Yale University*.
- Chaganti, Rajeswararo, and Damanpour, Fariborz. (1991), Institutional ownership, capital structure, and firm performance. *Strategic Management Journal*, 12, 479-491.
- Chan, L. K., Hamao, and Lakonishok. (1991), Fundamental and stock return in Japan. *Journal of Finance*, 46(5), 1739-1764.

- Claessens, S., Djankov, S. D., Fan, J., and Lang, L. (1999), Expropriation of minority shareholders in East Asia. *Washington DC Policy Research Paper World Bank*, 2088, 1-47.
- Dreman, D.N. and Lufkin, E.A. (1997), Do concentration strategies work within industries? *Journal of Investing*, 6, 23-32.
- Han, K.C, and David Y.S. (1998), The effect of ownership structure on firm performance: Additiona Evidence. *Review of Financial Economics*, 7(2), 143-155.
- Fama, E.F, and French, K.R. (1998), Value versus growth: The international evidence. *Journal of Finance*, 53, 1975–1999.
- Frensidy, Budi. (2010), Meluruskansalahkaprahsol PER saham. *Economic Business and Accounting Review*, 3(2), 87-96.
- Gee, Chan Sok and Tee Chwee Ming. (2008), The influence of ownership structure on corporate performance of Malaysian public listed companies. *ASEAN Economics Bulletin*, 25(2), 195-208.
- Houmes, Chira. (2014), The effect of ownership structure on the price earnings ratio – returns anomaly. *International Review of Financial Analysis*, 37, 140-147.
- Jarrel, G.A. and A.B. Poulsen. 1987. Shark repellents and stock prices: The effect of antitakeover amendements since 1980. *Journal of Finance Economics*, 20, 267-291.
- Jensen, Michael C. and William H. Meckling. (1976), Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Jones, Charles P, Siddharta Utama, Budi Frensidy, Irwan Adi Ekaputra, and Rachman Untung Budiman. (2009), *Investments: Analysis and Management (An Indonesian Adaptation) 10th edition*. Indonesia :John Wiley and Sons, Salemba Empat.
- Juniarti & A. A. Sentosa. (2009), Pengaruh good corporate governance, Voluntary disclosure terhadap biaya utang (cost of), *Jurnal Akuntansi Keuangan*, 11(2), 88-100.
- Kirrage, Nick. (2012), Value investing: Your guide to value investing. *Investment*, 54-55.
- Kline, Marvin I and Richard E. Buchwald. (1996), Value investing. *Journal of Accountancy*, 181(4), 49-50.
- Koh. (2003), On the association between institutional ownership and aggressive corporate earnings management in Australia. *The British Accounting Review*, 35, 105.
- Lakonishok, J., and R. Shleifer and Robert W. Vishny. (1992), The impact of institutional trading on stock prices. *Journal of Financial Economics*, 32, 23-43.
- Lam, Keith S. K. (2002), The relationship between size, book-to-market equity ratio, earnings-price ratio, and return for the Hongkong Stock Market. *Global Finance Journal*, 13, 163-179.
- Levy, Haim S. 1999. *Introduction to Investment*. South Western Publishing.
- McKnight, Phillip J, and Charlie Weir. (2009), Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *The Quarterly Review of Economics and Finance*, 2009, 139–158.
- Meythi & Mariana M. (2012), Pengaruh price earnings ratio and price to book value terhadap return saham indeks LQ45. *Jurnal Akuntansi*, 4(1), 1- 21.
- Rebecca, Yulisia. S. (2012), *Pengaruh corporate governance index, kepemilikan keluarga, and kepemilikan Institusion alter badapbiaya keuitas & biaya utang: Studi empiris adaperusahaan manufaktur yang terdaftar di BEI*. Skripsi: Universitas Indonesia.
- Ross, Stephen A. et. al. (2003), *Corporate finance fundamentals* (8th ed.), USA: McGraw-Hill.
- Shleifer, R., Vishny. (1997), A Survey of corporate governance. *Journal of Finance*, 52(2), 737-783.
- Short, Helen., Haozhang and Kevin Keasey. (2002), The link between dividend policy and institusional ownership. *Journal of Corporate Finance*, 8, 105-122.
- Simon, J. (1999), Company valuation and performance measurement. *Student Accountant* <http://www.accaglobal.com/publications>
- Solomon, J., Solomon, A. (2004), *Corporate Governance and Accountability*. Chicester: John Wiley and Sons, Ltd.

*The Effect of Price Earnings Ratio (PER) and Institutional Ownership on Stock Returns of LQ45 Stocks...*

- Suryana, Depri. (2010), *Analisis pengaruh struktur kepemilikan dalam perusahaan terhadap kinerja hasil pengembalian perusahaan LQ45 tahun 2006-2008*. Skripsi: Universitas Indonesia.
- Tan, H. B. and H. C. Hooy. (2004), Effect of ownership structure on corporate performance. *Bankers Journal Malaysia*, 2004, 21-27.
- Utama, S., Cready, W.M. (1997), Institutional ownership, differential predisclosure precision and trading volume at announcement dates. *Journal of Accounting and Economics*, 24, 129-150.