The Effect of Variance Return, Market Value, and Dividend Payout Ratio on Holding Period of Shares (Case Study at the Companies included in LQ-45 Index Year 2012-2018)

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Abstract
The purpose of this research is to investigate the effect of variance return, market value, and Dividend Payout Ratio (DPR) on holding period of shares of the companies listed in LQ-45 Index period 2012-2018. The population of the study were the companies listed in LQ-45 Index period 2012-2018. The sampling technique used in the study was purposive sampling. Using the technique, 20 companies were obtained. The analysis method used was panel data regression analysis. The result of study showed that variance return, market value, and Dividend Payout Ratio (DPR) simultaneously had significant effect on holding period of shares. Partially, variance return had significant negative effect on holding period of shares. Market value and Dividend Payout Ratio (DPR) had positive and significant effect on holding period of shares. Based on the result of study, investors who would like invest could pay attention to the risks they would have. If investors intended to maintain their shares in long term, they would need to invest in companies that had low risks. The risks were reflected by the value of variance return. In addition, if investors intend to maintain their shares for a long term, they will need to make investment in a company that has a bigger size. The company size is reflected from the value of market value. Then, if investors intend to maintain their shares for a long term, they will need to make investment in a company that give a large dividend. So, investors will get more profits from the companies.

Keywords—variance return; market value; Dividend Payout Ratio (DPR); holding period
I. INTRODUCTION

Shares are proofs of someone’s capital ownership in a company (Sunyoto and Susanti, 2015: 67). Shares have some benefits for investors. The benefits can be in form of capital gain and in form of dividend. The amount of benefits obtained by investors depends on the performance of the company where the investment was made.

Investors are free to determine the amount and type of shares they would like to buy and they can determine the holding period of shares (Fathani and Oktaviana, 2018). The period in which an investor holds the shares is referred to as holding period of shares. By knowing the value of holding period of shares, investors will get an illustration about the condition of shares held by them. The value of holding period of shares can be fluctuating as what happens in the companies included in LQ-45 Index period 2012-2018.

![Figure 1. Holding Period of Shares Year 2012-2018 (Source: Processed data, 2012-2018)](image)

Based on Figure 1, it can be seen that the average holding period of shares of the companies included in LQ-45 Index in 2012 was 4.21 years. In 2013, the value of holding period of shares decreased for 10% to be 3.79 years. Then in 2014, the value of holding period of shares increased again for 15.6% to be 4.38 years. The value of holding period of shares in 2015 decreased for 4.3% to be 4.19 years. In 2016, the value of holding period of shares decreased for 14.3% to be 3.59 years. In 2017, the value of holding period of shares increased for 80.8% to be 6.49 years. After that, in 2018, the value of holding period of shares decreased for 36.4% to be 4.14 years. It means that in 2012, investors have maintained their holding of shares for 4.21 years, in 2013 for 3.79 years, in 2014 for 4.38 years, in 2015 for 4.19 years, in 2016 for 3.59 years, in 2017 for 6.49 years, and in 2018 for 4.14 years.

There are three factors considered having important role in affecting the value of holding period of shares. The factors are market value, variance return, and Dividend Payout Ratio (DPR). Variance return is crucial because it indicates the risk held by a company caused by fluctuating price of shares (Fatrin, et al., 2018). The higher value of variance return, the lower value of holding period of shares because risk is inversely proportional to holding period of shares. It is in line with the studies conducted by Arma (2013) and Maulina and Triyuwono (2010) that state that variance return has significant and negative effect on holding period of shares. However, the study is not in line with the one conducted by Utami and Sedana (2016) and Hasanah (2016) that states that variance return has insignificant and negative effect on holding period of shares.

Market value is crucial because it indicates the value held by a company. The higher value of market value of a company, the longer investors maintain their holding of shares (Arma, 2013). It is in line with the studies conducted by Sari and Abundanti (2015) and Arma (2013) that state that market value has significant and positive effect on holding period of shares. However, it is different from the studies conducted by Hasanah (2016) and Fathani and Oktaviana (2018) that state that market value has insignificant and positive effect on holding period of shares.

Dividend Payout Ratio (DPR) is one of the consideration factors of investors in determining the length of period to maintain shares. According to the study conducted by Sari and Abundanti (2015), a company that has high Dividend Payout Ratio (DPR) will be increasingly demanded by investors because it tends to be more beneficial for investors so investors will maintain their shares longer to obtain greater dividend. It is in line with the studies conducted by Fathani and Oktaviana (2018) and Utami and Sedana (2016) that state that Dividend Payout Ratio (DPR) has significant and positive effect on holding period of shares. However, the study is not in line with the studies conducted by Fatrin, et al. (2018) and Maulina and Triyuwono (2010) that state that Dividend Payout Ratio (DPR) does not have any effect on holding period of shares.
II. LITERATURE REVIEW

A. The Effect of Variance Return, Market Value, and Dividend Payout Ratio on Holding Period of Shares Simultaneously

Variance return, market value, and Dividend Payout Ratio are included in the factors that can affect holding period of shares. Variance return indicates the risk carried by investors in investing. Variance return is inversely proportional to holding period of shares. If holding period of shares is high, the value of variance return will be low (Arma, 2013). Market value indicates the value held by a company and shows the size of company. Dividend Payout Ratio indicates the percentage of dividend distributed to shareholders in a company. Market value and Dividend Payout Ratio are directly proportional to holding period of shares. It is in accordance with Arma (2013) and Fathani and Oktaviana (2018).

H1: Variance return, market value, and Dividend Payout Ratio simultaneously can have significant effect on holding period of shares.

B. The Effect of Variance Return on Holding Period of Shares

Variance return indicates the risk held by a company caused by fluctuating price of shares (Fatrin, et al., 2018). The greater variance return on an asset, the greater possibility of return different from expectation (Tandelilin, 2010: 54). Therefore, risk becomes one of the consideration factors of investor in making investment. If the risk level when investing shares in a company is high, the value of holding period of shares will get lower. Vice versa, if the risk level is low, the value of holding period will get higher. In other words, variance return in inversely proportional to holding period of shares. It is in line with the studies conducted by Arma (2013) and Maulina and Triyuwono (2010) that state that variance return has significant and negative effect on holding period of shares.

H2: Variance return partially can have significant negative effect on holding period of shares.

C. The Effect of Market Value on Holding Period of Shares

Market value is the selling price of an asset that applies in market at the moment (Hery, 2016:192). Market value indicates the value held by a company. Besides that, market value is also used to see the size of a company. Where it will affect investors to invest shares in the company and also affect the length investors maintain their holding period of shares. The greater market value, the greater size of the company (Sari and Abundanti, 2015). The greater market value of a company, the longer investors maintain their holding of shares (Arma, 2013). It is in line with the studies conducted by Sari and Abundanti (2015) and Arma (2013) that state that market value has significant and positive effect on holding period of shares.

H3: Market value partially can have significant positive effect on holding period of shares.

D. The Effect of Dividend Payout Ratio on Holding Period of Shares

Dividend Payout Ratio (DPR) is the comparison between the dividend paid and the net profit. The higher Dividend Payout Ratio (DPR), the more it will benefit the investors as the shareholders (Musthafa, 2017: 141). Therefore, Dividend Payout Ratio (DPR) becomes one of the consideration factors of investors in determining the length of period to maintain shares. A company that has high Dividend Payout Ratio (DPR) will be increasingly demanded by investors because it tends to be more beneficial for investors so they will maintain their shares longer to obtain greater dividend. Therefore, the higher percentage of Dividend Payout Ratio (DPR), the longer the investors maintain the holding of shares and vice versa (Utami and Sedana, 2016). It is in line with the studies conducted by Fathani and Oktaviana (2018) and Utami and Sedana (2016) that state that Dividend Payout Ratio (DPR) has significant and positive effect on holding period of shares.

H4: Dividend Payout Ratio (DPR) partially can have significant positive effect on holding period of shares.

III. RESEARCH METHODOLOGY

A. Research Design

The study aimed to test the effect of market value, variance return, and Dividend Payout Ratio on holding period of shares. The study was a quantitative study and categorized as verificative study in which it explained some characteristics of variables to be studied in certain situation and it aimed to find the illustration of
correlation among the variables studied. The study was also a causality study because the study was a research aiming to study the possibilities of causality between variable X and variable Y. Based on the involvement of research, the study used the type of research that did not intervene data. If it was seen from the aspect of analysis unit, the study was a research with analysis unit in form of organization namely in form of a study on two companies included in LQ-45 index. Based on the time of implementation, the study was a panel study, combination between time series and cross sectional. The following is the framework of thinking used in the study.

Variable X
- Variance return (X1)
- Market value (X2)
- Dividend Payout Ratio (X3)

Variable Y
- Holding period of Shares

Ernawati et al. (2016)

Figure 2. Framework of Thinking (Source: Processed data, 2019)

B. Operational Variable

Independent Variable

The independent variables in the study consisted of three variables: market value, variance return, and Dividend Payout Ratio (DPR). The explanation about the variables is as the following.

Variance return is used to calculate the risk in making investment. Variance return can be calculated using the variance return calculation formula. While the formula is as the following (Tandellin, 2010: 56).

\[
\text{Variance return} = \sigma^2 = \frac{\sum (R_{jt} - \bar{R}_j)^2}{n-1}
\]  

Where:
- \(\sigma^2\) = variance return
- \(R_{jt}\) = actual return
- \(\bar{R}_j\) = average return
- \(n\) = size of samples (number of data)

Pignataro (2013: 279) states that market value is the value determined by market and can be calculated by looking at its market capitalization. The calculation of market value can be formulated as the following (Atkins and Dyl, 1997).

\[
\text{Market value} = \frac{\sum_{N=1}^{Nt} \text{Price of shares } i \times \text{number of circulating shares}}{N_{t}}
\]

Where:
- \(N\) = number of transactions of shares of company \(i\) in year \(t\)
- \(\text{Price of shares}\) = price of closing of shares of company \(i\) in year \(t\)
- \(\text{Number of circulating shares}\) = number of circulating shares of company \(i\) in year \(t\)

Musthafa (2017: 141) explains that Dividend Payout Ratio (DPR) is the comparison between the dividend paid and the net profit. Dividend Payout Ratio (DPR) calculation formula is as the following.
The dependent variable in the study was holding period. Holding period can be calculated using the following formula (Atkins and Dyl, 1997).

$$\text{Holding period} = \frac{\text{Number of Circulating Shares}}{\text{Volume of Trade Transactions}}$$ (4)

C. Population and Samples

The population of the study was the companies included in LQ-45 period 2012-2018 in a number of 48 companies. In determining the samples of the study, the researchers used purposive sampling technique because in the study the samples were selected based on the criteria determined by the researchers. The criteria of samples in the study were the companies included in LQ-45 index period 2012-2018, namely (1) The companies included in LQ-45 index consecutively from 2012 to 2018; (2) The companies consistently included in LQ-45 index period 2012-2018; (3) The companies issuing financial statement in period 2012-2018. After using purposive sampling technique, a number of 20 companies were obtained to be the samples of the study.

D. Data Collection Technique

The data collection technique used in the study was documentation and literature study method. The data used in the study were in form of financial statement, summary of LQ-45 performance, fact book obtained from the official website of Indonesian Stock Exchange and the official websites of the companies included in the samples of the study. In addition, in the study, data related to price of shares obtained from the official website of Yahoo Finance were used.

E. Data Analysis Technique

The data analysis technique used to test the effect of market value, variance return, Dividend Payout Ratio (DPR) was descriptive statistics analysis and panel data analysis. In the study, hypothesis testing was also done, namely F test and t test. The tests were done to find which variable could affect holding period of shares.

IV. RESULT OF STUDY AND DISCUSSION

A. Descriptive Analysis

<table>
<thead>
<tr>
<th></th>
<th>Holding Period</th>
<th>Variance Return</th>
<th>Market Value (Ln)</th>
<th>Dividend Payout Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.386551</td>
<td>0.000476</td>
<td>31.67240</td>
<td>0.460672</td>
</tr>
<tr>
<td>Maximum</td>
<td>3.343601</td>
<td>0.000442</td>
<td>31.72913</td>
<td>0.412664</td>
</tr>
<tr>
<td>Minimum</td>
<td>32.46809</td>
<td>0.001430</td>
<td>33.96407</td>
<td>2.248694</td>
</tr>
</tbody>
</table>

Source: Processed data, 2020

The variable of market value had the greatest value of all variables in the study. Market value had the greatest value in each category, mean, maximum value, and minimum value.

B. Panel Data Regression Test

Chow Test

Chow test was used to choose the best model between common effect and fixed effect model. There were two hypotheses:

$$H_0 : \text{Common Effect}$$
$$H_a : \text{Fixed Effect}$$
Based on the table 2, it can be seen that the value of Chi-Square probability was 0.0000. The value was smaller than 0.05 so H₀ was rejected and H₁ was accepted, so the model selected was fixed effect model. After fixed effect model was selected from the result of Chow test, then it was retest using Hausman test to investigate whether to use fixed effect or random effect model.

**Hausman Test**

Hausman test was used to select the best model between random effect and fixed effect model. There were two hypotheses:

- H₀: Random Effect
- H₁: Fixed Effect

If H₀ was rejected, fixed effect model should be used because random effect model was likely correlated to one or more independent variables. Otherwise, if H₁ was rejected, random effect model should be used. The following is the result of Hausman test in the study.

Based on the table 3, the value of cross-section random probability was 0.0037. The value was smaller than 0.05 so H₀ was rejected and H₁ was accepted, so the model selected was fixed effect model. After fixed effect model was selected from the result of Hausman test, Lagrange Multiplier (LM) test was not required to be done because the result of Chow test was consistent with the result of Hausman test. The two tests showed that the model selected should be fixed effect model.

**C. Panel Data Regression Analysis**

Based on the table 4 we can find out the value of coefficient constants so panel data regression equation could be made. The regression equation is as the following.

\[
\text{Holding period} = -22.06966 - 1208.699 \times VR + 0.839990 \times MV + 0.927671 \times DPR + \epsilon
\]

Based on the equation above, it can be interpreted as the following.

1) \( \beta_0 = -22.06966 \) that means if the value of independent variables of variance return, market value, and Dividend Payout Ratio (DPR) was zero, the value of dependent variable of holding period would be -22.06966.

2) \( \beta_1 = -1208.699 \times VR \) that means if the variable of variance return decreased for one unit and the other variables were constant, the variable of holding period would increase for 1208.699.
3) $\beta_2 = 0.839990$ MV that means if the variable of market value increased for one unit and the other variables were constant, the variable of holding period would increase for 0.839990.

4) $\beta_3 = 0.927671$ DPR that means if the variable of Dividend Payout Ratio (DPR) increased for one unit and the other variables were constant, the variable of holding period would increase for 0.927671.

**D. Determination Coefficient Test**

<table>
<thead>
<tr>
<th>Table 5. Determination Coefficient Test</th>
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</thead>
<tbody>
<tr>
<td>Cross-section fixed (Dummy variables)</td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
</tr>
</tbody>
</table>

Determination coefficient test was done to measure the model’s ability level in explaining the independent variables. The test could be done by looking at the value of adjusted R-Square. Based on the table 5, the value of adjusted R-Square was 0.793554. It means that the independent variables’ ability in explaining the dependent variable was 79.36% and the rest 20.64% was explained by other variables.

**E. Hypothesis testing**

**Simultaneous Test**

<table>
<thead>
<tr>
<th>Table 6. Simultaneous Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section fixed (Dummy variables)</td>
</tr>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Prob(F-Statistic)</td>
</tr>
</tbody>
</table>

F test was done to test whether all of the independent variables simultaneously could affect the independent variable. The following is the result of simultaneous test (F test) done in the study. Based on the table 6, it can be seen that the probability value or F-statistics significance value was 0.000000. It showed that the probability value or F-statistics significance value was smaller than the testing criteria determined, 0.05, so it could be concluded that $H_0$ was rejected and $H_1$ was accepted. It means that all of the independent variables: variance return, market value, and Dividend Payout Ratio (DPR) simultaneously had significant effect on holding period of shares.

**Partial Test**

<table>
<thead>
<tr>
<th>Table 7. Partial Test</th>
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<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>VR</td>
</tr>
<tr>
<td>MV</td>
</tr>
<tr>
<td>DPR</td>
</tr>
<tr>
<td>C</td>
</tr>
</tbody>
</table>

Fixed Effects (Cross)

- _ADRO--C_ -1.014133
- _AKRA--C_ -1.558932
- _ASII--C_ -1.322482
- _BBCA--C_ -1.141426
- _BBNI--C_ -2.041463
- _BBRI--C_ 0.330282
- _BMRI--C_ -1.418405
- _GGRM--C_ 1.108026
- _ICBP--C_ 3.478906
- _INDF--C_ -1.660438
- _INTP--C_ -0.203836
T test was done to determine the effect of the independent variables partially on the dependent variable. The following is the hypothesis of t test formulated before.

Based on Table 7, it can be concluded that each company had a different coefficient value. ADRO had coefficient value of -1.014133, AKRA had coefficient value of -1.558932, ASII had coefficient value of -1.322382, BBCA had coefficient value of -1.141426, BBNI had coefficient value of -2.041463, BBRI had coefficient value of 0.330281, BMRI had coefficient value of -1.418405, GGRM had coefficient value of 1.108026, ICBP had coefficient value of 3.478906, INDF had coefficient value OF -1.660438, INTP had coefficient value of -0.203836, JSMR had coefficient value of -0.613402, KLBF had coefficient value of 0.198817, LPKR had coefficient value of -1.737630, PGAS had coefficient value of -1.786665, PTBA had coefficient value of 1.761012, SMGR had coefficient value of -1.567367, TLKM had coefficient value of -1.831418, UNTR had coefficient value of -1.198664, and UNVR had coefficient value of 12.21922.

Variance return had probability value of 0.0001. The value was smaller than the significance level determined, 0.05. It means that variance return partially could have effect on holding period of shares. When it was seen from the coefficient value, variance return had coefficient value of -1208.699 that means that variance return had negative effect on holding period of shares. The negative effect indicated that the higher value of variance return, the lower value of holding period of shares. Vice versa, the lower value of variance return, the higher value of holding period of shares. It is in line with the studies conducted by Arma (2013) and Maulina and Triyuwono (2010) that state that variance return had significant negative effect on holding period of shares. Variance return indicates the risk held by an investor. The greater variance return on an asset, the greater possibility of return different from expectation (Tandelilin, 2010: 54), so there is a possibility that investor will get a lower return than expected return that investor expected before. Therefore, if the value of variance return was high the investor should hold they shares for a short term. Because investor must avoid the possibility of a change return that is not in accordance with expected return by the investor.

Market value had probability value of 0.0000. The value was smaller than the significance level determined, 0.05. It means that market value partially could have significant effect on holding period of shares. Market value had coefficient value of 0.839990 that means that market value had positive effect on holding period of shares. The positive effect indicated that the higher value of market value, the higher value of holding period of shares. It is in line with the studies conducted by Sari and Abundanti (2015) and Arma (2013) that state that market value has significant and positive effect on holding period of shares. Market value is used to see the size of a company. The greater market value, the greater size of the company (Sari and Abundanti, 2015). The greater market value of a company, the longer investors maintain their holding of shares because investor thought that the large companies are able to provide financial report and information properly (Ernawati et al., 2016). Therefore if investor intend to maintain their shares for a long term, they will need to make investment in a company that has a bigger size.

Dividend Payout Ratio (DPR) had probability value of 0.0052. The value was smaller than the significance level determined, 0.05. It means that Dividend Payout Ratio (DPR) partially could have significant effect on holding period of shares. Dividend Payout Ratio (DPR) had coefficient value of 0.927671 it means that Dividend Payout Ratio (DPR) had positive effect on holding period of shares. The positive effect indicated that the higher value of Dividend Payout Ratio (DPR), the higher value of holding period of shares. It is in line with the studies conducted by Fathani and Oktaviana (2018) and Utami and Sedana (2016) that state that Dividend Payout Ratio (DPR) has significant positive effect on holding period of shares.Dividend Payout Ratio (DPR) shows the percentage of dividend value that will be distributed to investor. The higher Dividend Payout Ratio (DPR), the more it will benefit the investors as the shareholders (Musthafa, 2017:141), so if investors intend to
maintain their shares for a long term, they will need to make investment in a company that give a large dividend.

V. CONCLUSIONS AND SUGGESTION

Based on the result of panel data analysis and hypothesis testing in the study, the following conclusions could be taken. Variance return, market value, and Dividend Payout Ratio simultaneously had significant effect on holding period of shares in the companies included in LQ-45 index year 2012-2018. Variance return partially had negative and significant effect on holding period of shares in the companies included in LQ-45 index year 2012-2018. Market value and Dividend Payout Ratio (DPR) partially had positive and significant effect on holding period of shares in the companies included in LQ-45 index year 2012-2018.

Suggestion for future research are to add other independent variables that can affect holding period such as bid-ask spread and volume of shares trade transaction. In addition, future researches can expand the research samples and extend the period of study because the longer period of research will give more accurate result. This research gives an advice for investor to make decision in holding shares by pay attention in the level of risk that held by a company as value of variance return reflection. If investors intend to maintain their shares for a long term, they will need to make investment in a company that has low risk. The risk is reflected from the value of variance return. In addition, if investors intend to maintain their shares for a long term, they will need to make investment in a company that has a bigger size. The company size is reflected from the value of market value. Then, if investors intend to maintain their shares for a long term, they will need to make investment in a company that give a large dividend. So, investors will get more profits from the companies.

REFERENCES