The Impact of Abnormal Return towards Dividend Changes with Private Information as a Moderating in Indonesia

Nurul Husna and *Faisal

Department of Management, Faculty of Economics and Business, University of Syiah Kuala, Banda Aceh 23111, Indonesia;

*Corresponding author: faisalekm@unsyiah.ac.id

Abstract

This study examines the impact of abnormal return towards dividend changes with private information as a moderating in Indonesia. The variables used in this study are abnormal return, private information, and dividend changes. Analysis model in this study is Moderated Regression Analysis (MRA). By using purposive sampling technique, there are 27 stocks as a research sample in Indonesia Stock Exchange 2013-2016. The result of this research shows that abnormal return has positive and significant impact towards dividend change. In other hand, private information in stock price has a negative and significant impact towards dividend change. The interaction analysis result shows that private information weakens the impact of abnormal return towards dividend changes. This study highlights private information in stock prices as an important determinant of dividend policy.

Keywords: abnormal return, private information, asymmetric information, dividend changes, agency theory.

Introduction

A stock market needs to reflect the valid information about financial condition for each of the securities listed. Fama (1970) classifies the types of information in a stock market into public information and private information. In addition, Arifin (2005) states the differences level of information contents collected between poorly-informed investor and well-informed manager cause the asymmetric information. The asymmetric information is the source of firm’s agency problem. Manager tends to do decision on his own interest rather than investor's interest (Arifin, 2005). It is due to manager with complete information content of firm than investor. De Cesari and Huang-Meier (2015) state manager learn the movement of stock prices of market reaction and private information to decide dividend policy.

Market reaction is shown by private information effect of dividend payment event. It can be seen by the existence of abnormal return. Abnormal return measurement used in this paper is market-adjusted model. Based on IDX data, the abnormal return in Indonesia 2013-2016 are highly abnormal; -1.86%, -1.56%, -0.93%, -1.66%. According to Ariffin (2007), abnormal return indicates high and low level of firm’s agency problem. Besides, managerial structural ownership in Indonesia is higher from family circle. The higher managerial structural ownership of firm’s shares creates a conflict between insiders’ and investors’ interests and raises a higher agency cost (Faisal, 2013). In this case, investor can insist the managers to
increase dividend payouts. De Cesari and Huang-Meier (2015) also state that abnormal return has a positive and significant effect on dividend changes.

In this study, we use the ratio of Illiquidity (Amihud, 2002) to measure the private information in Indonesia 2013-2016. The result data of private information collected from IDX show a negative average value; -0.00048913, -0.00002333, -0.00000202, -0.00000930. According to Amihud (2002) the lower value of ILLIQ ratio, the lower firm’s liquidity and vice versa. Illiquid stocks tend to have high private information (Arifin, 2007). That is, the level of private information on the firm’s stock price in Indonesia is very high. The high level of private information on stock prices led to a decrease in dividend payouts (Arifin, 2007). De Cesari and Huang-Meier (2015) also state that private information on stock prices had a significant negative effect on changes in corporate dividends.

Previous studies of dividend policy have been widely studied in terms of public information; profitability (Fama and French, 2001) and (Grullon and Michaely, 2002); corporate investment policies (Chen et al., 2007), CEO turnover (Defond and Hung, 2004), and news on mergers and acquisitions (Luo, 2005). Even though, the study of the influence of private information on dividend policy is still lack of attention. Based on the data at IDX, the dividend changes in Indonesia is very sharp; 0, -0.04, 0.1, 0.39 during 2013-2016. Data were analyzed by using the measurement of dividend change by De Cesari and Huang-Meier (2015).

According to De Cesari and Huang-Meier (2015), quarterly dividend changes are significantly affected by abnormal return and private information on firms listed on the NYSE and AMEX. This study shows that managers learn the information from the stock price when making dividend payout decisions. This study highlights the importance of private information as a determinant of dividend payment on financial markets in America. A study on the effect of asymmetric information on the mechanism of agency problem reduction in Indonesia Stock Exchange shows the level of asymmetric information has a significant impact towards dividends as a mechanism to reduce agency problems in Indonesia (Arifin, 2007).

Therefore, the existence of abnormal return and private information on stock prices around the dividend announcement event in Indonesia Stock Exchange make the researcher want to study more deeply about the dividend changes in Indonesia. This study is different from previous studies. This study focuses on the annual cash dividends payment. This study offers a huge contribution; managers and investors can optimize the information contained in stock prices to determine their investment decisions.

**Literature Review**

**Agency Theory**

The theory of agency was found and popularized by Jensen and Meckling (1976) in The Theory of the Firm: Managerial Behavior, Agency Cost and Ownership Structure. In agency theory, agency relation is a well-built contract explicitly and implicitly in which one person or more (principal) ask the other who is called agent to make decision on principal’s interest. Principal is the stockholder, besides agent is the management who has authority for making decision in increasing the firm’s value. In fact, the manager prefers making the decision which is favorable to manager and prioritized the principal’s interest. This problem causes the agency problem in firms (Arifin, 2005).

Agency theory categorized the agency problems in firms into:
1. Principal-agent
2. Majority-minority stock holders
3. Principal or agent-creditor

Ross (1973) stated that principal-agent problem arise if asymmetric information is existed whether it is related to manager’s activities (hidden action) or manager’s private information of the firm (hidden information) as the agent. The existence of asymmetric information can be seen from the abnormal return. It indicates that there are investors who gain return above the market average. The higher abnormal return indicates the high level of agency problem and vice versa (Arifin, 2007).

The high level of agency conflicts in Indonesia can be shown by the high level of managerial ownership of firm’s family circle. The investor can insist the managers to increase dividend payouts (Arifin, 2007). One mechanism that can be done to reduce agency problems is to pay dividends (Arifin, 2007). Moreover, De Cesari and Huang-Meier (2015) also state the abnormal return had a significant positive effect on dividend changes.

On the other hand, the existence of asymmetric information indicates the existence of private information, the information that is only known by certain parties. When the level of private information on stock prices is high and misused by certain parties, the agency conflict will be higher. It leads the managers to reduce the firm's dividend payout. De Cesari and Huang-Meier (2015) also state that private information had a significant and negative effect on the dividend changes.

**Theoretical Framework**

**The Impact of Abnormal Return towards Dividend Changes**

One of the causes of agency problem is asymmetric information (Ross, 1973). It could be seen by abnormal return which indicated the investors gain profit above market average. Ups and downs of abnormal return indicate the same condition of agency problem in firm (Arifin, 2007). Based on the highly abnormal return in Indonesia, therefore agency problem in Indonesia is relatively high. Besides, managerial structural ownership in Indonesia mostly comes from family.

The high state of agency problem in firm induces the stock holders to stress out the manager to increase dividend changes. Dividend can be used as agency problem reducer by manager (Arifin, 2007). De Cesari and Huang-Meier (2015) stated that abnormal return significantly has positive relation to dividend changes.

H1: Abnormal return has positive impact significantly toward the dividend changes.

**The Impact of Private Information of Stock Price towards Dividend Changes**

Ross (1973) stated that principal-agent problem arises if asymmetric information is existed. Asymmetric information happens due to the information gap between principal and agent. Asymmetric information conflict increase when agent (manager) knows better. Private information could be measured by ILLIQ Amihud proxy (2002) (De Cesari and Huang-Meier, 2015). Ups and downs of stock liquidity will influence the same condition in private information of stock price.

Private information indicates the agency problem of principal and agent. When private information of stock price is high and abused by certain parties, the agency problem escalates. Hence, manager decreases the firm’s dividend. De Cesari and Huang-Meier (2015) stated that private information has negative impact significantly towards dividend changes.

H2: Private information of stock price has negative impact significantly toward dividend changes.
Private Information of Stock Price Moderation on Abnormal Return towards Dividend Changes

Agency theory conveys about agency theory existed between principal-agent. This problem arises due to asymmetric information between agent (manager) who is well-informed than principal who is poorly informed. Abnormal return indicates if agency problem is existed in firm. When abnormal return is interacted with private information, the firm tends to decrease their dividend. It causes by firms with high asymmetric information incline less liquid (Amihud and Mandelson, 1991).

Decreasing of dividend causes the problem agency between principal-agent. It is because the principal expects firm to maximize agent’s wealth by increasing the dividend payment. De Cesari and Huang-Meier (2015) finds private information of stock price moderates abnormal return impact towards dividend changes significantly negative from interaction of coefficient side.

H3: Private information of stock price moderates negatively and significantly on the impact of abnormal return toward dividend changes

Based the explanation above, the theoretical framework or this research is:

![Diagram](Figure 1. Theoretical framework)

Research Method

Population and Sample
The population of this research is all of the listed companies in Indonesia Stock Exchange (IDX) period 2013-2016. The non-probability approach taken is purposive sampling. The sample that meets the criteria for this study are 27 companies, with criteria (1) share of companies are listed on the Indonesia Stock Exchange (IDX) and (2) companies paying cash dividends during the period 2013-2016.

Definition of Operational Variables
The definition of operational variables in this study can be seen in the table below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Symbol</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend Changes</td>
<td>Dividend Changes</td>
<td>$\text{Dividend Changes} = \beta_0 + \beta_1 \text{Abnormal Return}_i + \beta_2 \text{Private Information}_i + \beta_3 (\text{Abnormal Return}_i \times \text{Private Information}_i)$ (Grullon, Michaely &amp; Swaminathan, 2002, Amihud &amp; Li, 2002 &amp; De Cesari &amp; Huang-Meier, 2015).</td>
</tr>
<tr>
<td>Abnormal Return</td>
<td>AR</td>
<td>$\text{AR} = \text{Realized Return} - \text{Expected Return}$ (Jogiyanto, 2016)</td>
</tr>
<tr>
<td>Private Information</td>
<td>ILLIQ</td>
<td>$\text{ILLIQ}_t = \frac{1}{\text{D}<em>t} \sum</em>{t=1}^{\text{D}_t} \frac{\text{ILLIQ}_t}{\text{Volume}_t}$ (Amihud, 2002)</td>
</tr>
</tbody>
</table>

Research Model
To analyze the hypotheses in this study, the regression equation used is the Moderated Regression Analysis (De Cesari & Huang-Meier (2015) with the following equation:

$$\text{Dividend Changes} = \beta_0 + \beta_1 \text{Abnormal Return}_i + \beta_2 \text{Private Information}_i + \beta_3 (\text{Abnormal Return}_i \times \text{Private Information}_i)$$
Definition:
\( \beta_0 \): Constant  
\( \beta_1 \): Abnormal return of firm \( i \)  
\( \beta_2 \): Private Information of firm \( i \)  
\( \beta_3 \): Interaction

**Analysis Technique and Hypothesis Testing**

This study uses SPSS program as technical analysis. To test the hypothesis, we use a moderated regression model which is free of assumptions of the classical linear regression model.

**Classical Assumption Testing**

The use of MRA (Moderated Regression Analysis) in this research is required to fulfill classical assumption; normality test, autocorrelation test, heteroscedasticity test, and multicollinearity test (Gujarati, 2006). Normality test is conducted to determine whether the distribution data of dependent and independent variable are normal, close to normal, or not (Gujarati, 2006). Normality testing can be done by Kolmogorov-Smirnov non-parametric statistical test (K-S). The autocorrelation test aims to ensure whether the errors appear on the data in a time series or not. This test can be done with Durbin-Watson test d Statistic Test. Heteroscedasticity test is aimed to test whether the regression model has an inequality of residual observation variance with one another or not; it can be done by using Glejser method. Multicollinearity test is aimed to test whether a linear regression model has a strong relationship both positive and negative between the data on each variable. The multicollinearity test can be done with the criteria of Durbin Watson test.

**Results and Discussion**

**Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend Changes</td>
<td>108</td>
<td>0.037394</td>
<td>0.4287395</td>
</tr>
<tr>
<td>Abnormal Return</td>
<td>108</td>
<td>-0.00909</td>
<td>0.031162</td>
</tr>
<tr>
<td>Private Information</td>
<td>108</td>
<td>-0.0000549</td>
<td>0.00026419</td>
</tr>
<tr>
<td>Interaction</td>
<td>108</td>
<td>-0.0000283</td>
<td>0.00023423</td>
</tr>
</tbody>
</table>

Table 2 shows that dividend changes variable, on mean, is 0.037, positive figures indicate the firms which is listed in BEI is likely increasing the dividend payment to investors. Mean of abnormal return variable is -0.009, the figures show that abnormal return in BEI is likely negative. Private information of stock price, on mean, is 0.000049, which is the firms in BEI less informative. Mean interaction variable is -0.000002838, which means the multiplication of abnormal return and private information is likely negative.

**Classical Assumption Testing**

The normality test in this study uses non-parametric Kolmogorov-Smirnov (K-S) which required normally distributed residual values. Data outlier in this research is eliminated by doing trimming process. This process is allowed by removing the extreme data in order to have a normal distributed data. Based on table 3, the value of significance before the trimming process is 0.000 or < 0.05; it can be concluded that the residual data is not normally distributed. After trimming process, the value of significance is 0.090 or <0.05; it can be concluded that the residual data are normally distributed.
The autocorrelation test result (see table 4) shows the Durbin-Watson d Test score is 2,223. According to Durbin Watson table, n = 105 and k = 3: dL = 1.6237; dU = 1.7411. Based on the calculation result, dW > dU (2,223 > 1.7411); the data in this study are free of positive autocorrelation. Besides that, (4 - dW) > dU or 1.777 > 1.7411; the data in this study are free of negative autocorrelation. Finally, the data in this study are free from autocorrelation problems.

The result of heteroscedasticity test by using Glejser method shows the regression result on each variable is not significant at α = 5% (see table 5). To conclude, the research data are free of heteroscedasticity problem.

The result of multicollinearity test by using TOL (Tolerance) and Variance Inflation Factor (VIF) shows that VIF value of each independent variable above 0.1 and the VIF value below the 10 (see table 6). That is, the data of each independent variable in this study are not correlated with each other and free of multicolinearity problem.
**Results**

The results are examined by computer software IBM SPSS 20 which can be seen below.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Abnormal Return</td>
<td>101</td>
<td>8,256</td>
<td>0,035</td>
</tr>
<tr>
<td>2</td>
<td>Abnormal Return</td>
<td>0,051</td>
<td>6,244</td>
<td>0,033</td>
</tr>
<tr>
<td></td>
<td>Private Information</td>
<td>-590,321</td>
<td>124,216</td>
<td>-594,043</td>
</tr>
<tr>
<td>3</td>
<td>Abnormal Return</td>
<td>0,032</td>
<td>4,529</td>
<td>0,032</td>
</tr>
<tr>
<td></td>
<td>Private Information</td>
<td>-345,043</td>
<td>137,654</td>
<td>-3,462</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>-5945,201</td>
<td>1717,243</td>
<td>-3,462</td>
</tr>
</tbody>
</table>

**The Impact of Abnormal Return towards Dividend Changes in Indonesia BEI**

Abnormal return variable has positive impact significantly (Sig < 0,05) towards dividend changes in BEI alongside 2013 to 2016. Positive coefficient result shows that for each abnormal return increased cause dividend changes is getting higher in BEI.

One of the reasons agency problem arise is due to asymmetric information (Ross, 1973). This phenomenon can be seen from abnormal return which indicates the investors gain the return above market average. Ups and downs of abnormal return indicate the same condition of agency problem in firm (Arifin, 2007). Based on the high abnormal return in Indonesia, therefore agency problem in Indonesia is relatively high. The high state of agency problem in firm induces the stock holders to stress out the manager to increase dividend changes. Dividend can be used as agency problem reducer by manager (Arifin, 2007).

Empirical result of this research is suitable to De Cesari and Huang-Meier’s (2015), abnormal return significantly has positive relation to dividend changes. Mulyati (2003) stated dividend announcement contains the information which causes positive stock price reaction which is viewed from abnormal return existence. Also, Esomar (2010) declared investor responds the dividend changes announcement positively which is indicated from abnormal return existence.

**The Impact of Private Information of Stock Price towards Dividend Changes in Indonesia Stock Exchange (IDX)**

Private information as moderated variable has negative and significant (Sig <0,05) impact towards dividend changes in BEI alongside 2013 to 2016. Negative coefficient of the result shows that each private information escalation causes declining in dividend changes in BEI.

According agency theory, agency problem appears due to problem between manager and investor. Ross (1973) stated that principal-agent problem arises if asymmetric
information is existed. Asymmetric information happens due to the information gap between principal and agent. Asymmetric information conflict increase when agent (manager) is better informed. The result of private information measurement by Amihud ILLQ proxy (2002) shows there is high private information in IDX. High private information of stock price causes reduction of dividend changes in the firm. Empirical evidence of this research is also in accordance to De Cesari and Huang-Meier's (2015), which is stated that private information of stock price has negative impact significantly towards dividend.

**Private Information of Stock Price Moderation on Abnormal Return towards Dividend Changes in Indonesia Stock Exchange (IDX)**

Based on the result of regression model 1, 2, and 3, β1 value of regression model 1 is significant at 0,000 (0,000 <0.05), the value of β2 in model 2 is significant at 0,000 (0,000 <0.05) and β3 in model 3 is significant at 0.001 (0.000 <0.05). Based on the results of data analysis, it can be concluded that the private information is causal moderating variable that moderate the effect of abnormal return on dividend changes. Causal moderation can be seen from the second and third regression stages which have a significant impact. The data analysis also shows the coefficient beta of abnormal return on dividend changes in all of three regression stages are decrease. It shows that private information weakens the effect of abnormal return on dividend changes.

This research result is consistent with agency theory which discuss about agency problem between manager and investor. This problem arises due to asymmetric information between agent (manager) who is well-informed than principal who is poorly informed. Abnormal return indicates if agency problem is existed in firms which are listed in Indonesia Stock Exchange (IDX). When abnormal return is interacted with private information, the firm tends to decrease their dividend. It is caused by firms with high asymmetric information incline less liquid and high risk (Amihud and Mandelson, 1991).

**Conclusion**

The first hypothesis is successfully proofed. The abnormal return has a significant and positive impact toward the dividend changes in Indonesia Stock Exchange (IDX). The higher abnormal return shows the higher agency problem - it induces the stock holders to stress out the manager to increase dividend changes.

The second hypothesis is successfully proofed. Private information of stock price has a significant and negative impact toward dividend changes Indonesia Stock Exchange (IDX). Private information shows the information gap between principal and agent. The high contain of private information in a stock price leads the manager to reduce the dividend changes.

The third hypothesis is successfully proofed. Private information of stock price moderates negatively and significantly on the impact of abnormal return toward dividend changes in Indonesia Stock Exchange (IDX). Information private and abnormal return indicates the agency problem between manager and investor. When abnormal return is interacted with private information, the firm tends to decrease their dividend. It is caused by firms with high asymmetric information incline less liquid and high risk.

**Implication and Suggestion**

First, as the result shows the dividend payment changes is very crucial in financial decision, manager needs to do fundamental analysis; abnormal return and optimize the information contained in stock price in order to maximize the managerial goals and investor’s wealth.
Second, investor needs to consider whether the abnormal return or dividend when choosing a particular stock for final investment decision. It is very important to determine whether daily abnormal return or dividend will gain a higher return. This study shows the abnormal return determines the dividend payment at the next period. A higher abnormal return will affect the higher dividend changes. This finding shows the abnormal return contains the private information which will affect the manager to do dividend changes.

Third, the period and observation of this study is limited for a short period and samples. It is suggested for further research to extend the research period and observation. Besides, the addition of control variable is recommended to show a better result.

References


