MARKET REACTION ANALYSIS BEFORE AND AFTER THE ANNOUNCEMENT OF THE DIVIDEND (EMPIRE STUDY ON GO PUBLIC COMPANIES)

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Abstract

The purpose of this study is to prove whether there are differences in the volume of stock trading in the period and whether there are differences in abnormal returns before and after the announcement of cash dividends in Property and Real Estate companies on the Indonesia Stock Exchange. The population of this study are manufacturing companies listed on the Indonesia Stock Exchange as many as 360 companies with years of observation 201 1 to 201 6 . The sample was selected using *purposive sampling method* . The data was processed using the panel data regression statistical test method. The results of this study prove that the announcement of cash dividends does not cause stock trading volume to change after the announcement of dividends and there is no difference in the average abnormal return in the period before and after the announcement of cash dividends in Property and Real Estate companies on the Indonesia Stock Exchange .

Keywords : *Dividend, Trading Volume , Abnormal Return*

1. INTRODUCTION[Times New Roman 11 bold]

The capital market as a capital transaction infrastructure that can affect the economic development of a country. There is a capital market efficiency which is one of the determining factors for the success of capital market development which needs to be seriously studied, because the development of an efficient capital market will further increase the confidence of investors, both domestic and foreign, to invest in the capital market. Indonesia is a country where the movement of equity prices fluctuates relatively high, so this condition can be influenced by several factors, including information from outside the company (external), within the company (internal) which includes dividend announcements. The announcement of dividends is one of the corporate actions originating from the company, as one of the important factors that can influence investors to invest. In conditions where investors are faced with uncertainty of investment returns, the use of dividends as an indicator to estimate profit prospects is acceptable because dividends according to accounting reports can be influenced by different accounting methods.

Information on dividend announcements for investors is very useful for consideration and determination of the financial level and risk of the shares being traded. Investors really want to feel safe in their investments. A sense of security arises because correct, complete and timely information is obtained. The dividend announcement contains information about the company's management's perception of future financial prospects. The fundamental factor for investors in investing is to obtain optimal profits from their investments in the form of dividends or capital gains.

Dividends are the results obtained by shareholders from purchases in the company in accordance with the percentage of ownership. Capital gain is the difference between the

purchase price and the selling price. Investors who want to get capital gains need information about dividends because dividends are one of the important things that can affect stock prices. Investors are required to know the development of market information and market prices. Information can shape perceptions for investors that will have an impact on changes in supply and demand.

Information on the rise and fall of dividends distributed by the company includes information that is quite important for investors regarding the prospects for profits that will be obtained by a company in the future. This information causes investors to be faced with high uncertainty regarding the results of their investment work. So, the up and down information can be used as an indicator to be able to estimate the company's profit expectations in the future.

The company 's management will not take risks by providing high dividends at a certain time according to their estimation the company will not be able to maintain in the future. An increase in dividends can be interpreted as a sign of optimism by the company's management with the company's profits in the future, on the contrary if it experiences a decrease in dividends, it will experience losses in the future.

The distribution of dividends to investors will cause a company's cash position to decrease and may result in an increase in leverage (the ratio between debt to equity). This event can cause investors to think negatively of the company. In the theory of the Efficient Market Hypothesis (Galih, 2010), stock prices react to available information such as information about dividend distributions which are believed to affect the behavior of stock prices on the stock exchange due to the actions of investors who want to profit from the incident. Investors usually predict dividend distribution will have an impact on stock prices, investors who wish to make profits tend to choose not to be in a long position. The impact on this event is that the stock price will decrease in proportion to the value of the return that has been lost.

From the information obtained, it can be found several reactions from investors, in the form of rational and unemotional people as well as irrational investors. Rational investors tend to be more careful in making decisions, while irrational investors in choosing and making decisions tend to be emotional where it is easy to take information that does not have a clear source so that investors quickly release their shares when they hear bad information about the stock. There is an over-reaction that can affect the returns expected by investors.

The announcement of dividends has an effect on stock profits, finding abnormal stock profits in companies that provide dividends. This research can be done by measuring the volume of stock trading which is formulated by Trading Volume Activity and Abnormal Return.

2. LITERATURE REVIEW

Efficient Market Hypothesis (EMH)

Efficient Market Hypothesis (EMH) is a market that describes the available information. Efficient markets inform how the market can provide and respond to information and things that can affect security prices. If the market reacts quickly and reaches equilibrium in the price of these securities, it indicates an efficient market condition. (Jogiyanto, 2010). Several forms of the *Efficient Market Hypothesis* (EMH) include:

a. Efficient in weak form

The form is classified as weak if the price reflects information that can be seen from past prices, sales volumes and profits

b. The market is classified as semi-strong
This form is based on past prices, company data, profit forecasts and financial arrangements. If investors can capture public information, it can be reflected in market prices

c. Efficient in strong form

This form is classified from all information, both *historical* and private The Indonesia Stock Exchange (IDX) is classified in the semi-strong form. On the Indonesia Stock Exchange there is a market reaction when receiving new information circulating.

Dividend Signaling Theory

Dividend signaling theory developed in the 19th century in America. In this theory the company adjusts dividends to show a signal about the company's prospects. If the dividend increases, it can be interpreted as a positive signal, but it can also be interpreted as a negative signal if it is the other way around.

Event study

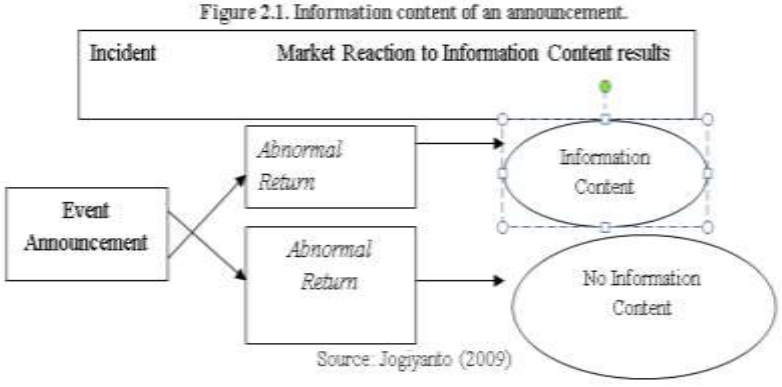
Event study is a study that studies the market reaction to an event whose information is published as an announcement. *Event studies* can be developed as an analysis of market reactions or published events. *Event studies* can also include various events, both economic and non-economic events in order to find out whether there is information about *abnormal returns* that can be obtained from shareholders.

Event study has 4 types which can be categorized as follows:

a. Information content

Can be used as a tester of the information content of an event, if an event or events contain information, the market will respond. Which is indicated by the presence *of abnormal returns.*

Figure 2.1. Information content of an announcement.



Source: Jogiyanto (2009)

a. Market efficiency

Continued testing of the information content. If the information content test only tests *abnormal returns* as a reaction to the market. Referred to as an efficient market if an event and information is responded to quickly by the

market . The information available includes all available information, both past information (eg last year's company profit), as well as current information (eg this year's dividend increase plan), as well as information that is rational opinion/opinion circulating in the market that can affect price changes (for example, if many investors in the market think that the stock price will rise, then that information will later be reflected in changes in stock prices that tend to rise)

b. Model evaluation

Model evaluation is research that evaluates the old model that best suits certain conditions

c. Metric explanation

The metric explanation category research tries to further explain the causes of the market reaction

2. Stock Trading Volume

The definition of stock trading volume is the number of shares in a company that are traded in the capital market every day at a price level that has been agreed upon by the seller and buyer of shares through a stock trading broker.

Stock trading volume variables can be identified by observing stock trading activities through the *Trading Volume Activity indicator* . This is because the *Trading Volume Activity* is directly proportional to the liquidity of the stock, the higher the value of the *Trading Volume Activity* , the stock means that the stock can be sold easily because the stock is available so that the stock can be converted to have a high level of liquidity.

The stock trading volume approach is used as a proxy for market reaction. Stock trading volume reflects more on investor activity because of the new information through the sum of the shares traded.

To calculate the trading volume of shares (*Trading Volume Activity)* which is often used by many researchers is to use the formula in Novia (2011), which is as follows:

$$TVA = \frac{\text{Company i's shares traded at time t}}{\text{Company i's outstanding shares } \textit{(listing)} \text{ at time t}}$$

3. Stock *Return*

Stock *return* is a measure of the return on an investment. In investing, people will choose investments that provide a high *rate of return* . for example , *the rate of return* on investment in stock A is 15% per year, meaning that the investment value is Rp. 100,000,000, - previously would be Rp. 115,000,000,- when the shares were sold a year later.

returns consist of realized *returns or are said to have occurred and expected returns* or those that have not occurred but are expected by investors to occur in the future. In securities , the *return* obtained is usually in the form of dividends or *capital gains.*

Abnormal return It is interpreted as a speculative thing because it is unpredictable. *Abnormal returns* can occur in very excited market conditions and there is an important event for all business people and investments in the market. In general, *abnormal returns* are things that are awaited by investors.

An indication of a growing company is one of the information that can be used by investors to obtain *abnormal returns* around the dividend announcement date. The existence *of abnormal returns* indicates the ability of investors to respond to this information.

Return Abnormal return (*abnormal return)* is the difference between the actual *return* (*actual return*) with the expected *return* (*expected return*) which can be interpreted as the rate of return that is estimated by several valuation methods. *Abnormal Return* can mean good or vice versa.

Steps that can be used in calculating *abnormal returns* are:

a. *Mean – Adjusted model* assumes that the expected *return* is constant, which is the same as the previous average realized *return* during the estimation period

$$E(Rit) = \frac{Rit}{t}$$

means :

E(Rit) = expected *return* of the i-th security at time t
Rit = *actual return* of the i-th security at time t
t = estimation period

The *estimation period* is the period before the event period. Event period *(event period)* called also with the observation period or *event window*.

b. Market Model

Market models in count *Expected return* is carried out in two stages, namely forming an expectation model using realization data during the estimation period and using an expectation model to estimate expected *return* in the window period.

Model expectation could formed with use technique OLS (*Ordinary Least Square*) regression with the equation:

$$E(Rit) = i + i + Rmt + it$$

It means:

E(Rit) = expected *return* of the i-th security in the estimation period t
i = *intercept* , independent of Rmt
i = *slope* , systematic risk, dependent on Rmt
Rmt = market *return* calculated by the formula:

$$Rmt = \frac{(CSPI - JCI\text{-}1)}{JCI\text{-}1}$$

it = residual error of security i in period t

c. *Market Adjusted Model*

Market Customized Model assume that the best estimator for estimating the *return* of a security is the current market *return* index. With use this model, no need use estimation period to form an estimation model because the estimated security *return is the same as the market index return* . The following is the formula for calculating the *Market Adjusted Model.*

ARit = Rit – Rmt

Where:

ARit = *abnormal return* of stock i on day t

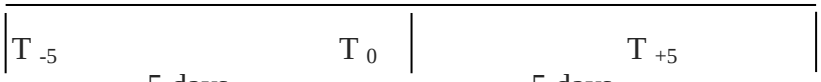
Rit = *actual return* of stock i on day t

Rmt = Market *Return , which is calculated by the formula:*

$$Rmt = \frac{(JCI - JCI\text{-}1)}{JCI\text{-}1}$$

3. RESEARCH METHOD

study uses the *event study method* to analyze the effect of dividend announcements on stock trading volume and stock *abnormal returns* . *Event study* is a research methodology of economists to measure the effect of an economic event on the *value of the firms* by using accounting data or financial data in the market. If all security prices have reflected the available information assuming the market has been efficient, price changes should reflect new information so that the measurement of an *event* is mostly done by analyzing the price changes that occur.



Event Window

4. RESULTS AND ANALYSIS

1. Statistical Description Analysis

Statistical description is the process of collecting the presentation of various data characteristics to adequately describe the data. Statistical description analysis aims to determine the characteristics of the data such as the lowest value *(minimum*), the highest value (*maximum*), the average value *(mean),* and the level of deviation of the data distribution (*standard deviation).*

In this study, the average *trading volume activity (TVA) variable* and the average *abnormal return* before and after the dividend announcement event were obtained from the difference between the actual *return and the expected return* for each company included in the sample. The results of this research analysis can be described with statistical descriptions as follows:

Table 4.1
Description of Statistics

Information	N	*Minimum*	*Maximum*	*mean*	*Std. Deviation*

TVA Before	10	.000	.008	.00490	.002514
TVA After	10	.000	.007	.00380	.001932
AAR Before	10	-.051	.027	-.0016	.021088
AAR After	10	-.004	.006	.0025	.003536

In table 4.1 it can be described as follows:

a. *Trading Volume Activity* variable , there is a *minimum value* in the previous period of 0.000 and a *maximum* value of 0.008, an average value *(mean)* of 0.00490 and a standard deviation of 0.002514. However, in the period after the event, the *minimum* TVA value is 0.000 with a *maximum value* of 0.007, the average value *(mean)* is 0.00380 with a standard deviation of 0.001932.
b. In the second variable, namely *Average Abnormal Return*, the *minimum value* before the event is -0.0051 with a *maximum* value of 0.0027, the *mean* of -0.0016 with a standard deviation of 0.021088. Meanwhile, in the post-event period, the *minimum value is* -0.004 and the *maximum value* is 0.006, the average value *(mean)* is 0.0025 with a standard deviation of 0.003536.

In table 4. 1 shows that the graph of the movement of the *Trading Volume Activity* before and after the announcement of the cash dividend and the graph of the movement of the average *abnormal return* before and after the announcement of the cash dividend.

2. Data analysis

In this study, the analysis used is by comparing the value of each variable in the period before and after the dividend announcement, where the period is five days before the dividend announcement and five days after the dividend announcement.

3. Data normality test

In this study, using a different test analysis tool on related samples *(paired sample t test)* used for hypothesis testing, the assumptions that will be used are normally distributed data. To detect the normality of the data in each variable, the data normality test (*Shapiro-Wilk) was used* because the number of samples was <50, if the sample was >50, the *Kolmogrof-Smirnov was used.*

The steps that can be taken in this test are as follows:

Hypothesis:

H0 : Data is normally distributed

H1 : Data are not normally distributed

If the results of data processing used produce a significance probability below 5% or 0.05, then H0 is rejected or the variables are not normally distributed.

a. Testing the normality of the *Trading Volume Activity variable data*

The results of testing the normality of the data on the *Trading Volume Activity* (TVA) variable are as follows:

Table 4.2
***Trading Volume Activity* Variable Data Normality Test**

Before and After Cash Dividend Announcement

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
TVAsblm	.125	10	.200*	.946	10	.624
TVAssdh	.239	10	.109	.931	10	.463

a. Lilliefors Significance Correction

In this table, it can be seen that the level of significance is 0.463 which means that it is greater than the probability value of 0.05. So on this result it can be said that the data is normally distributed.

b. Testing the normality of variable data *Average Abnormal Return (AAR)*
The results of the data normality testing that has been carried out are as follows:

Table 4.3
Normality Test of Variable Data *Average Abnormal Return*
Before and After Announcement of Cash Dividend

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Arsblm	.219	10	.200 *	.887	10	.187
Arssdh	.184	10	.200 *	.896	10	.231

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

It can be seen in table 4.3 which means that the significance level is 0.231 which is greater than the probability value of 0.05. In this result, it can be interpreted that the data is normally distributed.

4. Hypothesis test

Before testing, the hypothesis can be determined, namely:

- If H0 can be accepted with sig. > from a significance level of 0.05 (5%) then there is no difference
- While H0 is rejected if sig. < from significance level of 0.05 (5%)
  So there is a difference.

In this study, two hypotheses were proposed, hypotheses one and two were tested using *the paired sample t test.*

a. Hypothesis 1 (one)

The first hypothesis is that there is a significant change in stock trading volume in the period before and after the announcement which can be formulated as *Trading Volume Activity* (TVA) obtained from the

comparison of the number of shares traded at time t with the number outstanding at time t.

After knowing the average *Trading Volume Activity* (TVA) in each sample period before and after the announcement of cash dividends, a *paired sample t test can be performed* and the results can be seen as follows:

Table 4.4
TVA Average Statistical Test Results
Before and After Announcement of Cash Dividend

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	TVAsblm – TVAssdh	.001000	.003542	.001120	-.001434	.003634	.982	9	.352

The results of this test indicate that there is a t count of 0.982 with a significance value of 0.352 which means that it is greater than the significance value of 0.05 . So we can conclude that H0 is accepted or there is no significant difference in stock trading volume in the period before and after the announcement of cash dividends, which means that the hypothesis is rejected.

b. Hypothesis 2 (Two)

The second hypothesis is that there are significant differences in *abnormal* stock returns in the period before and after the announcement of cash dividends, then the *paired sample t test can be carried out* and the results are in the table below:

Table 4.5
***Average* Statistical Test Results *Abnormal Return* (AAR)**
Before and After Announcement of Cash Dividend
Paired Samples Test

	Paired Differences				t	df	Sig. (2-tailed)
	mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			

				Lower	Upper			
Pairs 1	ARsblm – Arssdh	-.004100	.022541	.007128	-.020225	.012025	-.575	9	.579

From the results of this test can be seen in this table, which indicates the results of the different test of *Average Abnormal Return* before and after the event. Obtained t count of -0.575 with a significance value of 0.579, which means it is greater than the 0.05 significance level, then H0 can be accepted.

The conclusion is that there is no significant difference in *Average Abnormal Return* in the period before and after the announcement of cash dividends, so the second hypothesis is rejected, so there is an allegation of leakage of information from within the company.

If there is no significant difference in *Average Abnormal Return* in the period before and after the announcement of cash dividends, it can be interpreted that this event does not carry information / *signaling content* about future profits.

5. CONCLUSION

1. Hypothesis One

From testing the first hypothesis, statistically it can be concluded that there is no significant difference between TVA before and after the event, so the hypothesis which states that there is a significant difference in TVA in the period before and after the announcement of cash dividends is not proven. Based on the average value, the TVA before the dividend announcement was 0.00490 and the TVA after the dividend announcement was 0.00380.

The results of the study prove that the announcement of cash dividends does not result in a significant difference in TVA in the period before and after the announcement of cash dividends . The absence of a significant market reaction after the dividend announcement reflects that investors in Indonesia still do not quickly anticipate the information they receive in the capital market or investors think that the cash dividend announcement is not *good news* , so there is no significant difference in volume in the period before and after the dividend announcement. cash.

2. Hypothesis Two

From testing the second hypothesis, statistically no significant difference was found between *abnormal returns* before and after the event, so the hypothesis that there were significant differences in *abnormal returns* in the period before and after the announcement of cash dividends was rejected.

Based on the average value, the *abnormal return* before and after the announcement of cash dividends is -0.00160 and after the announcement of cash dividends is 0.00250. These results prove that there is no significant difference in *abnormal returns* in the period before and after the announcement of cash dividends.

From a theoretical point of view, in terms of *signaling theory* , which states that *signaling theory* is related to the existence of information asymmetry between managers and investors, managers can use cash dividend announcements to give a positive signal to the market about their expectations in the future.

I. CONCLUSIONS AND RECOMMENDATIONS

1. In the different test results, it can be seen from the average *Trading Volume Activity* period before and after the announcement of cash dividends, statistical data shows that there is no change before and after the announcement of cash dividends. This certainly can indicate that the announcement of cash dividends does not cause the volume of stock trading to change after the announcement of the dividend.
2. In the different test results from the average *abnormal return period before and after the* cash dividend announcement , it can be concluded that there is no difference in the average *abnormal return* period before and after the cash dividend announcement.

Suggestion

In accordance with the conclusions above and the limitations of existing research, there are several suggestions so that further research can regarding the effect of dividend announcements more perfect, the suggestions are:

1. It is better if the variables used are added in order to provide a more accurate picture of the effect.
2. The method of finding *abnormal returns* in this study uses *the Market Adjusted Model,* which is likely to be less accurate in estimating the actual *abnormal return*

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