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A Return and Trading Volume Activity Analysis on Before and After Stock Split Announcement

(At Indonesian Stock Exchange Period 2014-2018)

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ABSTRACT: *This study aims to determine whether there are differences in abnormal return (AR) and trading volume activity (TVA) between before and after the announcement of a stock split. The data used in this study are secondary data from the Indonesia Stock Exchange (IDX). Sampling in this study used a purposive sampling method. With certain criteria obtained a sample of 36 companies. This study uses event studies to determine the information content contained in an event. Hypothesis testing conducted in this study uses the normality test and the Wilcoxon signed rank test. The results of testing the first hypothesis in this study indicate that there are differences in AR between before and after the announcement of a stock split. This happens because investors consider the stock split announcement to have economic value and prefer to allocate their funds to companies that conduct stock split. Whereas in testing the second hypothesis it was found that there was no significant TVA difference between before and after the announcement of the stock split.*

Keywords: *Abnormal Return, TVA, Stock Split*

I. Introduction

In fixing the investment climate in Indonesia, the government seeks to simplify the investment management process in Indonesia, both directly and indirectly. The existence of this policy is expected to attract investors to invest their money in Indonesia. The capital market is an instrument that can be used to invest. Its development in the world of investment provides huge benefits in a country's economy.

There are 2 uses of the capital market, namely economic function and financial function. The ability to bring together those who need funds with those who need funds is the role of the capital market in economic functions. While the financial function is obtained because the capital market is a tool to invest by investors in various securities that are traded in order to get a return.

But behind its benefits, the capital market has risks because they contain uncertainty. Because the size of the risk that will be faced is what makes investors have to consider all the possibilities in making decisions. Where there is a high return, there is high risk. So that the risks faced can be reduced, investors need complete information to know the picture of the capital market conditions.

Apart from the public, the information needed is also obtained from every event that triggers a market reaction. Event studies (studies of events) become one of the common techniques used to fund capital markets. Event study is a study to observe market reaction to an event whose information is published as an announcement, such as a stock split, right issue, and dividend distribution (Hartono, 2010).

Measurement of market reactions can be done by knowing the abnormal returns (Liogu and Saerang, 2015). It is said that investors will receive profits above normal if positive abnormal returns occur. While negative abnormal returns indicate if the returns obtained by investors are below normal. Normal return is the return expected by investors (expected return). Then it can be concluded that the abnormal return is the difference between the actual return and the expected return (Hartono, 2010).

Hartono (2010) explain another indicator that can analyze the market reaction to an event is the volume of stock trading (trading volume activity). Trading volume activity (TVA) is the ratio of n shares of companies traded in a certain period with n shares of companies outstanding in a certain period (Damayanti, Atmadja and Darmawan, 2014). The increase of trading volume activity (TVA) indicates that there has been an increase in liquidity on these shares. Conversely, if trading volume activity (TVA) decrease it can be interpreted as a decrease in liquidity in a stock.

The activity to increase the number of shares outstanding by a publicly traded company is called a stock split. The purpose of a stock split is to make retail investors interested in buying shares of an issuer because the price is relatively cheap because it has been broken down. That way the price of an issuer can be maintained so that the stock liquidity is not optimal. Stock liquidity is the sooner or later an issuer's shares are traded on the stock exchange. If the shares sell out quickly, it can be said that the shares are liquid. So it can be concluded that the stock split event can be important information for investors in making decisions in the capital market.

Research conducted by Aduda & Caroline (2010), Tak Yan, Rui, & Wang (2005) found that there were significant changes from abnormal return and trading volume activity (TVA) between before and after the stock split announcement. Unlike the results found by Alexander & Kadafi (2018), Lasmanah & Bagja (2014) which states that there is no significant change from abnormal return and trading volume activity (TVA) between before and after the stock split announcement. Basing on previous research that provides mixed empirical evidence, researchers re-examine whether the announcement of a stock split will cause differences in abnormal return and trading volume activity (TVA) between before and after the announcement of a stock split.

II. LITERATURE

Investment

Investment is a form of delay in consumption in the present to get consumption in the future which contains a risk in the form of uncertainty so there must be compensation for the delay (Martalena and Malinda, 2011). Investment aims to increase the return (return) and welfare of investors. Investment can be divided into two (Halim, 2005):

1. Financial Assets, including investments in financial assets made on the money market, and investments in financial assets made on the capital market.
2. Real Assets, investment in productive assets such as the establishment of factories, opening of mines, plantations and so on.

Stock Market

The capital market is a market of various long-term financial instruments that can be traded in the form of debt, equity (shares) derivative instruments, or other instruments (Darmadji and Fakhruddin, 2012). The capital market becomes a means of funding for companies and other institutions (for example the government) and a means of investing activities. As an economic function, the capital market plays a role in providing a forum to bring together excess funds (investors) with those who need funds (issuer). Parties with excess funds can allocate a number of funds in the capital market in the hope that they will be able to get a return, while those who lack funds can use the funds for the sake of company expansion and can operate on a larger scale. Meanwhile, in terms of financial functions, the capital market is able to provide the possibility for fund owners to obtain returns according to the character and investment risk chosen.

Stock

According to Fahmi (2017) a share is a proof of ownership of capital or funds in a company that is clearly stated in nominal value, company name and is accompanied by clear rights and obligations to each holder. In addition to showing ownership of a company, each share can represent a voice about all matters in the management of the company and can be used in annual shareholders' meetings as well as in the distribution of company profits.

Event Study

Event study according to Hartono (2010) is a study that studies the market reaction to an event whose information is published as an announcement. Event studies can be used to test information content (information content) of an announcement and can also be used to test market efficiency. Testing the information content is intended to see the reaction of an announcement. If the announcement contains information (information content), it is expected that the market will react when the announcement is received by the market.

Stock Returns

Return is the level of profit that investors receive from the investment they make. Return is an attraction that makes investors dare to invest their funds and is willing to bear all the risks that will occur. The relationship between return and investment risk is positive. If the greater the investment risk, the greater the return that will be obtained, and vice versa.

1. Return Realization (R_i)

Represents a return that has been calculated based on historical data and can be used as a measure of the performance of the company, and as a basis for determining future expectations and risks.

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}} \quad \text{(Hartono, 2010)}$$

Note:
$R_{i,t}$: daily stock return of securities i in period t
$P_{i,t}$: daily stock price of a security in period t
$P_{i,t-1}$: daily stock price of a security in period t-1

2. Expected Return ($E[R_i]$)

Expected return is the return expected by investors to be obtained in the future where it has not occurred. Expected returns can be estimated with market index returns at that time.

$$E[Ri,t] = RM\ i,t \quad \text{(Brown \& Warner, 1985)}$$

Note:
$E[R_{i,t}]$: expected return of the 1st security in the t event period
$RM_{i,t}$: market return of the i-securities in the t-th event period

3. Market Return (R_m)

Market return is a return where the return is based on the development of the stock price index. JCI (Composite Stock Price Index) is an index that shows the movement of company stock prices listed on the stock exchange in general.

$$RM\ i,t = \frac{JCI_{i,t} - JCI_{i,t-1}}{JCI_{i,t-1}} \quad \text{(Hartono, 2010)}$$

Abnormal Return

Abnormal return is the difference between the actual return that occurs with the expected return.

$$ARi,t = Ri,t - E[Ri,t] \quad \text{(Hartono, 2010)}$$

Note:
$AR_{i,t}$: abnormal return of the i-th in the period of the t-event
$R_{i,t}$: the actual return that occurs for the i-securities in the t-event period
$E[R_{i,t}]$:expected return of the i-securities in the t-event period

Trading Volume Activity

Trading volume acivity (TVA) of a stock is the number of trading transactions for a particular stock at a certain time. Increased trading volume activity is a form of increased buying and selling activities that occur on the trading floor. The higher the amount of supply and demand for a stock, the greater the effect on fluctuations in the share price on the stock exchange floor.

$$TVA = \frac{\text{n,i shares trade on t}}{\text{n,i shares circulate on t}} \quad \text{(Hartono, 2010)}$$

Stock Split

According to Hartono (2010) stock split is breaking up shares into n shares, where the price per share after the stock split is 1 / n from the previous price. In general, stock split aims to control stock prices. Thus, shares are more easily owned by small investors as well as an increase in liquidity of company shares in the capital market.

III. METHOD

This type of research uses quantitative research with event studies. The event that will be analyzed is the announcement of a stock split (stock split) made by issuers on the Indonesia Stock Exchange (IDX) during the period 2014-2018 a number of 61 companies. This sampling uses certain criteria (purposive sampling) and 36 samples are obtained as the object of observation. The type of data used in this study is secondary data with documentation techniques, by tracing the historical data of PT. Indonesian Capital Market Electronic Library and IDX official website. There are 3 data analysis techniques used in this study, namely descriptive statistical analysis, normality test, and Wilcoxon signed rank test.

IV. RESULT AND DISCUSSION

Descriptive Statistics

Tabel 1. Data on the Seven Days before and Seven Days after Stock Split

Observation Period	AR Average	TVA Average
T+7	-0,002188	0,002742
T+6	0,016368	0,001718
T+5	-0,007000	0,001305
T+4	-0,006219	0,001476
T+3	0,013139	0,001607
T+2	-0,004629	0,001150
T+1	0,006278	0,001240
T	0,032189	0,001654
T-1	0,013514	0,001522
T-2	0,011253	0,001638
T-3	0,024365	0,001283
T-4	0,004047	0,001510
T-5	0,002976	0,001166
T-6	0,008769	0,001346
T-7	-0,000111	0,000705

1. Abnormal Return Average

In table 1 shows the average abnormal return of 36 companies studied during the 15 day observation period. Can be seen in the period T-6 to T-1 the average abnormal return is still in a positive position where the actual return obtained is still higher than the expected return. At the date of the stock split announcement, the abnormal return is at the highest level. This situation indicates that the announcement of a stock split brings good news (good news). However, after the announcement of the stock split, the abnormal return tends to decrease until the T + 2 period, the average abnormal return is in a negative position. This happens to the whole company because in this period there is a decline in stock prices which causes the actual return to be smaller than the expected return. This condition begins to return positive at T + 3, but again experiences a negative position at T + 4 and T + 5. Until the T + 7 period, the abnormal return returns to the negative position.

2. Trading Volume Activity Average

Table 1 shows the average trading volume activity (TVA) during the observation period. The value of trading volume activty (TVA) is always less than one because it is the ratio of the number of shares traded in a given period divided by the number of shares outstanding in that period. Its value is very small considering the number of shares traded is not as much as the number of shares outstanding.

From the table above it can be seen that there was a fluctuation in the average trading volume activity (TVA) of the entire sample company. It can be seen that trading volume activity (TVA) tends to increase since the T-7 period to reach its highest average at T+7.

Normality Test

Hypothesis testing in this study is done by using a different test for related samples (Paired Samples T-Test) if the data is normally distributed, or using a marked rank test (Wilcoxon Signed Rank Test) if the data is not normally distributed (Alexander and Kadafi, 2018). To find out whether the data from the average abnormal return and the average trading

volume activity before and after the announcement of the stock split has been normally distributed, a normality test can be done with the Kolmogorov-Smirnov One-Sample Test Tool.
In table 2 we can see the level of significance of the average abnormal return before 0.000 and the average abnormal return after 0.001 which is below the significance probability limit (0.05). So it can be concluded that the average abnormal return before and after is not normally distributed.

Tabel 2. Data Normality Test Results with One Samples Kolmogorov Smirnov AAR Test Before and After Stock Split

	n	Sig.	Conclusion
AAR Before	36	0,000	Ho rejected
AAR After	36	0,001	Ho rejected

Tabel 3. Data Normality Test Results with One Samples Kolmogorov Smirnov ATVA Test Before and After Stock Split

	n	Sig.	Conclusion
ATVA Before	36	0,000	Ho rejected
ATVA After	36	0,000	Ho rejected

The results of the average normality of trading volume activity (TVA) can be seen in table 3. The average trading volume activity (TVA) of shares before and after the date of the announcement of a stock split which shows that the two data are not normally distributed. Both of them are 0,000 which is below 0.05.
From the results of normality test data above, both show that the average Abnormal Return (AAR) data and the average Trading Volume Activity (ATVA) before and after the date of the stock split are not normally distributed. So that the next hypothesis testing using the ranking test marked (Wilcoxon signed rank test).

Tabel 4. Wilcoxon Signed Rank Test Results on AAR and ATVA Shares before and After Stock Split Announcements

	Za	Ztable	Sig.	Conclusion
AAR After – AAR Before	-2,152	1,96	0,031	Ho rejected
ATVA After – ATVA Before	-1,021	1,96	0,307	Ho accepted

H1 : there is a difference between the average abnormal return between before and the average abnormal return after the stock split period

From the Wilcoxon test results obtained z count of -2,152 or 2,152 with a p value of 0,031. With a significance level of α of 0.05, the p-value (0.031) < α (0.05) and z table (1.96) < z arithmetic (2.152) so that Ho is rejected and Ha is accepted. It can be concluded that there are differences in abnormal returns between before and after the announcement of a stock split..

H2 : there is a difference between the average trading volume activity between before and the average abnormal return after the stock split period

Based on the Wilcoxon test results obtained z count of -1.021 or 1.021 with a p value of 0.307. With a significance level of α of 0.05, the p-value (0.307) > α (0.05) and with z tables (1.96) > z arithmetic (1.021) it can be concluded that Ho is accepted and Ha is rejected. This test states that there are differences in trading volume activity (TVA) between before and after the announcement of a stock split.

Discussion of Research Results

From the research results obtained above, conclusions can be drawn from the descriptive analysis seen from the average of abnormal return and trading volume activity (TVA) continues to decrease and increase each observation period in terms of the amount before and after the announcement of the stock split. The highest increase in abnormal return (AAR) before the announcement of the stock split was at T-3 (0.024365) and the highest increase after the announcement of the stock split at T+6 (0.016368). While the average abnormal return (AAR) after the announcement of a stock split tends to be in a negative position, namely at T+2 (-0.004629), T+4 (-0.006219), T+5 (-0.007000) and T+7 (-0.002188).

The results of the analysis of the average abnormal return (AAR) in the period before and after the announcement of the stock split produces allegations that stock split information affects investors in making decisions to sell shares before the announcement of stock split.

Then the descriptive statistical results of the average trading volume activity (ATVA), an average fluctuation in trading volume activity (ATVA) of the entire issuer. It can be seen that the average trading volume activity (ATVA) where the lowest average trading volume activity (ATVA) is at T-7 (0,000705) and the highest average trading volume activity (ATVA) is at T+7 (0.002742). However, from T-6 to T+6 tends not to experience a significant increase.

The results of an analysis of the average trading volume activity (ATVA) indicate that investors choose not to trade after the announcement of a stock split. Viewed from the liquidity which tends to be stable at T-6 to T+6.

Wilcoxon testing on abnormal returns shows the results of p-value (0.031) <α (0.05) so that Ho is rejected and Ha is accepted, or there is a significant difference in abnormal returns between before and after the announcement of a stock split. The difference in the average abnormal return ¬ in the period before and after the stock split event is in line with the signaling theory which states that if a company conducts a stock split policy, the company's management is giving a positive signal about the state of a good company and wants to provide information to investors that the company is able to provide high returns in the future given that only companies that are in good performance and have prospects in the future are able to do a stock split with no small cost.

These results are in accordance with research conducted by previous researchers who stated that there were differences in abnormal returns in the period before and after the stock split event (Tak Yan, Rui and Wang, 2005; Zein, Indrawati and Hariyani, 2009; Aduda and Caroline, 2010; Hernoyo, 2013).

But the results of this study do not support research conducted by Alexander & Kadafi (2018), Lasmanah & Bagja, (2014), Rahayu & Murti (2017) which states that the stock split event makes no difference to the abnormal returns before and after the announcement.

In trading volume activity (TVA) the result is p-value (0.307)> α (0.05) so that Ho is accepted and Ha is rejected, or there is no difference in trading volume activity (TVA) in the period before and after the stock split event. There is no significant difference in trading volume activity (TVA) before and after a stock split, one of which can be caused by potential investors receiving stock split announcement information as a negative signal or bad news. Other things can be caused by external factors such as the presence of issues that affect the state of the market or the country's economy. The lack of investor interest has resulted in less trading volume activity (TVA), so there is no increase in stock liquidity.

These results are consistent with the research conducted by Alexander & Kadafi (2018), Lasmanah & Bagja (2014) dan Zein et al. (2009) which states that a stock split does not affect trading volume activity or stock liquidity. In addition these results are contrary to the results of the study Copeland (1979) which shows there are differences in trading volume activity (TVA) between before and after the stock split event.

CONCLUSION

Based on empirical evidence of the results of research and hypothesis testing conducted it can be concluded that there are differences in abnormal returns between before and after the announcement of a stock split, and there is no difference in trading volume activity between before and after the announcement of a stock split.

The results of this study indicate that (1) stock split becomes a positive signal from the company to investors because it is able to provide returns above expectations. However, more abnormal returns are obtained by investors who have invested their funds in the stock market which then immediately sell their shares before the announcement of a stock split; (2) stock split is not the sole consideration of investors in making investment decisions because the liquidity seen from trading volume activity before and after the stock split is relatively the same and there is no difference. Stock splits are considered bad news so investors are not interested in trading their shares.

Investors and potential investors can consider the stock split policy that has been issued by the company as one of the information for decision making in the capital market. In addition, by considering the policies issued by the company, investors and potential investors can estimate returns and minimize investment risk. Economic and non-economic factors must also be considered in decision making.

For companies that want to do a stock split policy, they should consider the condition of the capital market, because theoretically a stock split only increases the number of shares outstanding and does not directly affect the company's cash flow.

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