Aptisi Transactions On Technopreneurship (ATT)
Vol. 2 No. 1 March 2020

p-ISSN: 2655-8807
e-ISSN: 2656-8888

STUDY OF COMPARISON OF STOCK PERFORMANCE BEFORE AND AFTER DOING SPLIT STOCK IN GO PUBLIC COMPANIES THAT ARE LISTING ON THE IDX PERIOD 2013 – 2015

R.A. Norromadani Yuniati[1], Mirza Safitri Agatha Putri[2], Latof Syeikhur Rabbani[3],
[1,2,3]Shipbuilding Institute of Polytechnic Surabaya
Surabaya, Indonesia
Email : yuniatinorma8@gmail.com [1] , safitri.mirza@gmail.com [2], latofbani@gmail.com [3]

Author Notification
07 September 2019
Final Revised
24 October 2019
Published
10 December 2019

To cite this document:
Yuniati, R., Rabbani, L., & Agatha Putri, M. (2019). Study of Comparison of Stock Performance Before And After Doing Split Stock In Go Public Companies That Are Listing on The Idx Period 2013 – 2015. Aptisi Transactions On Technopreneurship (ATT), 2(1), 1-17.

DOI:
https://doi.org/10.34306/att.v2i1.48

Abstract

This study aims to determine the difference in abnormal return, trading volume activity, and security return variability before and after the stock split announcement on companies listed on the Indonesia Stock Exchange for the period 2013 - 2015. Testing the information content will be done by looking at differences in average abnormal return, average security return variability and average trading volume activity five days before and five days after the announcement of the stock split. The data analysis method that will be used is descriptive statistical analysis and different tests before and after the stock split announcement using the Wilcoxon signed rank test. The results of this study indicate that there are significant abnormal return differences before and after the stock split announcement, there is no significant difference in trading volume activity before and after the stock split announcement, and there is no significant difference in security return variability before and after the stock split announcement.

Keywords: abnormal return, security return variability, trading volume activity, stock split

1. Introduction

The capital market provides a large role in the economy of a country because the capital market provides two functions at once, economic functions and financial functions. Capital markets are said to have economic functions because the capital market provides facilities or vehicles that bring together two interests, namely those who have excess funds (investors) and those who need funds (issuers). With the existence of the capital market, public companies can obtain fresh community funds through the purchase of shares through IPO procedures or debt securities (bonds).

The capital market can be used as an alternative chosen by the company to meet the funding needs to finance its business expansion activities in a way that is easier and cheaper(Ang, 1997). Investors who have more funds use capital market facilities to channel funds to companies that need them. According to(Broude, Paul, 1997) there are two reasons why companies go public, first, the founders want to diversify their portfolios and the two companies do not have alternative

sources of funding to finance their investment projects. Funds from the sale of shares other than those used for expansion can be used for repayment of short-term or long-term debt.

In the capital market, there is a lot of information that investors can obtain both information available in the public and private (private) information. One of the information is the announcement of a stock split or stock split. This information can have meaning or value if the existence of such information causes investors to make transactions in the capital market, which will be reflected in changes in stock prices (price effect), trading volume (trading volume), stock returns, stock price volatility, and other market indicators or characteristics.

Stock split announcements are part of the actions that occur in the capital market. Split announcements cause investors to raise their expectations that the return to be obtained provides favorable expectations. A stock split has long been a phenomenon for investors and capital market players. The split usually occurs after an increase in stock prices and usually causes a reaction both before and after the stock split action. According to (Susiyanto M, n.d.) stock split can be defined as the issuer's actions carried out by breaking the nominal value of the stock into a smaller nominal in accordance with the specified stock split ratio, where the change in nominal value only results in an increase in the number of shares, but does not change the amount issued capital and paid-up capital.

Theoretically and empirically, the existence of stock split announcements causes stock prices to react positively and negatively. This influence explains that information about stock performance is an indicator of investors to invest. If the market reacts positively, the investor will hunt for the stock and if it is negative, the market will give an unfavorable signal to the stock. this research is only focused on stock split and is considered important at this time because the split is part of the company's cooperative action in increasing stock liquidity, thus giving the opportunity for small investors to buy these shares in improving stock performance.

Based on this background, our study raises a notion whether there is a difference in Abnormal Return, Trading Volume Activity, Security Return Variability between before and after doing a stock split on companies listed on the Stock Exchange from 2013 - 2015.

Based on the formulation of the problems mentioned above, the objectives of writing to be achieved in this study are: first, to find out whether Abnormal Return, Trading Volume Activity, Security Return Variability between before and after the stock split on companies listed on the Indonesia Stock Exchange from 2013 to 2015. Second, to find out whether there are differences in abnormal stock returns between before and after the stock split in companies listed on the Indonesia Stock Exchange from 2013 to 2015. Third, to find out whether there are differences in Trading Volume Activity between before and after the stock split on companies listed on the Indonesia Stock Exchange from 2013 to 2015. Fourth, to find out whether there are differences in Security Return Variability between before and after the stock split on companies listed on the Indonesia Stock Exchange from 2013 to 2015.

2. Research Method

2.1 Capital Market

A capital market is a place of investment that can provide potential profits for investors. Capital market activities are inseparable from the availability of various types of information about the company. Information is the main requirement for investors because it will be used in making investment decisions. One information that affects securities prices is corporate action, one of which is stock split.

2.2 Stock Splits

Stock splits are activities to break a piece of stock into several shares (n shares) so that the price per new share after stock splits is 1 / n from the previous price. A stock split is also interpreted as an act of the company to increase the number of shares outstanding, such as multiplying the number of shares outstanding by exchanging one old stock with two new shares, which value is half the value of the old stock(Weston, 1996). The aim of the company to do Stock Split is to increase the liquidity of shares on the stock exchange and give small investors the ability to buy shares because the price will go down during the stock split ”(Lin, J.C., Singh, A.K., & Yu, 2008). Theoretically, the stock split is motivated by the company to do stock solving and the influence

that is generated is contained in several theories. Among them are two main theories that dominate the stock split literature, namely signaling theory and trading theory.

2.3 Signaling Theory

Signaling theory states that a stock split is considered a company that gives a good signal to the public relating to good corporate prospects in the future, because companies that do stock split are companies that have shares with high prices, high stock prices are a signal that the company has a prospect a good future, where high stock prices reflect that the company has a good performance(Jogiyanto, 2014). According to Signaling theory, a stock split is only carried out by companies that have good performance prospects where the company believes that the stock price after it breaks will increase in accordance with the increase in company performance in the future. Copeland ((Jogiyanto Hartono, 2014)) states that stock splits require large transaction costs, for example printing new certificates so that companies that have good prospects are able to bear these costs. If reacting at the time of stock split does not mean the market reacts to information on a stock split that has no economic value, but rather knows the company's prospects in the future that are signaled through stock splits. So the factors that motivate companies to do stock splits are company performance.

2.4 Trading Range Theory

Companies that do stock splits because the stock price is too high so they cannot be reached by prospective small investors. According to the Trading Range Theory, stock prices that are too high cause stocks to be illiquid, this is related to the ability of each investor to be different, therefore the company carries out a stock split in an effort to steer stock prices at certain intervals that are not too expensive. (Fahmi, 2009)states that by stock splitting the stock price is not too high so that it is able to be reached by potential investors and ultimately increases stock liquidity. So according to the trading range theory, companies do a stock split because they see the stock price too high, in other words, the stock price that is too high is what drives the company to do a stock split.

2.5 Event Study (Event Study)

Event studies are studies that study market reactions to an event whose information has been published. This reaction can be measured by using a return as a value of price changes or by using an abnormal return. If abnormal returns are used, it can be said that an announcement that has information content will give an abnormal return to the market. Conversely, those that do not contain information do not give abnormal returns to the market. The information content is then tested which is intended to see the reaction of an announcement. If the announcement contains information, it is expected that the market will react through the announcement received. Market reactions are indicated by changes in t
he securities concerned, for example, reflected in changes in prices, stock trading volume and abnormal returns(Jogiyanto, 2010).

2.6 Return and Abnormal Return

The main motivation of investors to invest their capital in investment is to get an optimal return on investment. Return is the level of profit enjoyed by investors for an investment made(Jogiyanto, 2010). Stock returns that will be received by investors are strongly influenced by the type of investment chosen. To measure the amount of return that investors will receive in connection with the occurrence of stock split events is measured by the existence of abnormal returns received by investors. Abnormal return is the difference between the actual Return and Expected Return. The actual level of profit is a comparison between the difference between the current share price and the previous period. A positive abnormal return shows the level of profit obtained is greater, namely between the actual return and expected return. In connection with stock split events, if a positive abnormal return occurs after the stock split can provide benefits above normal for investors and vice versa if there is a negative abnormal return indicates that the profits obtained are below normal. Test the efficiency of capital markets by analyzing abnormal returns that occur. Abnormal returns are the advantages of the actual returns that occur against normal returns. Study of events is an analysis of abnormal returns (abnormal returns) of securities that may occur around the announcement of an event. Thus the abnormal return (abnormal return) is the difference between the actual return that occurs with the expected return which is formulated as follows:

AR it = R it - E (R it)
Where: AR it: the abnormal return of stock i in the period of the event t; R it: the real return that occurs for i shares in the period of the event t; E (R it): the expected return on stock i for the period of event t.
Actual return (actual return) is an acceptable profit for stock investment in a certain period, mathematically can be formulated as follows:

$$\text{Rit} = \frac{Pit - Pit - 1}{Pit - 1}$$

According to(Jogiyanto, 2014), that estimate expected return can use several estimation models including:
a. Mean adjusted model. The average adjusted model (mean adjusted model) assumes that the expected return is constant which is equal to the average return on the previous realization during the estimation period. This model can be formulated as follows:

$$\text{E (R it)} = \frac{\sum R_{ij}}{T}$$

b. Market model. Calculation of expected return with this model is done in 2 stages:

1. First. Calculation of the I expectation return in the estimation period.
2. Second. Using the expectation model can be formed using OLS (Ordinary Least Square) regression techniques with the following equation:

Rij = αi + βi R Mj + Eij

Where: Rij = return realization of i-securities in the j-estimation period; αi = intercept for i-security; βi = slope coefficient which is the i securities beta; RMj = return of market index in the j-estimation period; Eij = i residual error in the j estimation period.
c. Market-adjusted model. This model assumes that the best predictor for estimating the return of a security is the market index return at that time. By using this model, it is not necessary to use the estimation period to form the estimation model, because the estimated return of securities is the same as the market return.

E (R it) = Rmt

Where: E (R it) = expected return on thesecurity of the i in the period of the t-event; Rmt = return security at t-time.
Calculate the expected return of each stock using the market-adjusted model equation during the observation period using the following equation:

$$\text{R}_{\text{MJ}} = \frac{(\text{IHSG}_{\text{j}} - \text{IHSG}_{\text{j}-1})}{\text{IHSG}_{\text{j}-1}}$$

2.7 Security Return Variability
Variability of the level of profit sought by the formula:

where: SRVit = profitability variability i in period t; ARIT = i stock abnormal return in period t.

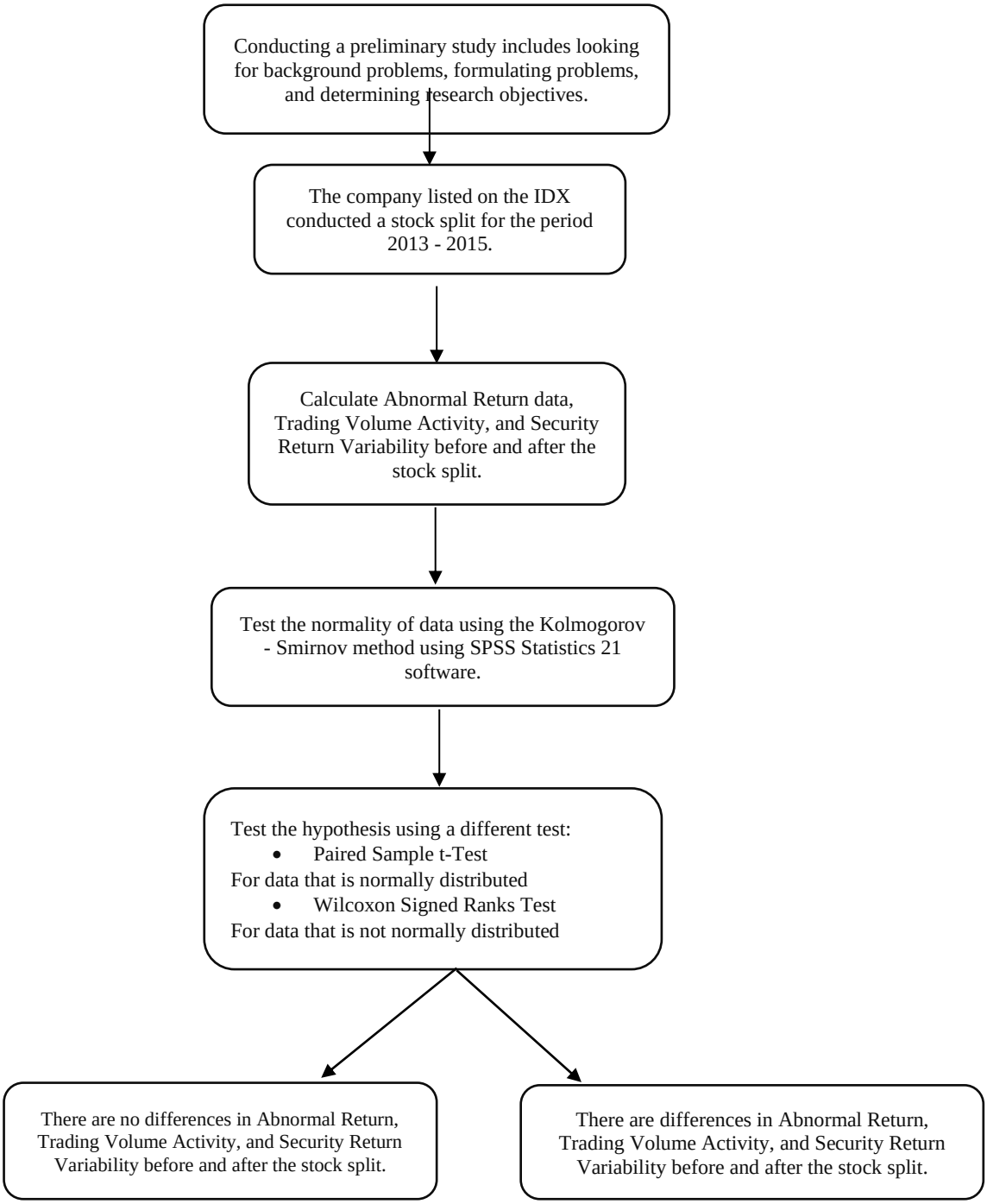
$$\text{SRV}_{\text{it}} = \frac{\text{AR}^{2}{}_{\text{it}}}{\text{VarianAR}_{\text{it}}}$$

3. Theoretical Framework and Hypothesis Development
3.1 Observation Period

This observation is divided into two windows, namely before and after the stock split. The calculation results from H - 5 to H - 1 are called observations before the stock split and

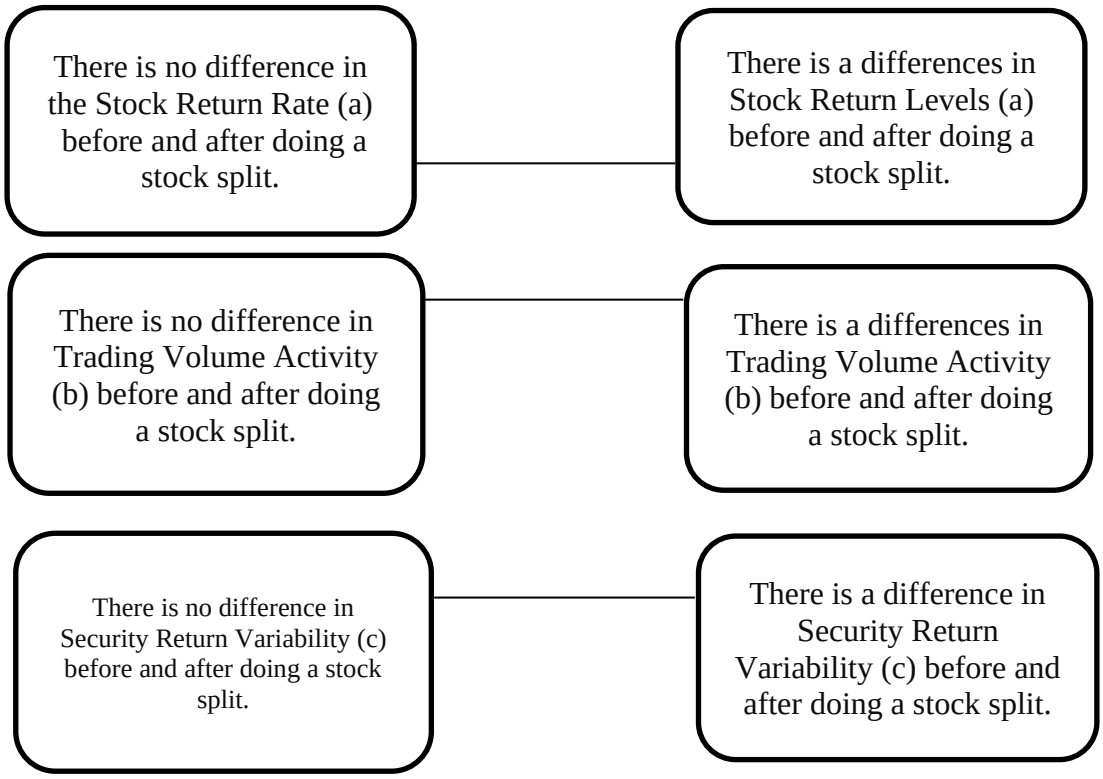
the results of the calculation of H + 1 to H + 5 are called observations after the stock split. Determining the window period is to avoid other corporate actions so that it can influence changes in returns, trading volume activity, and stock liquidity.

3.2 Research Flow



3.3 Thinking Framework and Hypothesis

Based on the descriptions and explanations that have been described previously, the frame of mind in this study is as follows:



Based on the above framework, the following hypothesis is obtained:

1. Ha0: There is no significant difference in stock returns partially before and after the stock split.

Ha1: There are significant differences in stock returns partially before and after the stock split.

2. Hb0: There is no significant difference in trading volume activity partially before and after the stock split.

Hb1: There is a significant difference in trading volume activity partially before and after the stock split.

3. Hc0: There is no significant difference in partial security return variability at the time before and after the stock split.

Hc1: There is a significant difference in partial security return variability at the time before and after the stock split.

4. Research Methods

4.1 Types of Research

This study uses a quantitative approach. This research is a study that falls into the category of event study, event study is research that studies the market reaction to an event whose information is published as an announcement(Jogiyanto, 2003).

4.2 Types and Data Sources

The type of data used in this study is secondary data, namely data obtained indirectly by studying documents related to research. Secondary data is able to provide information in returning decisions even though it can be further processed(Wijaya, 2013). These data include the general description of the company or company profile of stock returns, stock liquidity, and

stock prices in the company. Data sources from this study were obtained from the internet and literature studies on journals, books, articles, theses, and theses related to research.

4.3 Population and Samples

The population in this study are all listed companies, issuing shares, and conducting stock split into their shares on the Indonesia Stock Exchange (IDX). There are 23 issuers that conduct stock split in the period 2013 - 2015. Sampling is done by using purposive sampling method, which is the selection of sample members based on certain criteria. The criteria used in determining the sample data of this study are:

1. Companies listed on the Indonesia Stock Exchange that announce stock split and do not announce stock splits more than once during the 2013-2015 research period.
2. Companies that only carry out stock split corporate action policies without carrying out other policies such as to warrant, rights issue, stock dividends, and other announcements. The stock split date does not coincide with other events that can directly affect the price and volume of stock trading.
3. Have complete data in the study period for analysis needs.

List of Issuers Who Fulfill the Criteria and Conduct Stock Split for the 2013 - 2015 Period

No.	Date	Issuer Code	Name Of The Issuer	Ratio Stock Split
1.	19 April 2013	JPFA	Japfa Comfeed Tbk	1 : 5
2.	8 July 2013	ARNA	Arwana Citra Mulia Tbk	1 : 4
3.	22 July 2013	TOWR	Sarana Menara Nusantara Tbk	1 : 10
4.	29 July 2013	AMRT	Sumber Alfaria Trijaya Tbk	1 : 10
5.	1 August 2013	JRPT	Jaya Real Properti Tbk	1 : 5
6.	28 August 2013	TLKM	Telekomunikasi Indonesia Tbk	1 : 5
7.	4 September 2013	BATA	Sepatu Bata Tbk	1 : 10
8.	12 February 2014	ALMI	Alumindo Light Metal Industry Tbk	1 : 2
9.	12 February 2014	INAI	Indal Aluminium Industry Tbk	1 : 2
10.	25 July 2014	TOTO	Surya Toto Indonesia Tbk	1 : 2
11.	22 May 2015	LEAD	Logindo Samudramakmur Tbk	1 : 4
12.	7 September 2015	LION	Lion Metal Works Tbk	1 : 10
13.	7 September 2015	LMSH	Lionmesh Prima Tbk	1 : 10
14.	16 October 2015	MIKA	Mitra Keluarga Karyasehat Tbk	1 : 10
15.	19 October 2015	DSNG	Dharma Satya Nusantara Tbk	1 : 5
16.	5 November 2015	DLTA	Delta Djakarta Tbk	1 : 50
17.	23 December 2015	MERK	Merck Tbk	1 : 20

Source: Indonesian Central Securities Depository

4.4 Method of Collecting Data

The collection methods used in this research are as follows:

1. Library Study

Library study is a method of collecting data where data is obtained from books, magazines, literature, and so on. Data is obtained from books and journals on matters relating to research variables. Exploring theories that have developed in the field of interest, looking for methods and research techniques that have been used by previous researchers.

2. Documentation

Data collection methods that use websites as data and information retrieval. Data obtained in the form of company data that conducts a stock split from www.ksei.co.id, www.finance.yahoo.com, and www.idx.co.id which contains stock prices, trading volume, trading frequency, index.

4.5 Data Analysis Technique

To test the hypothesis in this study using a different test which aims to test the differences before and after the stock split on the variables described in the study and to test

two samples in pairs, namely before and after the stock split, which is used with the help of SPSS Statistics 21 program.

5. Findings

5.1 Descriptive Statistics

Descriptive statistics provide an overview of each research variable. The analysis used is the mean value, minimum and maximum values , and standard deviation. The data to be examined are Abnormal Return, Trading Volume Activity, and Security Return Variability. The following is an explanation of each of this information:

Table 3.1
Descriptive Statistics Results Abnormal Return

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ARN After	85	-.2567204	8.9110826	.210463378	1.1934039056
ARN Before	85	-.2471293	10.9084773	.253902635	1.3320084242
Valid N (listwise)	85				

It is known from table 3.1 in the period before the stock split announcement that the minimum abnormal return value of -0.2471293 is owned by Indal Aluminum Industry Tbk (INAI) and the maximum value of 10.9084773 is owned by Surya Toto Indonesia Tbk (TOTO). The mean value (average) is 0.253902635 with a standard deviation of 1.3320084242. The mean value (average) shows an abnormal return (difference in return from the market return) of 0.25% in the period before the stock split.

In the period after the announcement of the stock split the minimum abnormal return value of the shares is -0.2567204 owned by Lionmesh Prima Tbk (LMSH) and the maximum value is 8.9110826 owned by Sepatu Bata Tbk (BATA). The mean (mean) is .1010463378 and the standard deviation is 1.1934039056. The mean value (mean) shows an abnormal return of 0.21% in the period after the announcement of the stock split.

Table 3.2
Results of Descriptive Trading Volume Activity Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TVA After	85	100	198064000	11346827.71	33481520.210
TVA Before	85	100	128692500	9186121.22	23075887.642
Valid N (listwise)	85				

It is known from table 3.2 in the period before the announcement of the stock split the minimum trading volume activity value of 100 shares owned by Lion Metal Works Tbk (LION) and a maximum value of 128692500 owned by Telekomunikasi Indonesia Tbk (TLKM). The mean (average) is 9186121.22 with a standard deviation of 23075887,642. The mean value (average) shows that there is a trading volume activity of 9186121.22 in the period before the stock split.

In the period after the stock split announcement the minimum trading volume activity value is 100 shares owned by Lion Metal Works Tbk (LION) and a maximum value of 109446500 owned by Telekomunikasi Indonesia Tbk (TLKM). The mean (average) is 11346827.71 and the standard deviation is 33481520,210. The mean value (mean) shows that security has occurred at 11346827.71 in the period after the announcement of the stock split.

Table 3.3
Descriptive Statistics Results of Security Return Variability

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SRV After	85	-1.0886801	130.5016403	1.826562930	14.2082880881
SRV Before	85	-1.5681648	88.1762115	3.164713987	14.4144802247
Valid N (listwise)	85				

It is known from table 3.3 in the period before the stock split announcement that the minimum security return variability of the shares of -1.5681648 is owned by Merck Indonesia Tbk (MERK) and the maximum value of 88.1762115 is owned by Surya Toto Indonesia Tbk (TOTO). The mean value (average) is 3.164713987 with a standard deviation of 14.4144802247. The mean (mean) shows that there is a security return variability of 3.164713987 in the period before the stock split.

In the period after the stock split announcement, the minimum value of security return variability of shares is -1.0886801 owned by Mitra Keluarga Karyasehat Tbk (MIKA) and the maximum value is 130.5016403 owned by Sepatu Bata Tbk (BATA). The mean (average) is 1.826562930 and the standard deviation is 14.2082880881. The mean value (average) shows that there is a security return variability of 1.826562930 in the period after the announcement of the stock split.

5.2 Normality Test

Before conducting a hypothesis test, the author tests the normality of the data to find out whether the data used is normally distributed or not. In this study, the normality test used was the Kolmogorov-Smirnov test. If the calculation obtained a significance value of 5 0.05 then the data is normally distributed. Conversely, if the significance value is ≤ 0.05, the data is not normally distributed.

Table 3.4
Kolmogorov-Smirnov Test Abnormal Stock Return

One-Sample Kolmogorov-Smirnov Test

		ARN After	ARN Before
N		85	85
Normal Parameters[a,b]	Mean	.210463378	.253902635
	Std. Deviation	1.1934039056	1.3320084242
Most Extreme Differences	Absolute	.455	.464
	Positive	.455	.464
	Negative	-.382	-.380
Kolmogorov-Smirnov Z		4.199	4.282
Asymp. Sig. (2-tailed)		.000	.000

a. Test distribution is Normal.

b. Calculated from data.

Based on table 3.4, it can be seen that the probability of statistical errors (p-value) for the distribution of abnormal return data in the period before and after the announcement of the stock split totaling 0,000 and 0,000. The requirement to meet the criteria for normally distributed data is that all samples have a significance level of more than 0.05. This means

that the data is not normally distributed. Different test abnormal return before and after the stock split announcement can be done with the Wilcoxon Signed Rank Test.

Table 3.5
The Kolmogorov-Smirnov Trading Volume Activity Test

One-Sample Kolmogorov-Smirnov Test

		TVA Before	TVA After
N		34	34
Normal Parameters[a,b]	Mean	9219323.68	9884600.68
	Std. Deviation	25945745.042	26814469.217
Most Extreme Differences	Absolute	.364	.436
	Positive	.364	.436
	Negative	-.361	-.356
Kolmogorov-Smirnov Z		2.123	2.545
Asymp. Sig. (2-tailed)		.000	.000

a. Test distribution is Normal.

b. Calculated from data.

Based on table 3.5, it can be seen that the probability of statistical errors (p-value) for the distribution of trading volume activity data in the period before the stock split announcement is 0.000 and 0.000 which shows less than the 0.05 significance level, which means the data are not normally distributed. Different test of trading volume activity before and after the stock split announcement can be done with the Wilcoxon Signed Rank Test.

Table 3.6
The Kolmogorov-Smirnov Security Return Variability Test

One-Sample Kolmogorov-Smirnov Test

		SRV After	SRV Before
N		85	85
Normal Parameters[a,b]	Mean	1.826562930	3.164713987
	Std. Deviation	14.2082880881	14.4144802247
Most Extreme Differences	Absolute	.485	.453
	Positive	.485	.453
	Negative	-.419	-.396
Kolmogorov-Smirnov Z		4.475	4.175
Asymp. Sig. (2-tailed)		.000	.000

a. Test distribution is Normal.

b. Calculated from data.

Based on table 3.6, it can be seen that statistical error probability (p-value) for data distribution of security return variability in the period before the stock split announcement is 0.000 and 0.000 which shows less than the 0.05 significance level, which means that data is not normally distributed. Test for different security return variability before and after the stock split announcement can be done with the Wilcoxon Signed Rank Test.

5.3 Validity Test

This test is done by comparing the number r count and r table. If the r count is greater than the table then the item is said to be valid and vice versa if the r count is smaller than the r table then the item is said to be invalid. R count is sought by using SPSS Statistics 21 software, while r table is searched by looking at table r with minimum r provisions of 0.3 (Sugiyono, 2011)

Table 3.7
Validity test

Correlations

		ARN After	ARN Before	TVA After	TVA Before	SRV After	SRV Before
ARN After	Pearson Correlation	1	.068	.015	-.003	-.018	-.042
	Sig. (2-tailed)		.537	.893	.976	.873	.701
	N	85	85	85	85	85	85
ARN Before	Pearson Correlation	.068	1	-.031	-.037	-.025	-.037
	Sig. (2-tailed)	.537		.779	.735	.823	.740
	N	85	85	85	85	85	85
TVA After	Pearson Correlation	.015	-.031	1	.963**	-.018	.080
	Sig. (2-tailed)	.893	.779		.000	.872	.465
	N	85	85	85	85	85	85
TVA Before	Pearson Correlation	-.003	-.037	.963**	1	-.038	.132
	Sig. (2-tailed)	.976	.735	.000		.731	.227
	N	85	85	85	85	85	85
SRV After	Pearson Correlation	-.018	-.025	-.018	-.038	1	-.026
	Sig. (2-tailed)	.873	.823	.872	.731		.813
	N	85	85	85	85	85	85
SRV Before	Pearson Correlation	-.042	-.037	.080	.132	-.026	1
	Sig. (2-tailed)	.701	.740	.465	.227	.813	
	N	85	85	85	85	85	85

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the output above, it can be concluded that each variable has a significant value above 0.3 which indicates that the data has a valid value for further testing, namely reliability testing.

5.4 Reliability Test

This test is done by comparing the Cronbach Alpha numbers with the provision of a minimum value of 0.6, which means that if the Cronbach Alpha value obtained from the SPSS calculation results is greater than 0.6, it is concluded that the data inputted is reliable.

Table 3.8

Reliability Test

Case Processing Summary

		N	%
Cases	Valid	85	100.0
	Excluded[a]	0	.0
	Total	85	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.569	.297	6

Inter-Item Correlation Matrix

	ARN After	ARN Before	TVA After	TVA Before	SRV After	SRV Before
ARN After	1.000	.068	.015	-.003	-.018	-.042
ARN Before	.068	1.000	-.031	-.037	-.025	-.037
TVA After	.015	-.031	1.000	.963	-.018	.080
TVA Before	-.003	-.037	.963	1.000	-.038	.132
SRV After	-.018	-.025	-.018	-.038	1.000	-.026
SRV Before	-.042	-.037	.080	.132	-.026	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ARN After	20532954.175414845	31423170087 95146.000	.008	.010	.592
ARN Before	20532954.131975587	31423170148 52486.000	-.034	.008	.592
TVA After	9186126.679172343	53249665118 6312.700	.963	.931	1.425E-007
TVA Before	11346833.162348812	11210122546 74079.000	.963	.932	6.592E-008

SRV After	20532952.559315294	31423170515 01223.000	-.026	.008	.592
SRV Before	20532951.221164238	31423168442 41649.000	.102	.050	.592

Based on the results of the reliability testing above, it is known that the Cronbach Alpha number is 0.569. This number is smaller than the minimum value of Cronbach Alpha which is 0.6. Therefore it can be concluded that the research instrument used to measure variables cannot be said to be reliable or reliable.

6. Discussion

After carrying out the normality test, the next research will be carried out, namely, a different test with the Wilcoxon Signed Rank Test, carried out using SPSS Statistics 21 software.

Table 3.9
Wilcoxon Signed Rank Test Abnormal Stock Returns

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between ARN Before and ARN After equals 0.	Related-Samples Wilcoxon Signed Rank Test	.019	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

From table 3.9 it can be seen that the significance value is 0.019 <0.05, from this result H0, is rejected where there is a significant difference in stock returns which is proxied by abnormal returns before and after the stock split announcement at the error rate of 5%. Although the average stock abnormal return before the announcement of the stock split is lower than after the stock split announcement, the difference between the two is relatively very large and significant.

Table 3.10
Wilcoxon Signed Rank Test Trading Volume Activity

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between TVA Before and TVA After equals 0.	Related-Samples Wilcoxon Signed Rank Test	.887	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Wilcoxon Signed Rank Test Trading Volume Activity

From table 3.10 it can be seen that the significance value of 0.887> 0.05, from this result H0, is accepted where there is no significant difference in stock risk which is proxied by trading volume activity shares before and after the stock split announcement at the error rate of 5%. Although the average trading volume activity stock after the announcement of the stock split is

lower than before the stock split announcement, the difference between the two is relatively very small and insignificant.

Table 3.11
Wilcoxon Signed Rank Test Security Return Variability

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between SRV After and SRV Before equals 0.	Related-Samples Wilcoxon Signed Rank Test	.794	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

From table 3.11 it can be seen that the significance value is 0.794> 0.05, from this result H0 is accepted where there is no significant difference in stock security return variability which is proxied by security return variability before and after the announcement of stock split at a 5% error level. Although the average security return variability after the stock split announcement is lower than before the stock split announcement, the difference between the two is relatively very small and insignificant.

H1 : Abnormal Return Differences Before and After Stock Split

The average stock abnormal return in the period before and after the stock split mentioned above gives the presumption that the possibility of investors anticipating the existence of new information announced to the market, so it can change investor preferences for investment decisions, in other words, stock split information has information content significant enough to influence investors in making investment decisions.

Stock split announcements are said to influence investor preferences in making investment decisions if there is a difference in price or stock return between before the announcement and after the announcement significantly, this indicates that the announcement of the stock split has information content, if the stock split announcement gets a negative response from the market, it means the price shares will decline, this is often referred to as negative information contents and vice versa if a positive response means the stock price will increase. In this study, it was found that there were significant differences in prices or stock returns before and after the announcement, which meant the announcement of the stock split had information content that made the market react.

The results of this study are in line with the research of (Munthe, 2016)which revealed that the announcement of a stock split aimed at investment has information content that causes a market reaction. The Wilcoxon Signed Rank Test shows a significant difference in the average abnormal return and stock liquidity before and after the stock split, this indicates that the market reacts positively to the stock split. But this research is not in line with the results of research conducted by Ignatius (Subekti, 2014)which revealed that there was no significant difference in abnormal returns both after and before the announcement of the stock split. This is because investors do not enjoy the results of abnormal returns in the long term. So, in this case, the investor does not benefit from a stock split event.

H2 : Trading Differences Before and After Stock Split Volume Activity

The average trading volume activity in the period before and after the stock split that has given the notion that investors are likely to anticipate new information being announced to the market, so it does not change investor preferences for investment decisions, in other words, stock split information does not have enough information significant to be able to influence investors in making investment decisions.

It can also be said that there are no significant differences in the shares circulating with the number of shares traded before and after the stock split due to the calculation of trading

volume obtained from outstanding shares and the number of traded shares obtained from the stock split not experiencing significant changes, besides investors have doubts in interpreting the signals conveyed by the issuer through the stock split announcement. But in this study, it was found that there was no significant difference in trading volume before and after the announcement, which means that the announcement of the stock split does not have information content that makes the market react.

The results of this study are not in line with the research of (Astuti, 2015)which revealed that the announcement of stock split aimed at investment has information content that causes market reaction, where the market reaction can be seen from the significant difference in trading volume activity between before and after the announcement stock split which aims for investment. But this study supports the results of research conducted by (Setyawan, 2010)which revealed that not trading volume had an effect on liquidity proxies.

H3 : Differences in Security Return Variability Before and After Stock Split

Security return variability shows the variability of returns around normal returns due to stock volatility (price fluctuations). The higher the security return variability shows the more varied daily returns obtained by investors, and vice versa. In relation to investment considerations, especially the decision to hold or release a share ownership, return and level of risk are additional considerations that can be used in decision making because basically between the level of risk that must be borne by determining the time to decide or release shares is a matter related to. There is no significant difference in security return variability before and after the stock split indicating that there is no information content from the stock split announcement as evidenced by the non-reaction of the market for information on stock split announcements. and the calculation of market returns obtained from the JCI did not experience significant changes.

7. Conclusion

This study was conducted to determine the difference in abnormal returns, trading volume activity, and security return variability before and after the stock split in companies listed on the Indonesia Stock Exchange in the period 2013 - 2015. Based on the analysis that has been done, conclusions can be made as follows:

1. Abnormal return and security return variability, trading volume activity before and after the stock split.

a. In the period before the announcement of the stock split the minimum abnormal return value of -0.2471293 is owned by Indal Aluminum Industry Tbk (INAI) and the maximum value of 10.9084773 is owned by Surya Toto Indonesia Tbk (TOTO). The mean value (average) is 0.253902635 with a standard deviation of 1.3320084242. The mean value (average) shows an abnormal return (difference in return from the market return) of 0.25% in the period before the stock split. In the period after the announcement of the stock split the minimum abnormal return value of the shares is -0.2567204 owned by Lionmesh Prima Tbk (LMSH) and the maximum value is 8.9110826 owned by Sepatu Bata Tbk (BATA). The mean (mean) is .1010463378 and the standard deviation is 1.1934039056. The mean value (mean) shows an abnormal return of 0.21% in the period after the announcement of the stock split.

b. In the period before the announcement of the stock split the minimum trading volume activity value of 100 shares was owned by Lion Metal Works Tbk (LION) and a maximum value of 128692500 owned by Telekomunikasi Indonesia Tbk (TLKM). The mean (average) is 9186121.22 with a standard deviation of 23075887,642. The mean value (average) shows that there is a trading volume activity of 9186121.22 in the period before the stock split. In the period after the stock split announcement the minimum trading volume activity value is 100 shares owned by Lion Metal Works Tbk (LION) and a maximum value of 109446500 owned by Telekomunikasi Indonesia Tbk (TLKM). The mean (average) is 11346827.71 and the standard deviation is 33481520,210. The mean value (mean) shows that security has occurred at 11346827.71 in the period after the announcement of the stock split.

c. In the period before the stock split announcement the minimum security return variability value of -1.5681648 is owned by Merck Indonesia Tbk (MERK) and the maximum value

of 88.1762115 is owned by Surya Toto Indonesia Tbk (TOTO). The mean value (average) is 3.164713987 with a standard deviation of 14.4144802247. The mean (mean) shows that there is a security return variability of 3.164713987 in the period before the stock split. In the period after the stock split announcement, the minimum value of security return variability of shares is -1.0886801 owned by Mitra Keluarga Karyasehat Tbk (MIKA) and the maximum value is 130.5016403 owned by Sepatu Bata Tbk (BATA). The mean (average) is 1.826562930 and the standard deviation is 14.2082880881. The mean value (average) shows that there is a security return variability of 1.826562930 in the period after the announcement of the stock split.

2. From the results of the Wilcoxon Signed Rank Test abnormal return, the significance level for testing the hypothesis is smaller than 5%, which means that there are significant differences in stock returns before the stock split announcement and after the announcement of the stock split.
3. From the results of the Wilcoxon Signed Rank Test trading volume activity, the significance level for testing the hypothesis is greater than 5%, which means that there is no significant difference in trading volume before the stock split announcement and after the announcement of the stock split.
4. From the results of the Wilcoxon Signed Rank Test for security return variability, the significance level for hypothesis testing is greater than 5%, which means that there is no significant difference in returns before the stock split announcement and after the announcement of the stock split.

7.1 Suggestion

Theoretical Aspects

For the next researcher, it is better to conduct research with a longer observation period but must pay attention to the length of the study period so as not to be affected by other corporate action reactions such as rights issues, reverse stock splits, warrants and others. In addition, it is recommended that researchers can correct this weakness by grouping samples according to the type of industry the company made the stock split announcement.

Practical Aspects

a. For investors :

Companies that conduct stock splits are one of the indicators commonly used by investors as material for consideration in investing. With the result that there is no significant difference to before and after the stock split for old investors, you should not worry about utilizing the stock trading period to sell shares in the cash market, if the old shareholders do not want to penetrate their HMTD rights, at least a little loss is obtained. And for new investors, you should not rush in making investment decisions and look at other factors such as the background of the stock split, the purpose of the stock split, and the issuer's financial performance after the stock split.

b. For the company :

Companies should not worry if they want to issue new shares, because if we look at the results of the research, there is no significant difference between abnormal returns, security return variability and trading volume activity between before and after the stock split, in other words, investors do not make This stock split announcement is a problem in making investment decisions. And the company should use stock split issuance funds for positive things such as business expansion or capital structure improvements, so that the company's performance will be good in the future, this will cause the company's stock returns to be high, so that the resulting information will signal positive for investors who will increase the company's stock price.

References

[1] Ang, R. (1997). Buku Pintar Pasar Modal Indonesia. Jakarta: Mediasoft Indonesia.
Astuti, D. W. (2015). Dampak Stock Split terhadap Likuiditas Saham. Universitas Negeri Yogyakarta.
[2] Broude, Paul, D. (1997). Going Public. Journal Of Management Consulting,9 (3).

Fahmi, I. dan Y. L. H. (2009). Teori Portofolio dan Analisis Investasi. Bandung: Alfabeta.
[3] Jogiyanto. (2003). Teori Fortofolio dan Analisis Investasi, Cetakan Kedua. Yogyakarta: Badan Penerbit Fakultas Ekonomi.
[4] Jogiyanto. (2010). Teori Portofolio dan Analisis Investasi. Yogyakarta: Badan Penerbit Fakultas Ekonomi.
[5] Jogiyanto, H. (2014). Teori Portofolio dan Analisis Investasi. (Edisi Ketiga). Yogyakarta: Badan Penerbit Fakultas Ekonomi.
[6] Jogiyanto Hartono. (2014). Teori dan Analisis Investasi (9th ed.). Yogyakarta: Badan Penerbit Fakultas Ekonomi.
[7] Lin, J.C., Singh, A.K., & Yu, W. (2008). Stock Splits and The Trading Speed Improvement Hypothesis. Working Paper Social Science Research Network Journal, 1–45. Retrieved from www.ssrn.com
[8] Munthe, K. (2016). PerbandinganAbnormal Return Dan Likuditas Saham Sebelum Dan Sesudah Stock Split: Studi Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Akuntansi, 20 (2), 258–259.
[9] Setyawan, I. (2010). Stock split dan likuiditas saham di BEI: Pengujian menggunakan hipotesis likuiditas. Urnal Akuntansi Dan Keuangan Indonesia.
[10] Subekti, D. A. (2014). Pengaruh Stick Split terhadap Abnormal Return dan Volume Perdagangan Saham(Studi kasus pada perusahaan yang masuk dalam daftar efek Syariah Periode 2011). Jurnal Ekonomi.
[11] Sugiyono. (2011). Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: Alfabeta.
[12] Susiyanto M. (n.d.). Penggabungan dan Pemecahan Saham Konsolidasi Saham Sektor Perbangkan. Retrieved April 15, 2019, from kompas.com
[13] Weston, J. F. & T. E. C. (1996). Financial Management, 9 edition. NewYork: The Dryden Pass.
[14] Wijaya, T. (2013). Metodologi Penelitian Ekonomi dan Bisnis, cetakan pertama. Yogyakarta: Graha Ilmu.