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Stock Liquidity Analysis Before And After The Announcement Of *Split Reverse Stock* On Indonesia Stock Exchange Companies 2017-2020

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Abstract

The purpose of this study is a type of quantitative research with the aim of knowing whether there is a significant difference in stock liquidity before and after the announcement of the reverse stock split on the Indonesia Stock Exchange company in 2017-2020. The sample data obtained in this study are companies listed on the Indonesia Stock Exchange that carried out a stock split in 2017-2020. The sample obtained from 2017-2020 which experienced a stock split was 38 companies. The data collection technique used secondary data which was analyzed by using the Paired Sample t-Test. The results showed that there was no significant difference before and after the announcement of the stock split, by calculating the statistical test through the SPSS application. Based on the data obtained from the data difference test, the data is normally distributed and for the paired sample t-Test test which shows there is no significant difference before and after the stock split.

1. INTRODUCTION

Many things become investment considerations in deciding whether to invest in a security or not. The condition of stock movements in the market is indeed volatile, it can go up and down. This turns out to be able to affect the interest of investors in the stock. Considering that investors prefer company shares whose prices are stable in order to avoid the risk of loss. This clearly has a negative impact on companies, where their shares are not very attractive to buy in the capital market, this is the company's concern to find solutions to control stock prices, one of which is by *reverse stock split* . A *reverse stock split* is one of the steps companies can take when a problem occurs that affects their share price in the market.

The capital market is one of the alternative means that can be used by capital owners to invest. Investors can choose which company they will invest their money or capital in in order to get maximum profit. Positive stock performance can attract investors to invest in the company by evaluating stock performance, and shareholders can understand the advantages or disadvantages of the investment. (Alfian Dody Firmansyah 2016). Evaluation of stock performance is very important to determine the extent to which your offering can provide good performance

satisfactory for investors. The presentation of the company's offerings can be seen from the *returns* obtained from these shares. *Return* is one of the elements that encourage investors to invest, and is also a reward for investors who dare to take investment risks. Information is an important requirement for investors to make investment decisions. Investment decisions are related to choosing a profitable investment portfolio with certain risks. Information can reduce the uncertainty that occurs, so that the decision steps taken must be in line with the goals to be achieved. This is because stock prices reflect information contained in the capital market, in other words. Information that enters the market will be reflected in the stock price. The market will process the relevant information, and then the market will evaluate the share price based on that information.

The performance of a company's shares can be seen based on the market price of the company's stock. A stock market price that is too low often means that the performance of

the stock is not good because the stock price is too high, it is difficult to increase again and will reduce the ability of investors to buy it, to anticipate this many companies To do a *stock split* , basically there are two types of *stock splits* that can be done, namely the stock split up (*Split up*) and the stock split down (*Split down/reverse stock*).

Split Up is a reduction in the par value of each share outstanding at the same time, the share *split/reverse* increases the par value of each share and reduces the number of shares outstanding. If the company's stock price is good, it will increase the interest of investors to invest their capital. If there is no difficulty in trading shares, then it is said to be liquid. Highly liquid stocks provide the possibility of higher capital gains. The decision of investors to invest their capital affects stock liquidity and stock prices.

Theoretically, the motivation that drives a company to do a stock split and the resulting effects are contained in several hypotheses, namely the *Signaling Hypothesis* , *Trading Range Hypothesis,* and *Liquidity Hypothesis* . *The signaling hypothesis* states that the *split* provides an informative signal to investors about the company's prospects in the future so that the market will respond to the information provided by the company.

The announcement of a *reverse stock split* is information that will be processed by investors to make decisions. If the *reverse stock split* announcement contains information, the market will react when the information is received by the market. The market reaction to the announcement can affect the liquidity of the stock. In this study, stock liquidity with *bid-ask spread* and stock trading volume is getting smaller *bid-ask spread* .

Research conducted by Nurul Aini (2018), about "Analysis of Stock Returns and Stock Liquidity Before and After the *Stock Split* ". The results of the research conducted indicate that there are differences in stock *returns* before and after the *stock split* and there are differences in stock liquidity as measured by stock trading volume before and after the *stock split.* Dika Maulana (2018) conducted a study entitled "Analysis of *Stock Split Announcements on Stock* Liquidity, Stock Returns and Company Profitability in Indonesia". The results of the study that tested 38 samples of companies that carried out *stock splits* showed that only 1 of 3 variables had significant differences before and after the *stock split event* . The significant variable is the company's stock return, while the company's liquidity and profitability variables have no significant effect both before and after the *stock split event* . Henry Christopher Ivan Montolalu (2016) regarding the comparative analysis of stock prices, stock liquidity, and stock *returns* before and after the *stock split event* in publicly traded companies *listed* on the Indonesia Stock Exchange for the 2010-2014 period stated that in his research there were differences in stock prices before and after the stock split. after the *stock split event* , then there is no difference in stock liquidity before and after the *stock split event* and there is no difference in stock *returns* before and after the *stock split event* .

Dwiki Alfi Zuliansyah's research (2018), states that the results obtained on the liquidity of the shares of companies listed on the IDX which are proxied by changes in stock prices and stock volatility have an insignificant decrease in stock liquidity, *the bid-ask spread* has a significant decrease in stock liquidity while stock liquidity as a proxy for trading volume activity experienced an insignificant increase. For stock liquidity of companies listed on SGX which is proxied by changes in share prices,
stock volatility and *bid-ask spreads* experienced an insignificant decrease in stock liquidity, while stock liquidity proxied by *trading volume activity* experienced an insignificant increase. For the liquidity of shares of companies listed in KLSE with changes in stock prices, there is an insignificant decrease in stock liquidity and *the bid-ask spread* has a significant decrease in

stock liquidity, while for stock liquidity, which is proximal to *trading volume activity* and stock volatility, there is an insignificant increase.

2. LITERATURE REVIEW

2.1. Signaling Theory

Signaling theory states that stock split events contain informative signals for investors about the prospect of a substantial increase in future *returns* . The stock split event is part of the *signaling theory* that managers try to interpret that company managers will convey good prospects so that they can be considered to be able to improve investment welfare (Alfian Dody Firmansyah, 2016).

Signaling theory states that every event in the form of announcements, corporate actions, or publications about a company, whether intentional or unintentional, will have information as a signal to be received in the market. One of the corporate actions or announcements is a *stock split* . Stock splits can give a positive signal because company managers will provide information on the company's good future prospects to the public who do not know it. The reason this signal is supported is due to the fact that stock split companies are companies that have good performance conditions. So when the market reacts against this only because they know the future prospects of the company concerned (Malkus Tabu Ijak 2018).

2.2. Trading Range Theory

Trading Range theory states that *a stock split* will increase stock trading liquidity. According to this theory, the highest stock price (*overprice*) causes the stock to be less actively traded. With the occurrence of a *stock split* , the stock price will not be too high which will make many investors to trade (Alfisn Dody Firmansyah 2016).

In general, companies do a *reverse stock split* because they feel that the stock price is very cheap and the number of shares outstanding is already large. Therefore, the company wants to increase the value of its share price to be more expensive by giving a bona fide impression (the stock price does not look cheap) by having a new price that is more attractive to investors in the hope that trading volume can increase. An increase in trading volume is one indication of an increase in stock liquidity.

2.3. Stock Liquidity

Stock liquidity is the number of exchanges in the capital market in a certain period. The higher the transaction frequency of a stock, the higher the level of liquidity of the stock. Liquidity (liquidity) refers to the availability of company resources to meet short-term cash needs (Wild et al 2005: 186). Liquidity is the capacity of a company to convert assets into cash or the ability to obtain cash effectively quickly (Ross et al, 2007:24).

A stock can be said to be liquid if it is easily exchanged or converted into cash. Stock liquidity has a significant meaning for the two supporters, both for investors and for issuers. For investors, it will be profitable if the shares are liquid because they are easier to transact, so there is an opportunity to increase capital. For issuers themselves, stock liquidity is also beneficial, because if a company makes a new offering, the market will immediately consume it, while it also allows the company to avoid various threats of delisting (issued) from the capital market. Even on the Indonesia Stock Exchange, an evaluation has been carried out on 45 companies that have the highest stock liquidity, known as the LQ45 rating assessment.

Stock liquidity and stock price of a company are seen by the general public and investors as good indicators to measure the effectiveness of the company's performance. If the course of a company is more liquid than the shares of other companies, then that

time the company's performance is said to be better and vice versa. An investor's decision to invest affects stock liquidity and stock prices. If the company has a good stock price, it can increase investor interest to invest. To provide an overview of the target stock liquidity estimation, this study will use two measurements of stock liquidity, namely *bid-ask spreads* and trading volumes. Different estimates will produce different results from one measurement to another. In this study, individual measurements and analyzes were carried out to see if there were differences in stock liquidity before and after the announcement of the *reverse stock split.*

Bid-ask Spread and trading volume of a transaction can occur if there is a meeting between the highest asking price to buy, while ask is the price with the lowest selling offer (Hartono, 2008:41).

a. Bid-ask spread

Bid-ask is also a consideration for investors in deciding to hold or sell ownership of a share. The occurrence of corporate actions by companies becomes important information and becomes a guide for investors. Corporate actions such as *stock splits* will make investors provide a benchmark for the amount of spread they get.

b. Trading Volume

The size of the trading volume variable is known by observing stock trading activities which can be seen through the trading volume activity indicator (Trading Volume Activity/TVA). Trading Volume Activity (TVA) is an indicator that can be used to see the reaction of the capital market to information through the parameters of the movement of stock trading volume activities in the capital market. (Rosyeni Rasyid, et al 2016).

2.4. Reverse Stock Split

a. What is *Reverse Stock Split?*

Reverse Stock Split is a type of corporation . *A reverse stock split* only increases its face value. where the changed nominal value only causes a decrease in the number of shares and does not change the amount of capital (Evelin Budiarti 2019). As mentioned above, there are two types of stock splits, including *split up* and down (*split down* or *reverse stock split*). *Reverse stock split* is a combination of a larger par value per share, at the same time the share price will increase proportionally. Thus, the total capitalization value of the shares did not change. Based on the above definition, the *reverse stock split* can be described as follows, for example, a company wants to do a 5:1 *reverse stock split* with a stock price of Rp. 1000 on the stock exchange, then its share price is now Rp. 5000, as when a person exchanges five Rp. 1000 bills for a Rp. 5000 note.

***b. Reverse Stock Split* Purpose**

Reverse stock split aims if the stock price declines, it will be threatened with delisting (deletion) from the stock exchange. The Indonesia Stock Exchange itself applies a limit rule that the minimum is Rp. 50 per share. There are three reasons why a company doing a *reverse stock split* is seen as detrimental (Ross et al, 2007: 513), namely:

1) Shareholder transaction costs decreased after the *reverse stock split.*
2) The liquidity and marketing of the company's shares increase when the share price increases to the trading level.
3) The sale of shares whose price is too low is considered unattractive to investors because investors are less confident in the growth, income, cash flow and stability of the company.

There are two reasons why a company performs a *reverse stock split.* First, *a reverse stock split* is carried out because it meets the minimum share price per share. *A reverse stock split* can discuss rising stock prices to obtain a minimum price so that the company can avoid the threat of a second delisting, the company usually performs a *reverse stock split* and at the same time buys shares from shareholders who

cannot meet the minimum share limit due to the *reverse stock split.*

c. Reverse Stock Split Risk

Reverse stock split does not affect the shareholders or the company. This is because the *reverse stock split event* has no economic value, because after this *corporate action* the signal is negative because investors think that the company is in financial trouble, a healthy company should think twice before making a decision to do a *reverse stock split* (Horne, 1995). :338).

d. Company Motivation to Do *Reverse Stock Split*

1) Signaling Hypothesis

Any announcement information obtained by the company will produce news about the company's possibilities in the future. In general, it will be obtained from investors in the capital market, this is because the signals contained in the data are received by investors, both negative and positive signals, the *signaling hypothesis* says that the *stock split* provides information to the market about future prospects (Copelend, 2007). :394).

Stock split is seen as a positive signal because a company's management will provide information on the future of the company that is good for people who do not know it. The reason why this is supported by the fact that companies that do stock splits are companies that have good performance (Hartono, 2008:537). Based on this statement, we can see that the market will usually experience a reaction to the announcement of a *stock split,* but not because the market will announce a *stock split* because the announcement has no economic value, but that the announcement of a *stock split* can contain information related to the company in the future. *Stock splits* contain costs that must be borne, so that both companies are able to generate these costs and as a market effect to produce a positive effect on them. Conversely, companies with good prospects that will provide a valid signal through *a stock split* will not be able to bear these costs, so *a stock split* will increase the price of securities, but will decrease it (Copeland, 2007:429).

Like *stock splits* , *reverse stock splits* also provide signals or information to investors about the company's prospects in the future market so that it will provide data provided by the company (Ross at al, 2007:338). In general, investors will know that a company that performs a *reverse stock split* may be a company whose financial performance is not good. So investors will judge that the company has poor future prospects. This is also the reason why some companies do a *reverse stock split.* Some companies that do a *reserve stock split,* some of which are to reveal that the purpose of doing a *reverse stock split* is to avoid the delisting criteria that have been set by the exchange.

2) Trading Range Hypothesis

Based on the *trading range hypothesis* , a stock split is an attempt to direct stock prices to a certain *range* . For the most part, companies perform *reverse stock splits* in because they think the stock price is too cheap and the number of shares outstanding is not too much. The stock market price reflects the value of a company, if the stock is the higher the stock price, the higher the value of the company and vice versa, a stock market price that is too low reflects a low company value, has a bad reputation, and has poor performance. . Stock market prices that are too low make stocks less attractive to investors to buy stocks. This causes stocks to contribute effectively because stocks with low prices are often valued by investors as risky investments so that investors remove these stocks from their investment portfolio. In addition, the stock price is too low, which can result in the company being included in the delisting criteria.

3) *Liquidity Hypothesis*

The stated goal of management during a stock split is to improve stock liquidity, supported by the fact that attractiveness in the eyes of investors can be increased by lowering stock prices. If the stock becomes more

attractive, it can affect the number of trades and the number of shareholders, this applies to *a reverse stock split* . *The Liquidity Hypothesis* states that *a reverse stock split* can increase stock trading. By directing stock prices to a certain range, it is hoped that more people will be involved in the market involved in stock trading activities. The more market participants, the more stock liquidity can increase.

e. The Relationship of Stock Liquidity with the Announcement *of Revarse Stock Spilit* .

Every announcement given by the company that contains information data about the company's prospects which contains information related to the company's prospects in the future causes investors to respond to the information. Information about *reverse stock splits is* something that is very necessary for investors and potential investors to consider in making a decision to buy and sell their shares, based on their analysis. investors in making decisions to buy and sell their shares, considering their analysis of the data related to the *reverse stock split announcement.* the choices made by investors can affect the liquidity of capital market shares.

Stock liquidity is the proportion of stock exchanges in the capital market in a certain period. The higher the number of stock trading frequency levels, the more liquid the stock is. The signaling hypothesis states that the *reverse stock split* provides data or signals to investors about the possibility of the company in the future so that the market will respond to the information provided by the company (Ross et al. 2007:338).

Announcement of *reverse stock split* is information that will be processed by investors to make a decision. Information can be said to be relevant, if the information can influence trading decisions made by investors. If the information contained in the *reverse stock split announcement* benefits investors. Then it will be able to attract investors to make transactions in the capital market. Thus, transactions for these shares increased, so that the liquidity of the shares also increased. However, if the *reverse stock split announcement* does not change the investor's decision, then the reverse stock split announcement is irrelevant information for investors in making investment decisions. Low stock prices are often viewed by investors as risky investments so they are less active in participating. In addition, a stock price that is too low can cause the company to be included in the delisting criteria set by the exchange, a company that attracts investors.

3. RESEARCH METHODS

3.1 Technical Data Analysis

After the data collection stage is complete, then proceed with data management. Data analysis is the next step to process data from research results into data, where data is obtained, worked on, and used in such a way as to conclude the problems posed in compiling research results. The data analysis technique used in this research is descriptive analysis and performs two statistical tests, namely:

a. Descriptive statistics
   Basically, Descriptive Statistics is used to collect, process and analyze data and then present it in a good form (saiful Ghozi, 2016)
b. Normality test
   The normality test (Ghozali, 2013) aims to test whether in the regression model, confounding variables or other variables are normally distributed. This study uses the data normality test method, if the data is normally distributed, the test used is the parametric *paired sample T-test,* but if the data is not normally distributed, the *Wilcoxon Signed Ranks Test is used.*

The normality test aims to test the data with normal or abnormal distribution. If the data is normally distributed, the statistical test used is the *paired sample T-Test , whereas if the data is not normally distributed, the Wilcoxon* test is used .

a. Hypothesis Statistical Test

Different tests were conducted to prove whether or not there was a significant impact before and after the *reverse stock split.* This test is carried out in two ways, namely:

b. Paired Sample T-Test

Paired Sample T-Test is used if the data is normally distributed. The basis for decision making is based on the following probability values:

1) If probability (sig t) > (0.05) then H0 is accepted, meaning that there is no partially significant effect of the independent variable on the dependent variable.
2) If the probability (sig t) < (0.05) then H0 is rejected, meaning that there is a partially significant effect of the independent variable on the dependent variable.

Assuming a significant level (α) of 0.05 or 5%.

c. Wilcoxon test

If the data is not normally distributed, the test is carried out using the Wilcoxon test. The basis for decision making is as follows:

1) If $Z_{hitung} \succ Z_{tabel}$ then H0 is rejected and vice versa Ha is accepted
2) If $Z_{hitung} \prec Z_{tabel}$ then H0 is rejected and vice versa Ha is rejected

Assuming a significant level (α) of 0.05 or 5%.

4. RESULTS AND DISCUSSION

Based on calculation of stock liquidity with using trading volume activity. According to signal theory , every event or occurrence in the form of announcements, corporate actions, or publications about a company, whether intentional or unintentional, will have information as a signal to be conveyed to the market. One of the corporate actions or announcements is a *stock split* . By doing a stock split, the share price will be split at a certain nominal which is smaller without changing a certain nominal amount. Stock splits can give a positive signal because company managers will provide information on the company's good future prospects to the public who do not know it and know an investor's decision to invest.

Based on the results of the calculation of liquidity using *trading volume activity , it* shows that there are differences before and after the announcement of the *stock split* with results that do not support the *signaling theory* stating that the stock split can provide a positive signal because company managers will provide information on the company's good future prospects to the public. who do not know it and know the decision of an investor to invest. Companies that do *stock splits* because the stock prices are relatively cheaper, thereby increasing stock liquidity. The higher the stock price, the higher the value of the company. If the stock price is too high, it will affect investors to buy shares and will make stock trading liquid.

Based on this research, what might happen in that year is that investors' interest is so great. The results of this study strengthen *Trading Range theory* is very supportive regarding this research which said that *a stock split* will increase stock trading liquidity, according to this theory the highest stock price (*overprice*) causes the stock to be less actively traded. With the occurrence of a *stock split* , the stock price will not be too high which will make many investors to make transactions (Alfisn Dody Firmansyah 2016).

Although there is an increase or decrease in stock trading before and after the stock split, the difference is not so much. Stock performance is one of the factors that investors consider in deciding whether or not to invest in an issuer. Companies that have low stock values will cause a decrease in investor confidence in these shares. This is in line with the results of Dwiki Alfi Zuliansyah's research (2018), Based on the results of the study, it was found that the liquidity of the shares of companies listed on the IDX which were proxied by changes in stock prices and stock volatility experienced an insignificant decrease in stock liquidity, *the bid-*

ask spread experienced a decrease in stock liquidity. significant while stock liquidity as a proxy for *trading volume activity* experienced an insignificant increase. The liquidity of shares of companies listed on SGX as proxied by changes in stock prices, stock volatility and *bid-ask spreads* experienced an insignificant decrease in stock liquidity, while for stock liquidity as proxied by *trading volume activity* , there was an insignificant increase. For liquidity of shares of companies listed in KLSE with changes in stock prices, there is an insignificant decrease in stock liquidity and *the bid-ask spread* has a significant decrease in stock liquidity, while for stock liquidity, which is proximal to *trading volume activity* and stock volatility, there is an insignificant increase.

From the results of research by Evelin Budiarti, Ida Bagus Putra Astika (2019), it also shows that there is no difference in firm value between before and after the *reverse stock split.* According to Virgian Rizky Alghazali, Ari Darmawan (2019), The results of the different test analysis show that there is no significant difference between *Trading Volume Activity* before and after *the stock split.* Likewise with the results of research conducted by Alfian Dody Firmansyah (2016). The results showed that there were no significant differences in trading volume activity and abnormal returns before and after the event.

According to Miftahul Jannah (2020), the results of the research conducted in 7 companies on the effect of stock splits (before and after) there is a movement in stock prices indexed by Indonesian Sharia Stocks in 2018 This can be seen from the results of the salam analysis. the observation period which shows a significance value of 0.039 and is smaller than = 0.05 which means that there is a movement of stock prices for 30 days before carrying out a *reverse stock split* , so it can be concluded that the effect of *stock split* on stock price movements in the Indonesian Islamic stock market has a significant effect. significant.

In the perspective of *Signaling Theory and Trading Range Theory* of 7 companies that do *stock splits,* the results of the research show that there are stock price movements before and after the *stock split.* And 5 companies experienced good liquidity, while 2 companies experienced liquidity but not so fluctuating. This shows that the *stock split event is* consistent with *Signaling Theory and Trading Rang.* Likewise in research from Anita Tri Utami (2017). Based on the results of the study , it can be concluded that there is no significant difference between after and before the *stock split* , this condition occurs because the number of shareholders is less after the split and there are differences in *abnormal returns* before and after the announcement of the *stock split* . This condition occurs because an announcement that enters the stock exchange will affect the market to act.

5. CLOSING

5.1 CONCLUSION

Based on the problem and the results of hypothesis testing, it shows that the level of liquidity is significantly different before and after *the stock split.* The results of this study through data analysis on companies that carried out *stock splits* in 2017-2020 on companies listed on the Indonesia Stock Exchange. Based on the results of the hypothesis test *Paired sample t-Test* shows the t value of liquidity before and after the stock split with a t count of -925 with sig t 361 > 0.05, then H1 is rejected. Through the *paired sample test method* , it can be proven that there is no significant difference in the level of liquidity before and after the *stock split.*

5.1 Suggestion

Based on the results of the research, the suggestions that will be found are:

1. For managers who want a stock split funding source, it can increase stock liquidity, so that the additional capital contribution is more significant.
2. For further researchers, it is better to choose a different variable related to the level of stock liquidity to the *stock split* so

that it can add wider insight to and provide objects so that readers can understand more about stock liquidity.

3. For potential investors and investors, if you want to buy shares, you should first pay attention to how the state of a market was on the date of the stock split, so that investors get information and investors are wiser in investing in companies that are experiencing a *stock split.*

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