The Impact of the Aannouncement of Stock-Split on Stock Return and Stock Liquidity in Indonesia Stock Exchange

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ABSTRACT:- A stock is the evidence of ownership in investment in buying stocks which are expected to get capital gain. One of the attempts of the investor to get stocks or investment is by using corporation act, stock split since its stock price is affordable. The stock split is that minimal stock values are split into small ones. The purpose of the stock split is to increase stock liquidity although a company which does a stock split, its stocks do not always undergo positive effect. Some stocks even become strong after stock split although some others undergo significant weakness. The objective of this research was to find out the differences in company's stock return in the pre and post stock split and to find out the accurate strategy of making an investment toward companies which did a stock split. The research used empirical study and applied the practice in the capital market on event study. The population was 17 companies. The result of the research on companies which did the stock split in 2017 showed that 14 companies had fulfilled the criteria as the samples. It was found that stock split did not indicate a significant difference in stock liquidity in the pre and post stock split. Stock return and abnormal stock return did not have any significant difference in pre and post stocksplit, either in each company or in the portfolio.

Keywords:- Stock Splits, Stock Return, Stock Liquidity

I. INTRODUCTION

Times and technology developments allow all information to be seen and accepted by everyone. One of the information known by the public is the capital market. The capital market is one of the essential elements in a country's economic system because it contributes to the growth and development of the business economy through its role as a source of corporate funding. The capital market is a financial instrument that trades securities in the form of bonds and stocks for the long term issued by the government and private companies. Also, the activities are carried out at the exchange where brokers that are representing investors meet each other. Recently, stocks have become increasingly known by the general public. The government also expects all communities to be involved in economic growth and development by participating in the capital market. The stock is a kind of investment instrument for groups and individuals. Stocks are proof of group or individual ownership of a go-public company or issuer.

In a nation, too high stock prices generally reduce the ability of investors to buy these stocks. The stock split is one of the corporate actions that are expected to increase the purchasing power of investors towards these stocks. The stock split is one of the corporate actions for issuers whose stock prices are high. By having a stock split, it is expected that many investors are involved in buying stocks. If the purchasing power of investors increases, the stock price will increase. The company's stock split intends to increase the domestic retail investor base. The presence of domestic retail investors is expected to provide balance, support the 'saving stocks' program, and provide opportunities for domestic retail investors to own blue-chip stocks.

According to Darmawan (2017), the definition of the stock split is a corporate action of a go-public company (issuer) with the aim of breaking the nominal value of the stock to a smaller nominal value. That is conducted by breaking a piece of stock into several pieces of stock. The solution is carried out with a specific ratio so that the number of outstanding stocks will increase proportionally. The decline in the nominal value of the stocks is not through a sale and purchase transaction so that the capital held by the stockholders does not change.Darmawan (2017) stated that companies do stock splits with several objectives which include increasing the number of stocks in circulation so that investors who have more stocks, maintain the level of stock liquidity with the number of stocks in circulation, avoiding too high stock prices that burden the public to buying/ owning these stocks, and making it easier for small investors to buy stocks whose prices have been broken down into smaller ones.

If the stock price is too expensive, small investor funds will not be able to afford it. The company is well aware of the importance of liquidity in stock trading because a less liquid stock can affect investor interest.

Indirectly, it also affects stock price movements. The basis of an investor's decision in investing consists of the level of expected return, the level of risk, and the relationship between return and risk. Therefore, companies often conduct stock splits to increase the level of liquidity of their stocks.

Stock liquidity is related to the speed of a security issued by a company that can be traded on the secondary market. The faster security is traded, the more liquid the security is, and vice versa. The more illiquid a security, the higher the liquidity risk faced by the company (Tandelilin, 2010).However, companies that do stock split stocks do not always experience positive impacts. After conducting a stock split, several stocks experienced an increase, and several others experienced a significant decline. Data taken from www.finance.yahoo.com represents the number of companies conducting a stock split in 2017 consisting of PT Bank Rakyat Indonesia Tbk (BBRI) with a ratio of1;5, PT Chandra Asri Petrochemical Tbk (TPIA) with a ratio of 1: 5, PT Indal Aluminum Industry Tbk (INAI) with a ratio of 1: 2.

Table 1: Stock price and stock trading daily pre and post stock split at PT Bank Rakyat Indonesia Tbk (BBRI); PT Chandra Asri Petrochemical Tbk (TPIA); PT Indal Aluminum Industry Tbk (INAI)

Event Window	BBRI		TPIA		INAI	
	Price (IDR)	Volume (shares)	Price (IDR)	Volume (shares)	Price (IDR)	Volume (shares)
-10	3120	134568500	5580	12247000	3120	134568500
-9	3110	115711500	5660	12099000	3110	115711500
-8	3120	124347500	5690	10684000	3120	124347500
-7	3140	48605000	5760	9338000	3140	48605000
-6	3190	121672500	5770	10485500	3190	121672500
-5	3200	74016500	5690	8992500	3200	74016500
-4	3250	158253000	5700	10759000	3250	158253000
-3	3240	79145500	5650	9927500	3240	79145500
-2	3290	198185500	5660	9303000	3290	198185500
-1	3290	187067000	5795	11724000	3290	187067000
0	3280	100147400	5650	8531000	3280	100147400
1	3260	55986100	5750	8486100	3260	55986100
2	3170	105187300	5700	7457400	3170	105187300
3	3140	79049700	5700	7664300	3140	79049700
4	3210	78015200	5600	8208700	3210	78015200
5	3290	114054700	5500	8238600	3290	114054700
6	3340	92309000	5700	10441700	3340	92309000
7	3280	109824700	5475	6670200	3280	109824700
8	3400	147637500	5500	8428000	3400	147637500
9	3360	49703700	5450	6483800	3360	49703700
10	3350	82715200	5450	5220600	3350	82715200

II. LITERATURE REVIEW

Stock and Corporate Action

The stocks are securities that indicate the ownership of a person or legal entity against the issuing company (Simatupang, 2010).Corporate action is an action of management ranks that can significantly change the company's fundamentals. Asevy (2014) mentioned the types of corporate actions as follows:Right issue,Issuance of warrants, Capital addition without right issue, Right issue by stockholders, Takeover of public companies,Voluntary tender issue, Material transactions, changes in main business activities, Business merger and consolidation, Issuance of bonus stocks, Dividend distribution, Stock repurchases (buy back), Affiliate transactions, Stock split and reverse stock split, Repurchase Agreement (repo) and reverse repo (Simatupang,2010)

Stock Split

The stock split is a split in the nominal value of the stock to be smaller, for example, the stock value of the company PT X Tbk is IDR 1,000. Currently, it is traded on the stock exchange for IDR 20,000 and carried out with a 1: 4 stock splits. Thus, every one of the old stocks is exchanged for four new stocks, and the nominal

price of each stock becomes IDR 250 Thus, the stock price of PT. X during the stock split is IDR 20,000: 4 = IDR 5,000. Therefore, the stock split is conducted so that the stock price is lower and the number of stocks is increasing; so, investors are easier to make purchases (liquid) (Simatupang, 2010)

The purposes of Stock Split

Fahmi (2015) argued that the purposes of the company conducting stock split include: avoid too high stock prices that burden the public to buy these stocks;maintain the level of stock liquidity; attract more potential investors to own the stocks;attract small investors to own these stocks because if it is too expensive then the ownership of funds from small investors will not be affordable; increase the number of stocks; reduces the risk especially for investors who want to own these stocks at a low price. Since it has been broken down, it means that there is investment diversification,Implement investment diversification

Stock Split in the Perspectives of Signaling Theory and Trading Range Theory

Fahmi (2015) stated that information on applying a stock split is a signal or sign that describes a company. This work can be seen from two sides, namely the positive side and the negative side. Stock split announcements are considered as a positive signal because company managers will convey the company's prospects to the public. The reason for this signal is supported by the fact that companies that do stock splits are companies that have good performance.If the market reacts at the time of the stock split announcement, it is not the reaction about which the stock split information does not have such economic value, but the reaction is about knowing the prospect of the company being signaled in the future through the stock split. Not all companies can provide signals that are considered valid and can be trusted by the market. Only companies that have the right conditions are signaled that will get a positive reaction. Companies that provide invalid signals will have a negative impact.

Signaling theory looks at signs of conditions that describe a company. Based on the opinion above, we can understand that the policy of a company doing a stock split is to describe the condition of a healthy company, especially in terms of corporate finance. Logically, we also cannot assume that a company does a stock split if it is in an unhealthy condition or fall stock.

Stock Split and Financial Performance

Generally, there are two forms of relationships that we can see between a stock split and financial performance includingCompanies that conduct stock splits generally are companies that tend not to have problems in the financial performance. For the public, companies that conduct stock split are considered to have good financial performance in the past. It means that the stock split is more related to past earnings performance than to future earnings performance.

The success of past performance shows the quality of financial management of a company has been handled well. This condition gives confidence to investors, investors, and other stakeholders in responding to or evaluating the company's financial performance.

Investors generally can be classified into two, consisting of retail and institutional investors. Someone has the purpose in investment is to make some money. The basic investment decision consists of the level of expected return, the level of risk, and the relationship between return and risk. Return is the main reason people in investing.Bagus (2010) stated that investment strategies generally have two kinds, namely strategy to actives and strategy to passive.

Strategy to passive is an act of investors who tend to be passive in investing in stocks and only based on the movement of their stocks in the movement of the market index.Strategy to actives is an act of investors actively in selecting and buying and selling stocks, seeking information following the time and stock price movements, and getting abnormal returns.

Stock Price

Understanding of stock prices based on the theory is the present value of cash flows that will be received by stockholders in the future. However, we understand that the stock price is the price that appears as a result of the movement of supply and demand that appears in effect on the relevant stock (Ladynoel, 2018), Widoatmodjo (2004) concluded that the more people who want to buy stocks, then the stock price tends to move up. On the other hand, the more people who want to sell, then the stock price will move down. However, in the long run, issuer's company performance and stock price movements generally move in the same direction.

Stock Returns

Stock return is the result of profits (capital gains) or losses (capital loss) obtained from the investment or stock trading in a certain period. The result of a stock return can be a profit or loss. A scholar such as Zubir

(2011) who revealed that stock returns consist of capital gains and dividend yield. Capital gain is the difference between the selling price and the purchase price of stock shares divided by the purchase price while the yielded dividend is a dividend sheet divided by the purchase price of stocks per share. A positive return means profit. Positive stock returns are also called capital gains, while negative stock returns are called capital losses (Heze, 2017).

Calculating Daily Stock Returns

To calculate the return of realization of each company's stock, daily stock prices are used by the following formula:

$$\text{Ri,t} = \frac{Pi,t - Pi,t-1}{Pi,t-1}$$

Rt,t   = Return on stock realization (i) in period (t)
Pi,t   = Stock price (i) in period (t)
Pi,t-1 = Stock price (i) in period (t-1)

Calculating Daily Market Returns

Calculating market returns use the daily CSPI market index at the closing price on the exchange on that day, with the following formula

$$\text{Rm.t} = \frac{IHSGt - IHSGt-1}{IHSGt-1}$$

Rm.t   = market return in period (t)

IHSGIt = Daily composite stock price index in period (t)

IHSGt-1 = Daily composite stock price index in period (t-1)

Calculating Expected Return

Daily expected return is calculated using the market model

$$\text{E(Ri,t)} = \alpha i + \beta t\ (\text{Rm,t})$$

E(Ri,t) = Expected return on stocks (i) in estimated period (i)
αi   = Intercept from regression line
βt   = Coefficient of slope from regression
Rm,t   = Daily market return in period (t)

The risk of a stock is determined by beta (β). Beta shows the relationship (movement) between the stock and its market (overall stock) or referred to as the Composite Stock Price Index (CSPI). β > 1 indicates that the company's stock price is more volatile than the market index
β < 1   indicates that there are no conditions that are easily changed based on market conditions
β = 1   indicates that the condition is the same as the market index

Calculating Abnormal Return (Abnormal Return)

The abnormal return value is the realized return value minus the expectation.
RTNi,t = Ri,t – E (Ri,t)
RTNi,t   = Abnormal return stock (i) in period
Ri,t   = Realization of return that occurs for stock (i) in period (t)
E(Ri, t) = Expected return on stock (i) in period(t)

The formula of the average abnormal return:

$$\overline{\text{RTNt}} = \frac{\Sigma_1^k \text{RTNit}}{K}$$

$\overline{\text{RTNt}}$ = the average of abnormal return

K   = the number of securities affected by the announcement of the event

Calculating Trading Volume Activity (Liquidity)

Changes in liquidity are measured by trading volume activity (TVA). That is the number of stocks transacted at a particular time compared to the number of outstanding stocks at the same time. The presence or absence of influence will be seen from changes in price/ return and stock trading volume around the date of the event, for ten days before and ten days after the date of the stock split event.

$$TVA = \frac{\sum shares\ i\ transacted\ t\ time}{\sum stock\ i\ circulates\ time\ t}$$

RESEARCH METHOD

The type of research is empirical studies and practical applications in the capital market regarding the event study. Commonly, event studies are used to determine whether a stock price movement in the capital market triggered by a particular event can create an abnormal return for investors. This research was conducted in companies that do stock splits that are listed on the Indonesia Stock Exchange (http://www.idx.co.id). The research populations were 17 companies listed on the Indonesia Stock Exchange (IDX) which had conducted stock split. The sampling technique was carried out by the purposive sampling method (Siregar, 2013).Thus, the criteria of the research sampling include:

1.   The companies must remain listing on the Indonesia Stock Exchange until 2017
2.   The companies conducted stock split in 2017
3.   The companies must have quantitative data in the form of stock prices, CSPI, stock trading volume, and the number of outstanding stocks.
4.   The companies do not conduct other corporate actions during the stock split

The event window is 21 working days at IDX which consists of 10 days before the stock split announcement, one day on the day of the stock split announcement, and ten days after the announcement of the stock split; with an estimated period of 100 days. The population of issuers LPIN, INTD and PTBA did not meet the requirements as the research samples. During the event window, LPIN and INTD's trading volume transactions were not always available for ten days. PTBA conducted a stock split on December 14, 2017, where the event window period was insufficient. Thus, based on the criteria mentioned above, the number of research samples was 14 companies.

Formulation of the hypothesis
The hypothesis formulations for this study are:
H1 = There are significant differences in company stock returns before and after the stock split
H2 =There are significant differences in the   liquidity of company shares before and after the stock split

Research Instrument
        Testing of return and liquidity of each company was conducted using paired sample t-test and hypothesis testing of market reactions to stock split announcements to see significant differences in stock returns before and after the stock split as a whole (portfolio) was conducted using statistical tests with the help of the Wilcoxon Signed Rank Test because data was not distributed. This test was used because the data is interval/ ratio and data between samples were paired with the amount of data used was not more than 50 samples.Formulation of the Wilcoxon Sign Rank Test:

$$Z = \frac{T - \left[\frac{1}{4N\ (N+1)}\right]}{\sqrt{\frac{1}{24N(N+1)(2N+1)}}}$$

III.   RESULTS & DISCUSSION

Daily Stock Return
        The average stock return before conducting a stock split is nine listed companies that are positive, and five issuers (companies) are negative. It shows that there are many issuers that get a company's stock return

compared to the loss. The average stock return of each company after conducting a stock split is only five listed companies are positive, and nine issuers are negative. It shows that the company that is negative after the stock split means that the stock split does not increase the company's stock return, but it decreases the company's stock return.

From the 14 sample companies that conducted a stock split in 2017, the Paired Sample t-test was conducted on each company stock both before the stock split and after the stock split. If the significance is greater than 5% then H0 will be accepted; it means that there is no difference in company stock returns before and after the stock split. However, if the significance value is less than 5%, H1 will be accepted; it means that there are differences significant of company stock returns pre and post the stock split. Based on Table 2, the data shows that the value of the significance level of each issue is not below 5% or there is no difference in company stock returns before and after the stock split in 2017 for all companies.

Portfolio Daily Return Stocks

Table: 2 Average test return on portfolio stock returns

		N	Mean Mark	Sum of Mark
After –	Negative Ranks	8[a]	5.63	45.00
	Positive Ranks	2[b]	5.00	10.00
	Ties	0[c]		
	Total	10		
Before	Z	-1.784[b]		
	Asymp. Sig. (2-tailed)	0.074		

Negative rank or difference between the variables before and after the negative is 8. The average ranking is 5.63 with the number of negative ranks is 45. Positive ranking or the difference between the positive before and after variables is two observations, or there are two observations on the variable that are more from before variable observation with an average ranking of 5 with a positive number of ranks; that is 10.

H0: There is no significant difference in company stock returns before and after the stock split
H1: There are significant differences in company stock returns before and after the stock split.

Based on Table 2, the value of Z is -1.784 with a p-value (Asymp. Sig. 2 tailed) of 0.074 which is greater than the critical limit of the research 0.05; and the decision is to accept H0. It shows that there is no difference in the company's stock returns in a significant portfolio before and after the stock split. This case also shows that corporate actions to do a stock split do not have a positive signal in the market. Thus, the company's stock returns do not change before and after the stock split either tested individually or simultaneously (portfolio)

Expected Return

The stock risk is determined by beta (β). Beta shows the relationship between stocks and markets. Table 3 shows that of the 14 companies that did the stock split in 2017, none had beta = 1. It shows that no company conducts a stock split in 2017 which shows that the condition of its stock movements is the same as the market (CSPI). Companies that have $\beta > 1$ are five companies that show that the five companies did a stock split in 2017 where the stock price is easier to change compared to the market index (CSPI). Companies that have $\beta < 1$ are nine companies. That shows that the nine companies are not easily changed based on market conditions.

Based on Table 3, we can also see that the types of industries do not automatically have the same beta. Only two types of industries have the same beta including agriculture and basic and chemical industries. Other industries have different beta even though they are classified into one industrial sector. Looking at the financial sector and the banking sub-sector, the banking subsector which has the same beta are BRI banks (BBRI) and Bank Mandiri (BMRI); have the same $\beta > 1$. Therefore, the movement of stocks for each bank is the same as the CSPI.

Table 3 Results of Return on Average Non-Return Normal Portfolio

		N	Mean Mark
After-	8[a]	5.75	46.00
	2[b]	4.50	9.00
	0[c]		
	10		
Before	-1.886[b]		
	0.059		

Based on Table 3, a negative rank or difference between the negative before and after variables is 8. The average ranking is 5.75 with the negative total of ranks; i.e., 46. Positive ranks or the difference between the positive before and after variables are two observations, or there are two observations on the following variables which are more than the observation of before variable with the average rank of 4.5 and the total of positive ranks of 9.

H0: There is no significant difference in company stock returns before and after the stock split
H1: There is a significant difference in company stock returns before and after the stock split

Based on Table 3, the Z value is -1.886 with a p-value (Asymp. Sig. 2 tailed) of 0.059

Which is higher than the critical limit of the research of 0.05; so, the hypothesis decision is to accept H0. It shows that there is no significant difference in abnormal returns on company stocks before and after the stock split. It also finds that corporate actions to do a stock split do not have a positive signal in the market because the overall stock return has not changed. In other words, it is called bad news because many abnormal returns are marked negative after the stock split.

Liquidity of shares
Based on Table 3, the average liquidity is calculated by summing the amount of trading volume activity then dividing it by the number of event dates, namely ten days before the stock split and ten days after the stock split date or event date. Significance value is obtained through paired sample t-test in each company; i.e., before and after the stock split in 2017.

Table 3 shows that of the 14 companies that carried out the stock split in 2017 were three companies that experienced differences in the level of trading volume when it is calculated from each stock through the Paired Sample t-test consisting of PT Chandra Asri Petrochemical Tbk, PT Mitra Komunikasi Nusantara Tbk, and PT Voksel Electric Tbk. Meanwhile, 11 companies did not experience changes. A company has a different level of liquidity if it has a probability value or sig. (2-tailed) less than 0.05.

Table 4 Portfolio Liquidity Test Results

		N	Mean Mark	Sum of Mark
After – Before	Negative Ranks	4[a]	5.50	22.00
	Positive Ranks	6[b]	5.50	33.00
	Ties	0[c]		
	Total	10		
	Z	-0.561[b]		
	Asymp.Sig.(2tailed)	0.575		

Negative rank or difference between the negative before and after variables of the stock split is 4. The average ranking is 5.50 with a negative number of ranks of 22. Positive ranks or difference of positive before and after variables of the stock split is six observations, or there are six observations on the after variable which is more than the observation of before variable with an average ranking of 5.50 with a positive number of ranking of 33.

H0: There is no significant difference in the liquidity of the company's stocks before and after the stock split
H1: There are significant differences in the liquidity of the company's stocks before and after the stock split
Based on the calculation of Table 4, the value of Z is -0.561 with the p-value (Asymp. Sig. 2 tailed) 0.575 in which this number is greater than the critical limit of the research; i.e., 0.05; the hypothesis decision is to accept

H0. It shows that there is no difference in the liquidity of significant company stocks before and after the stock split. This case shows that corporate actions to do a stock split are only an image enhancement for the company

IV. CONCLUSIONS & SUGGESTIONS

Conclusions

There is no difference in the company's stock returns before and after the stock split both individually and asportfolio of companies that did stock splits in 2017. The same thing also happens to the abnormal return of company stock which has not changed before and after the stock split as portfolio.

There is no significant difference in the company stock liquidity before and after the stock split both individually and as portfolio of companies that did a stock split in 2017

Suggestions

It is suggested that investors take advantage of the actions taken by the company. By having corporate action like a stock split, we can find out that the company has good fundamentals and prospects, in which the stock prices are affordable for all people.Active strategies are always more profitable than passive strategies. For this reason, traders should be keen to see and take advantage of actions taken by companies such as choosing the best stocks that have good fundamentals. One of them can be known through corporate action such as stock split.It is recommended for investors to buy the stock of the company during the stock split and not to sell the stocks in a short time because the company's prospects will remain good or even increase. It can be seen from the fundamental financial data before the stock split.The companies need to pay attention to the condition of the company's fundamentals in conducting a stock split in order to avoid losses due to the costs incurred for the stock split; this increase can be taken from the fundamental financial data before stock split.

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