Stock Transformation: Understanding the Impact of Stock Split on Company Performance in Indonesia Stock Exchange through Before and After Comparative Analysis

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ABSTRACT  
The study delves into the differences in stock price, trading volume activity, and security return variability of stock splits policy, which is a corporate action where companies increase the number of outstanding shares while reducing their nominal value. This quantitative study analyzed 66 companies listed on the Indonesia Stock Exchange that underwent a stock split between 2017-2022. This research employs the Wilcoxon Signed Rank Test through SPSS 28 to explore the transformation in stock prices, trading volume activity, and security return variability before and after stock splits. The study presents significant findings: (1) there are noticeable differences in stock prices before and after stock splits, (2) trading volume shows variations before and after the corporate event, and (3) there are notable disparities in security return variability before and after stock splits. This study provides valuable insights for investors, analysts, and corporate strategists by examining the complex dynamics of stock splits and their impact on stock prices, trading activity, and security returns.
INTRODUCTION
The evolution of capital market activities has resulted in significant changes in expectations of information quality. It is considered informative if information influences investor confidence in decision-making (Putra & Suarjaya, 2020). In order to make rational investment decisions, investors need relevant information to assess the company’s performance. In other words, investors base their investment decisions on the information they receive (Lestari et al., 2024). One of the pieces of information in the capital market is about corporate actions.

According to Shidarta & Sofian (2018, p.146), corporate action is a strategic step chosen by public companies that has an impact on investor interests because the activities carried out can affect the total shares outstanding, the proportion of share ownership, the total shares owned by investors, price movements, increased stock transaction liquidity, and other things that have positive implications and benefit public companies. There are various kinds of corporate actions, including a stock split.

A stock split, according to Barnas (2021), is the dividing of one share into n shares, with the price per share being 1/n of the original price, to increase stock liquidity because the final share price after the stock split is cheaper and more affordable for investors to buy, resulting in increased investor demand for the stock. However, companies generally decide to conduct a stock split only when the stock price has reached a high level and management believes the company’s future is optimistic. As a result, a stock split is considered a positive signal and tends to lift the stock price.

During the 2017-2020 period, the number of companies that conducted stock splits fluctuated. Only companies with strong financial status have the ability to split shares because good financial performance tends to push the company's share price to a higher levels (Yustinia, 2018).

Companies use stock splits as a strategy to increase the liquidity of their stock trading (Masyithoh, 2018). In addition, a stock split announcement, according to Putra & Suaryana (2019), can provide positive signals to investors regarding the potential increased returns, which can encourage an increase in stock prices at the time of the announcement. However, in some cases, practice in the field shows that the theory is not entirely relevant to reality. Based on information from the www.cnbcindonesia.com page, not all companies that take this stock split action succeed in causing the stock prices to jump, which even weakens and moves downtrend after the stock split (Putra, 2022).

Hartono (2017, p.130) defines stock price as the value per share available in the capital market at a particular time. The interaction between supply and demand by the laws of supply and demands is the main factor influencing changes in stock prices. Overvalued stock prices can reduce investor interest in purchasing shares, while stocks that are cheaper can make investors interested in buying shares, as a result the demand for these shares becomes higher (Maulana & Yuliana, 2022). According to research by Sesa et al., (2022), Yuniartini & Sedana (2020), and Firdaus & Pangestuti (2023), there are differences in stock prices before and after the stock split. Meanwhile, a study by Hidayati & Putri (2022) and Suryansyah et al., (2018) discovered no difference between in stock price before and after the stock split.

The market reaction to an event can also be seen in changes in stock trading volume, which can be measured using the Trading Volume Activity (TVA) indicator (Suganda, 2018 p.18). According to Purwata & Wiksuana (2019), TVA is a measurement tool that calculates the ratio of the number of shares traded in a given period to the total outstanding shares in that period. According to Indrayani et al., (2020), an increase in stock trading volume shows that the company's shares are actively traded. However, not all companies that do stock splits will experience an increase in stock trading volume. The decline in trading volume shows that the stock split event is not considered a good signal by investors. This asymmetric information indicates that investors experience more uncertainty and hesitate to make more significant transactions (Yuniartini & Sedana, 2020). Several studies that have been conducted have
obtained mixed results, such as research by Irvangi & Rahmani (2022) and Firdaus & Pangestutti (2023), which stated that trading volume activity differed before and after stock split. Meanwhile, according to the findings of Alexander & Kadafi (2018) and Febriyanti & Febrianti (2022), there was no difference in trading volume activity before and after the stock split.

The greater the volume of supply and demand for a stock, the greater its influence on the rise and fall of stock prices in the stock exchange market, and increasing stock transaction volume activity indicates that investors are becoming more interested in these stocks, which affects stock price and return increases (Yuniartini & Sedana, 2020). Security Return Variability (SRV) is used as an analytical tool to examine the reaction of price and profit levels in response to an event as SRV helps determine whether the information has the potential to change the pattern of return distribution or stock return rate when the event occurs (Diantriasih et al., 2019). According to the findings of Trisanti (2020) research, there is a difference in security return variability before and after the stock split. This contradicts with the research by Yuniati et al., (2020) and A’la & Asandimitra (2017) which state that there is no difference in security return variability before and after a stock split.

This study focuses on finding out whether there are differences between stock prices, trading volume activity, and security return variability before and after stock splits in companies listed on the Indonesia Stock Exchange during the 2017-2022 periods. The findings of this study are expected to contribute significantly to future research, and can be a consideration for companies in taking stock split policies, as well as be a consideration for investors in order to increase investment opportunities and provide better information.

**Trading Range Theory**

Stock splits are used as a tool in trading range theory to reset the stock price to the expected price. When the stock price before the stock split is too high to achieve this goal, the stock splits becomes more relevant (Putri & Sihombing, 2020). In other words, stock splits are used to maintain or increase the attractiveness of a stock to investors by making it more affordable, especially if the previous stock price was already very high.

**Corporate Action**

According to Shidarta & Sofian (2018, p.146), corporate action is a strategic step chosen by public companies that has an impact on investor interests because the activities carried out can affect the total shares outstanding, the proportion of share ownership, the total shares owned by investors, price movements, increased liquidity of stock transactions, and other things that have positive implications and benefit public companies.

**Stock Split**

According to Brigham & Ehrhardt (2014, p.580), a stock split is like "dividing the cake into smaller pieces", which can reduce the previous price per share proportionally as the number of shares increases.

The purpose of the company taking this corporate action is to readjust the stock price so that it is not too high, make it easier for all investors to buy and resell, and provide signals or information to investors about the company’s quality (Hirmawan, 2020).

**Stock Price and Stock Split**

According to Trisanti (2020), stock prices are a representation of the value of limited capital ownership in a company and has been listed on the stock exchange, especially shares circulating in the market (outstanding securities), or can also be interpreted as a value formed through the process between fund providers and fund recipients, which is supported by their expectations of company’s performance that generates profitability.

Companies often use stock splits to break down shares into more affordable prices that encourage investors to buy these shares (Hartono, 2017 p.649). H₁: There are differences in Stock Price before and after the Stock Split.
Trading Volume Activity and Stock Split

The measurement of trading volume using Trading Volume Activity describes the level of trading activity in the stock market at a particular time and on a certain number of shares. TVA is one of the factors that influences stock price movements and is an essential component in forecasting stock price movements (Masyithoh, 2018).

According to Muna & Khaddafi (2022), after a stock split, there was an increase in trading volume activity caused by decreased stock prices, which made investors interested in investing so that the company's shares became more liquid.

H₃: There are differences in Trading Volume Activity before and after the Stock Split.

Security Return Variability and Stock Split

Security Return Variability, according to Indriani & Mariana (2021), is an indicator that measures the variability of profit levels or stock returns to determine market reactions in assessing the information content of an event that occurs. SRV is an analytical tool to determine the aggregate market value of the information contained in an event that causes changes in the distribution of stock returns. In the aggregate, the market assesses security return variability in stock split events as a more informative event, indicated by differences in the distribution of stock returns around the announcements (Trisanti, 2020).

H₃: There are differences in Security Return Variability before and after the Stock Split.

METHODS

This research is a quantitative study with variables of stock price, trading volume activity, and security return variability.

1. Stock prices were obtained from the closing price of companies that carried out the stock splits with an observation time of 7 days before and 7 days after the stock split.
2. Trading volume activity was calculated through:

   \[ TVA = \frac{\text{Number of shares traded}}{\text{Number of shares outstanding}} \]

3. Security Return Variability can be calculated as follows:

   \[ SRV_{it} = \frac{(AR_{it})^2}{V(AR_{it})} \]

   Description:
   - \( SRV_{it} \): Variability of stock profit rate \( i \) in period \( t \)
   - \( AR_{it} \): Abnormal return of stock \( i \) in period \( t \)
   - \( V(AR_{it}) \): Variance of the abnormal return in the period outside the announcement

This study’s population included all companies listed on the IDX for the 2017-2022 periods with a sample of companies that carried out a stock split. The sampling technique used non-probability sampling techniques in conjunction with full sampling.

The type of secondary data used in this study is cross section data from ksei.co.id, idx.co.id, finance.yahoo.com, and investing.com. The data was gathered through a review of the literature documentation.

The descriptive statistical analysis was followed by normality tests using Kolmogorov-Smirnov. The hypothesis testing of each variable would use parametric statistics Paired Sample T-Test if the data was normally distributed. Otherwise, the non-parametric statistics Wilcoxon Signed Rank Test would be used if the data was not normally distributed, which would be processed with Microsoft Office Excel 2019 and SPSS Version 28.

RESULTS AND DISCUSSION

Descriptive of Research Objects

This study observed companies that took corporate action, which are the stock splits for the period of 2017 to 2022. During this period, there were 66 companies identified as research objects of companies that had stock splits and entered into stock sector groups of the Indonesia Stock Exchange Industrial Classification or IDX-IC.
The sector that has the highest number of companies conducting stock splits, as many as 16 companies, is the consumer non-cyclicals sector. Consumer goods companies are relatively stable and less affected by the state of the country's economy because consumer goods are products that meet daily needs, cosmetics, household needs, household appliances, and pharmaceuticals (Laksana et al., 2023), so these shares are widely traded by retail investors.

Meanwhile, the property & real estate and transportation & logistics sectors only have two companies each that carried out stock splits during the period. This is because these companies have a dependence on large investments in high-capitalization assets, so they tend to use debt funding (leverage) which can provide financial flexibility without the need to conduct a stock split to attract investors or expand stock ownership.

Data processing was then carried out to provide a comprehensive picture of the data distribution by looking at the minimum, maximum, mean, and standard deviation values.

Based on descriptive statistical analysis, the average value of the stock price prior the stock split period was 1190.20 with a standard deviation of 1880.96176. Following the announcement of the stock split, the average company stock price increased to 1280.8850 with a standard deviation of 2267.10912. External factors and market sentiment, such as economic news, company performance, and market factors, can cause a change in stock price. Both periods have a larger standard deviation than...
the mean value, indicating that the data has a large variation. This can occur because companies come from a variety of sectors which results in significant variation in share prices between companies.

The average value of TVA for the period before the stock split was 0.0035395 with a standard deviation of 0.00872921. A standard deviation that is greater than the mean value indicates that the data has a large variation. Following the announcement of the stock split, the company’s average TVA fell to 0.002254689, with a standard deviation of 0.003848484. A decreased standard deviation after a stock split indicates that the data becomes more concentrated or the data variation decreases after a stock split. This decrease can occur due to other factors from the stock split such as company performance and market conditions that cause investors not to respond well to the stock split event. Most companies experienced a decrease in trading volume activity, indicating a possible decrease in liquidity post-stock split. This indicates that the increase in stock prices is not supported by the participation of market participants. It could be a sign that the stock price will experience a downtrend (bearish signal) afterwards.

The average SRV value for the period before the stock split was 82.5256 with a standard deviation of 263.34648. After the stock split announcement, the average SRV increased to 8432.9892 with a standard deviation of 50373.00472. Both periods have a larger standard deviation than the mean value, which means the data has a large variation. This can happen because companies come from various sectors which produce significant variations in security return variability between companies. Furthermore, the increase in SRV that occurs after a stock split can cause the market to assess the stock split event as very informative to the distribution of returns.

**Normality Tests**

The normality test was used to determine whether or not the data used in the study was normally distributed.

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<th>Table 3. Tests of Normality</th>
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Source: SPSS 28 (Data Processed)

The normality test results show that the variables of stock price, trading volume activity, and security return variability with variable residual values have a significance value of 0.001 as determined by the Kolmogorov-Smirnov test. If the probability sig., $\alpha \leq 0.05$, the data was not normally distributed, as a result, the non-parametric Wilcoxon Signed Rank Test would be used in the next hypothesis test analysis.

**Hypothesis Tests**

It has been found that data from variable stock prices, trading volume activity, and security return variability was not distributed normally. As a result, the non-parametric statistics Wilcoxon Signed Rank Test was implemented.
Difference in Stock Prices Before and After Stock Split

Based on hypothesis testing, the significance level using the Wilcoxon Signed Rank Test method was 0.049 lower than the 5% or 0.05 significance level. As a result, there were differences in stock prices before and after the stock split during the observation period seven days before and seven days after the announcement.

This finding indicates that the research is in accordance with the signaling theory first initiated by Spence (1973) regarding the signal concept, the stock split policy is an optimistic signal from the company’s management, indicating that the stock price will rise in the future. Furthermore, according to trading range theory, stock prices can become more affordable and easily traded by splitting shares or stock splits, making them more accessible to retail investors.

One of the factors that have a significant impact on demand and supply of shares is the rise in stock price. The stock price is considered to be lower after a stock split, thus creating an attraction for investors who have limited funds to buy shares. The stock price can increase as the number of shares purchased increases (Maulida & Mahardhika, 2021).

This is evidenced by the fact that 38 companies, or equivalent to 58% of all companies, experienced an increase in stock prices after a stock split. Conversely, there are 28 companies or about 42% of the total that experienced a decline in stock price after a stock split. The average stock price of as many as 7 company sectors increased after experienced the stock split, including the basic materials, consumer non-cyclical, energy, healthcare, industrials, property & real estate, and technology sector. This indicates that the stock split event elicited a positive market reaction, resulting in an increase in stock prices. Additionally, a total of 4 other sectors experienced negative changes, including the consumer cyclical, infrastructures, financials, and transportation & logistics. This decrease can occur due to other factors from the stock split such as company performance and market conditions that cause investors to not respond well to the stock split event.

The difference between stock prices before and after a stock split can be attributed to the market’s ability to adjust newly announced information over a longer period of time (Trisanti, 2020). The market reacts quickly to stock splits, with the highest price being shown by the average stock price on D-1 before the stock split and D+3 after the stock split. The difference in shares is also due to the fact that when a stock split occurs, each shareholder receives two new shares for every share they owned prior to the split. This doubles the number of shares owned by shareholders.

The results of this study are supported by research by Sesa et al., (2022), Yuniartini & Sedana (2020), and Firdaus & Pangestuti (2023) on companies listed on the Indonesian Stock Exchange, which discovered differences in stock prices before and after stock splits.

Difference in Trading Volume Activity Before and After Stock Split

Based on hypothesis testing, the significance level using the Wilcoxon Signed Rank Test method is 0.033 lower than the 5% or 0.05 significance level. As a result, there are differences in trading volume activity before and after the stock split during the observation period seven days before and seven days after the announcement.

The difference in trading volume activity in this study is due to investor’s decreased trading transactions following the stock split. This is evidenced by the decrease in average trading volume activity before the announcement of 0.00353952, while after the announcement it became 0.00225469. This finding is not in accordance with the trading range theory first developed by Richard W. Schabacker (1932), in this context after a stock split,
shares will be liquidated again and result in an increase in trading volume.

The trading volume activity decrease is also seen in a number of companies, with as many as 40 companies or equivalent to 61% of the total, experiencing a TVA decrease after the stock split. On the other hand, there are 26 companies or 39% of the total, experienced an increase in TVA after the stock split. Viewed from the industrial sector, there are 6 sectors that experienced positive changes in TVA after stock splits, including the consumer non-cyclical, consumer cyclical, energy, healthcare, industrials, and property & real estate. Then, 5 sectors show negative changes, including the basic materials, infrastructures, financials, technology, and transportation & logistics sectors. This decline can occur due to other factors from stock split such as company performance and market conditions that cause investors not to respond well to stock split events.

Overall, the average trading volume activity that decreased was caused by the negative response of market participants to the stock split announcement that preferred not to buy and sell when the stock split event occurred. The participation of market participants did not support the increase in stock prices. It could be a sign that the stock price would experience a downtrend (bearish signal) afterwards. In addition, another influencing factor is the fundamental performance of companies that conduct stock splits, such as a decrease in profits as mentioned by Sesa et al., (2022).

The theory linking of the trading range theory with stock splits is that stock splits can affect stock prices by expanding the trading range. A trading range is the price range of a stock over a given time period. A stock split, according to this theory, can broaden the trading range by lowering the price per share while increasing the number of shares outstanding. This can expand the range of stock prices traded and enable market participants to trade stocks across a broader price range. However, the impact of a stock split on stock prices may vary depending on market conditions and other factors.

This is in accordance with Hidayati & Putri (2022) research which reveals differences in trading activity volume because investors prefer companies that provide benefits in short term, such as dividends, rather than companies that only have the potential to provide profits in the future. In addition, research by Firdaus & Pangestutti (2023), Irvangi & Rahmani (2022), Purwata & Wiksuan (2019), and Muna & Khaddafi (2022) on companies listed on the Indonesian Stock Exchange, discovered differences in trading volume activity before and after the stock split.

### Difference in Security Return Variability Before and After Stock Split

Based on the hypothesis testing, the significance level using the Wilcoxon Signed Rank Test method was 0.009 lower than the 5% or 0.05 significance level. As a result, there were differences in security return variability before and after the stock split during the observation period seven days before and seven days after the announcement.

This finding is consistent with signaling theory, which considers stock split events provide information to investors about the prospect of future positive returns and are a signal about long-term and short-term profits. The greater the variability of stock returns, the more varied the daily returns obtained by investors (Yuniati et al., 2020).

It can be seen in the number of corporations, with up to 46 companies or equivalent to 70% of all companies, experiencing an increase in SRV after a stock split. This increase in SRV may reflect the high volatility and price changes after the stock split. On the other hand, there are 20 companies or 30% of the total that experienced a decrease in SRV after a stock split where a decrease in SRV may indicate a more stable market after the stock split.

There is only 1 company sector that experienced negative changes, which is the financial sector. Meanwhile, the other 10 sectors experienced positive changes in average security return variability after the stock split, including the basic materials, consumer non-cyclical, consumer cyclical, energy, infrastructures, healthcare, industrials, property & real estate, technology, and transportation & logistics sectors. This is because the financial sector has different components and financial reporting. In addition, earnings information in the financial sector has different characteristics from the non-financial sector (Gusnita & Taqwa, 2019).

The difference between SRV before and after the stock split can be seen in the overall average, which has increased. This can be caused by the adjustment to the new price that occurs as a result of the stock split, resulting in a change in the
distribution of returns after short-term announcements. This can be interpreted that the market in aggregate assessing the stock split event as an event with informative content that can provide information to investors about the prospect of positive returns, and stock split announcements have enough information content to influence investor preferences in investing, as evidenced by the difference in the distribution of stock returns around the announcement.

This research result is in line with research by Trisanti (2020), which found that there are differences in security return variability before and after the stock split. However, it is not in accordance with the research of A’la & Asandimitra (2017) and Yuniati et al., (2020) on companies listed on the Indonesian Stock Exchange, which found no difference between security return variability before and after the stock split.

CONCLUSION

According to the research results that have been described, there are noticeable differences in stock prices before and after stock splits, trading volume shows variations before and after the corporate event, and there are notable disparities in security return variability before and after stock splits in companies that carried out stock splits in the 2017-2022 periods. The research results can be used as a reference and source of information about the impact of the company’s stock split policy. Companies can use positive stock prices and security return variability to boost investor confidence. The variable trading volume activity that decreases in the majority of shares, things that may be done by the companies to increase liquidity are to improve company performance and not just carry out corporate actions in the form of stock splits. As well as for investors, it can be a reference to investment decisions in companies that will conduct stock splits in order to review the information provided by the company and consider other factors such as company fundamentals and market sentiment. Furthermore, researchers are encouraged to extend the observation period before and after the stock split to improve accuracy in capturing long-term effects, and add risk parameters to provide deeper insight into the level of risk in the context of the stock split.

REFERENCES


