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Stock Return of Companies on the Indonesia Stock Exchange: A Comparative Study Before and After a Stock Split

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Research article

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Abstract: A stock split is one of the corporate actions that the company can take to reduce the nominal value of the share price. A stock split is done by increasing the number of outstanding shares to encourage more share trading. This study aims to test whether there is a significant change in the performance of stock returns before and after the stock split operation. This study will use a quantitative research methodology, and the sampling strategy will be purposive sampling. These two things will go hand in hand. The data type used is secondary data, which is the daily closing price of shares. These prices are then processed so that the stock returns can be calculated. The length of time for the study was 20 days, starting ten days before the stock split activity and ending ten days after the stock split activity. This is done according to the stock split date. Because the normality test results showed that the returns obtained before and after the stock split are not normally distributed, the Wilcoxon marked rating test applied in SPSS version 25 will be used to test the hypothesis regarding the distribution of returns before and after the stock split. Hypothesis testing resulted in the conclusion that there is a substantial difference between return and stock split. This conclusion was reached based on the test findings.

Keywords: stock splits; stock returns; Indonesia Stock Exchange.

1. Introduction

Badan Koordinasi Penanaman Modal (BKPM) reported on the reality of investment in 2019 amounting to IDR 809.6 trillion, which increased by 2.06275% in 2020 to IDR 826.3 trillion, but decreased by 20.1985% in the period of January-September 2021 to IDR 659.4 trillion (Finaka, 2021). This indicates that there are fluctuations in investment in the capital market.

Stocks are one of the financial instruments companies issues and are one of the options chosen when making decisions on business financing (Awala et al., 2020; Dewi et al., 2022). Stocks also can generate a profitable rate, making them a popular choice among investors compared to other investment instruments (Martalena & Maya, 2011). Corporate action news can capture the attention of those involved in the stock market, especially those interested in buying and selling stocks (Nuraeni et al., 2021).

There are several types of corporate actions, including Initial Public Offering (IPO), partial delisting (removal of some stocks from the exchange), an announcement of stock dividends, joint ventures, stock mergers (reserve stock), stock splits, and others. The following is data on the number of companies that implemented these policies in 2019-2021:

Table 1. Number of Companies Doing Action Corporations in 2019 - 2021

No	Type Action Corporation	Amount company (in year)			Total
		2019	2020	2021	
1	*Initial Public Offering*	35	29	44	108
2	*Partial Delisting*	1	2	17	20
3	Stock Dividend	0	0	2	2
4	Join Business	1	0	0	1
5	*Reverse Stock*	0	0	0	0
6	*Stock Splits*	11	5	8	24
	Total	48	36	71	155

Source: IDX Action Corporation 2019-2021

From the table above, besides IPOs, stock splits are also among companies' most sought-after corporate actions. In 2019, 11 companies implemented stock splits, followed by five in 2020 and 8 in 2021. Corporate actions taken by companies can influence investment decisions through the mechanism of supply and demand of company stocks.

Stock splits are stock cosmetics, meaning it is a way to polish stocks even though they do not increase wealth for investors but make them look more attractive (Datta & Banerjee, 2012). This stock split action can also affect investors, as holding more shares will make their portfolios more volatile. Therefore, stock splits are an action that has no economic value. However, many cases of stock splits in the stock market show attractive signs that, in practice, stock splits are essential tools in the stock market. The occurrence of stock splits can reduce the price of shares, which is expected to attract investors from various backgrounds, increase stock liquidity, and provide returns.

With a stock split strategy, investors will be more interested in participating in the supply and demand mechanism of the stock market (Ikenberry et al., 1996). The higher the trading mechanism, the higher the resulting stock price tends to be volatile. The higher the stock price, the higher the potential for returns.

Previous researchers have shown inconsistencies in their data findings. Various studies have shown controversial results regarding the effect of stock splits. Stock splits are a highly controversial topic and a hot topic in the field of economics (Wardani, 2010). Fauzi & Hidayat (2016) stated that stock split information significantly influences abnormal returns. Additionally, research conducted by Kristianiarso (2014) stated that there is a significant difference between stock returns before and after a stock split, while research conducted by Rukmana (2020) found that the average stock returns before and after the announcement of a stock split did not have a significant difference.

2. Literature Review

2.1. Stock or Share

Stock or share is securities that represent ownership in a company. Investors are said to own a company if they hold shares, and the extent of their ownership is determined by the number of shares they hold. Shares are defined as a form of involvement of individuals or entities in the ownership of a corporation or a limited liability company. The shares take the form of a piece of paper indicating that the document holder is the owner of the security that was issued. The company that issues the securities is referred to as the issuer (Darmadji, 2011).

2.2. Stock returns

Return is a benefit that will be obtained by companies, individuals, and an institution based on the results of investment policies carried out (Fahmi, 2013). Return is one of the reasons why investors make investments because investments are made by buying shares by investors to get profits in the form of returns. Therefore, if no return is generated, investors are reluctant to invest (I'niswatin et al., 2020).

Returns can be divided into two categories: realized return and expected return. Realized return, also known as the actual return, is the type of return that has occurred and can be used as a basis for evaluating the return on expectations and potential risks to be faced in the future (Li et al., 2011). Expected return refers to the type of return investors anticipate receiving in the not-too-distant future. Another way to put it is that this anticipated return represents some unfulfilled control. The formula for calculating return is (Hartono, 2015):

$$R = \frac{Pt - Pt-1}{Pt-1} \ldots$$

Description :

R = individual stock *return* for time t

Pt = *price,* ie price share For time t

Pt - 1 = *price,* ie price share time previously

2.3. Corporate Action

Corporate action refers to the stock market activities that reflect important actions by listed companies that affect the interests of stockholders (Basir & Fakhruddin, 2005). For stockholders, there are corporate actions that attract the attention of related market players. The general purpose of corporate actions by management is to ensure that the company obtains all possible benefits, such as funding sources so that its business operations can run smoothly and efficiently. If these activities produce optimal results, they can create added value for stakeholders.

The types of policies that issuers usually undertake include stock splits, reserve splits, rights issues, acquisitions, spin-offs, initial public offerings, bonus shares, mergers, secondary offerings, distribution of dividends in cash or stock, stock buyback, and additional listings such as private placements, stock conversions from warrants, rights, or bonds.

2.4. Stock Split

As a result of a stock split, the number of shares increases, and the nominal value decreases (Jumady & Halim, 2020). Splitting shares into n shares is the definition of a stock split (Novitasari et al., 2020). There has been an increase in price for each new share since the last stock split. Consequently, a stock split does not increase the company's value because a stock split does not have economic value. Therefore, for a company to stand out in the stock market, even if it does not increase earnings per share for stockholders, the company may conduct a stock split (Jogiyanto, 2010).

2.5. Theory Stock Split

Larasanti (2017) identified three theories related to stock splits. These theories are Signaling Theory, Trading Range Theory, and Liquidity Theory:

1) Signaling Theory

A stock split sends shareholders a positive message about the company's future operations. However, the market will respond to the news of a stock split even if it does not have economic value. This is because the market recognizes the potential prosperity of the company.

2) *Trading Range Theory*
States that a high stock price can decrease the volume of active stock trading, which can lead to a stock split being performed by the company. It is believed that more investors will become active due to the stock split, which will cause the stock price to rise.
3) Theory Liquidity
States that a stock split can encourage the stock price to fall to a more affordable and attractive level for investors, making the stock more liquid. A stock split will increase investors' buying power, making it easier to trade the stock. Additionally, a stock split will increase the liquidity of the company's stock trading, which is indicated by an increase in stock trading volume.

2.6. The Effect of Stock Split on Stock Return

Corporations decide to split their shares to obtain a lower stock price while increasing the number of outstanding shares. Existing investors are expected to be more interested in buying the shares, and new investors will be attracted, thereby obtaining additional capital. The stock split policy is a signal for the company about the company's improved opportunities in the future, and the company can provide information to investors about the expected increase in stock return. Additionally, the stock split action is a signal for the company about the company's good opportunities in the future. Investors will have a higher level of interest in investing as a result.

3. Research Method

In this research, the data analysis method is based on comparative data with a quantitative approach. From 2019 to 2021, 24 companies listed on the Indonesia Stock Exchange underwent stock splits, each company doing it independently. This study also used a specific type of data known as time series data and secondary data provided the raw material for this data. The data used in this research is historical data on daily stock prices of companies listed on the Indonesia Stock Exchange that underwent stock splits from January 1, 2019, to December 31, 2021. The data source was obtained from media and internet-based websites (www.idx.co.id and www.finance.yahoo.com). The data collection technique was documentation based on the event window before and after the relevant stock split.

3.1. Sample Study

The sampling technique used in this study is purposive sampling, chosen to obtain a sample that can represent the population. The criteria for selecting the sample are as follows:

1) Companies listed on the Indonesia Stock Exchange that have implemented a Stock Split policy during the period 2019 to 2021.
2) The companies implemented no other policies during the Stock Split that could impact the stock price, stock return, and stock liquidity. Other policies include warrants, reverse stocks, stock dividends, and others.
3) Companies with complete available data for research purposes, namely companies that have daily closing price data for the research period.
4) Companies that actively engage in stock trading during the research period.

Sixteen companies were selected as research samples based on the predetermined criteria.

3.2. Data Analysis Techniques

1) Calculate the daily return value of each stock using the formula for stock return.
2) The technique used to analyze this research is the paired t-test, with a research time of 10 days before and after the stock split in all studied companies. In this study, all samples with similar actions are tested together. Measurement and analysis of the study were conducted using SPSS version 25.
3) Descriptive statistical analysis.
4) Normality test using the Kolmogorov-Smirnov test. If the sample results are normally distributed, the parametric test (paired sample t-test) is used for the subsequent test. However, if the sample is not normally distributed, the non-parametric test (Wilcoxon signed rank test) is used for the subsequent test.
5) Paired Sample T-Test or paired t-test. The decision-making criteria for this hypothesis test are:
   a) If the probability value is < 0.05, Ha is accepted, indicating a significant difference between the stock returns before and after the split.
   b) If the probability value is > 0.05, Ha is rejected, indicating no significant difference between the stock return before and after the stock split.
6) Wilcoxon Signed Rank Test, the decision-making criteria for hypothesis testing are:
   a) If the probability value in the sig. (2-tailed) the column is < 0.05, meaning there is a significant difference between the stock returns before and after the split.
   b) If the probability value in the sig. (2-tailed) the column is > 0.05, meaning there is no significant difference between the stock return before and after the stock split.

4. Results and Discussion

4.1. Statistics Descriptive

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Means	std. Deviation
Prior Stock Return	160	-.0750	.1756	.005814	.0360480
Stock Return After	160	-.2500	.3216	-.005323	.0564693
Valid N (listwise)	160				

Source : processed data writer

It is known that the smallest return on shares before the stock split is -0.0750, while the largest return on shares is 0.1756. This information is based on the table above. In addition, it is also known that the minimum return on shares after the stock split is -0.2500, while the maximum return on shares is 0.3216.

The variable return on share has a mean of 0.005814, but after the stock split, this value decreased to -0.05323. There was a decrease of 0.059044 in return on shares after the stock split. Before the stock split, the standard deviation was 0.0360480, but after the stock split, it increased to 0.0564693. There was an increase of 0.0204213 in return on share standard deviation after the stock split.

4.2. Normality Test

The following table presents the results of the normality test of stock return data before and after a stock split:

Table 3. One-Sample Kolmogorov- Sminorv Stock Return Test

	Prior Stock Return	Stock Return After
Test Statistics	.164	.203
Asymp . Sig. (2-tailed)	.000 c	.000 c

Source : processed data writer

The table above shows the results of the Kolmogorov-Smirnov test when conducting the normality test on stock return data before and after the stock split policy. It can be shown in this table:

1) The asymptotic significance value (2-tailed) or probability number of stock returns before the stock split is 0.000. From this, it can be seen that the asymptotic significance value of stock returns before the stock split is 0.000 < 0.05; therefore, it can be interpreted that the variable is not normally distributed.
2) The asymptotic significance value (2-tailed) or probability number of stock returns after the stock split is 0.000. From this, the asymptotic significance value of stock returns after the stock split is 0.000 < 0.05; hence, the variable is not normally distributed.

Since the obtained data is not normally distributed or because the significance probability value is lower than 5% (0.05), it indicates that the Wilcoxon test can be used to test whether there is a significant difference in stock return before and after the stock split policy.

4.3. Hypothesis Test

After testing for the normality of the data, statistical tests can be used to conclude the hypothesis.

Table 4. Wilcoxon *Signed Ranks Test*

		N	MeanRanking	Sum of Ranks
Stock Return After - Stock Return Before	Negative Ranks	88a	82.91	7296.50
	Positive Ranks	66b	70.28	4638.50
	ties	6 c		
	Total	160		

Source : processed data writer

This table shows the results of the hypothesis test using the Wilcoxon test. Based on the data presented in the table, there are 88 samples of stock returns after the stock split that are lower than before. The average rank for the negative ranks is 82.91, and the total rank count shows 7296.50 ranks. The table above also shows that there are 66 cases where the stock returns obtained after the stock split are superior to those before the stock split. Meanwhile, the Mean Ranks have a positive value of 70.28 and a total of 4638.50. 6 samples are the same between stock returns before and after the stock split, including Ties.

Table 5. Wilcoxon Test Statistics

	Stock Return After - Prior Stock Return
Z	-2,397b
Asymp . Sig. (2-tailed)	.017

Source : processed data writer

In the table, the Wilcoxon Signed Ranks Test shows that Z = -2.397, indicating that the return on stocks after the split is lower than before by -2.397. Additionally, the table obtained an Asymp. Sig. (2-tailed) value of 0.017. The Asymp. Sig (0.017) is smaller than α (0.05); thus, the test result indicates a significant difference between the return on stocks before and after the split. Therefore, the hypothesis in this study can be proven that there is a significant difference between stocks before and after the split.

4.4. Comparison Stock Return Before and After Stock Splits

Based on the results obtained from SPSS, the output of the test of the difference in stock returns of sixteen companies that underwent stock splits shows a significant difference in stock returns both before and after the stock split. The stock split causes this difference. From this, it can be concluded that the alternative hypothesis (Ha) is accepted, and the null hypothesis (Ho) is rejected.

In this study, the average stock returns experienced a decline before and after the stock split, which contradicts the Signaling Theory that states that such actions should increase returns. In the announcement of the stock split, it is stated that the split has the potential to convey a positive signal about the possibility of an actual increase in stock returns. However, the results show that the difference in stock returns after the stock split is not always positive, possibly due to investors not being able to anticipate the information received from the stock market or investors perceiving the news of the stock split as not being good news. In addition, a stock split ratio that is too large can cause the stock to become too cheap.

This study does not show any benefit for investors, as indicated by the overall average stock returns data after the study, which show that the return from stock splits is negative, amounting to -0.005323. The average return on the stock after the stock split decreased by 0.059044 from the previous average of 0.005814. The results of this study support the statement of Rosiana (2011) that there is a difference in stock returns before and after the stock split, Suhadak et al. (2016) stated that information from the stock split has a significant effect on abnormal returns and Kristianiarso (2014) who stated that the stock returns before and after the stock split activity have a significant difference. However, the research results by Rukmana (2020) contrast the results obtained, as the average stock returns before and after the stock split did not show a significant difference.

5. Conclusion

This research's findings show a significant difference between stock splits and stock returns in 16 representative sample companies released by the Indonesia Stock Exchange from 2019-2021 before and after the action. Results of this test state that the alternative hypothesis (Ha) is accepted as a result of the significance probability value being less than the true level (0.017 < 0.05). The average return on stocks decreased in the period following the stock split. According to the signaling theory, the information from the stock split can provide positive signals about the possibility of future actual stock returns increasing. However, this study shows that the difference in stock returns after the stock split is not always positive, which is caused by investors who cannot anticipate the announcement obtained in the capital market and who believe that the stock split news is not good news. This is due to the decrease in the amount of dividends, which can lead to a decrease in capital gains, as well as the fact that a too-large stock split ratio can cause stocks to become too cheap.

Shareholders or investors should investigate the reasons for significant differences before and after the stock split when deciding to buy or sell shares in the Indonesia Stock Exchange by conducting an analysis beforehand. For future researchers, this study can serve as a reference for further academic works in the same field, providing more in-depth and updated information, for example, by using a larger sample size and extending the observation or period range, which is expected to result in even better research.

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