The Effect of Covid-19 on January Effect Events on Index Lq45 as the Basis of Investor Decision Making

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Abstract
This study aims to determine the differences in stock prices, abnormal returns, and trading volume activity of the LQ45 Index in the January effect before the 2019-2020 COVID-19 and the January effect during the 2021-2022 COVID-19 event. This study uses a quantitative approach. The data collection technique used is the documentation method and the library method. The data source used is secondary data in the form of financial statements of companies listed in the LQ45 index stock on the IDX. The sampling technique used is purposive sampling with a total of 24 companies. The data analysis method used is the analysis of the average difference test with the observation period (event window) is 10 days at the beginning of the year opening in January. The results of this study indicate that there is no significant difference in stock prices and abnormal returns in the January effect event during the occurrence of COVID-19, while in trading volume activity there is a significant difference in the January effect event and during the occurrence of COVID-19.

Keywords: January effect, Stock Price, Abnormal Return, Trading Volume Activity, LQ45.

1. Introduction

COVID-19 pandemic is a worldwide event. At the end of December 2019 This disease outbreak first emerged from the city of Wuhan (China) which caused this city to have to do a lockdown. This condition makes human movement also hampered between cities, provinces, and countries because a number of air, land and sea transportation are also restricted and stopped (Muliati, 2020).

In trading March 09, 2020, the JCI closed down 6.5 percent to the level of 5,136 (Detikfinance, 2020). This made the Indonesia Stock Exchange announce a trading halt policy. Since the implementation of this policy, at least 6 stock trading times have been subject to a trading halt because it has fallen to 5 percent.

Sharpe (1995) mentions that there are three causes for the January effect, namely: 1) tax-loss selling, 2) window dressing, 3) small stock's beta. Tax-loss selling and window dressing basically doing the same thing, which is selling low-value stocks. The difference is that tax-loss selling is done to reduce tax debt while window dressing is done to improve the company's portfolio at the end of the year so that it looks good. Small stock's beta is a tendency when in January, small companies provide a higher rate of return compared to large companies (Fitriyani and Sari, 2013).

This research was conducted on companies that are included in the LQ45 index stock group on the Indonesia Stock Exchange. The selection of this population is based on consideration of the best and stable stock conditions, the companies included in the LQ45 index were selected on the condition that they are the top 60 companies with the highest market capitalization value and the highest transaction value in the regular market in the last 12 months.

Empirical evidence of the January effect can be seen from the studies conducted by Perez in 2018 which stated that stock returns in January were greater than other months, besides that Pradnya Paramita and Rahyuda who conducted research in 2017 suggested that the January effect affects abnormal returns. The results are different from the research conducted by Darman in 2018 with the result that the January effect phenomenon does not occur on the Indonesia Stock
Exchange. This study aims to compare the January effect when COVID-19 occurs in 2021-2022 with the January effect before the Covid-19 event in 2019-2020.

2. Overview

2.1 Market Efficiency Theory

The theory of market efficiency was first discovered in research conducted by Bacheler (1900) who wanted to know whether stock prices fluctuated randomly or not. The theory of market efficiency put forward by Fama (1970) is quite popular and is widely used as the basis for various research on market anomalies, a market is said to be efficient if no one, both individual investors and institutional investors, will be able to obtain abnormal returns, after adjusted for risk using existing trading strategies.

2.2 January Effect

January effect is a deviation in return in January, which experienced a significant increase when compared to other months (Yunita and Rahyuda, 2019). One of the most popular hypotheses regarding the cause of the January effect is tax advantages, empirical studies seek to prove that January abnormal returns are associated with tax payments at the end of the year, research states to take advantage of tax exemptions, individual investors try to sell stocks whose prices are declining, during the year, then at the beginning of the year investors buy shares thereby increasing demand and share prices (Norvaisiene, et al, 2015).

2.3 LQ45 . Index

The LQ45 index was created and published by the Indonesia Stock Exchange, this index is an index that measures the price performance of 45 stocks that have high liquidity and large market capitalization and are supported by good company fundamentals, this index was published on February 1, 1997 and evaluation of stock selection was carried out every 6 months, namely at the beginning of February and August, the base date for calculating this index is July 13, 1994 with an initial index value of 100 (idx.co.id, 2021).

2.4 Covid-19

The corona virus, also known as COVID-19, first appeared in the city of Wuhan, China. This outbreak was first announced by the World Health Organization (WHO) on January 9, 2020. According to Khan, et al (2020) when the covid-19 pandemic event spread throughout the world it did not affect the stock market, but with more and more confirmed victims, the stock market gave a negative reaction. It also causes negative abnormal returns (Liu, et al, 2020).

2.5 Stock price

Hadi (2013) stated that the stock price is the value of shares in rupiah which is formed as a result of buying and offering shares on the stock exchange by fellow stock exchange members. Stock prices can change up or down in a matter of time so quickly. This is possible because it depends on the demand and supply between the stock buyers and the stock sellers.
2.6 Abnormal Return

According to Halim (2018), abnormal return is the difference between the actual or realized return and the expected return. Brown and Warner (1985) estimate expected returns using the mean-adjusted model, market model, and market adjusted models. This study will use a market adjusted model because it is considered that the best predictor for estimating the return of a security is the market index return at that time. This model is used so that it is not necessary to use the estimation period to form the estimation model, because the estimated security return is the same as the market index return.

2.7 Trading Volume Activity

Fama (1970) stated that Trading Volume Activity (TVA) is a tool used to see how the market reacts to information in the capital market by looking at trading volume activity movements. The reaction of investors in the capital market can not only be known through changes in stock prices, but also trading volume activity or trading volume activity. A stock is said to have a good performance if the level of stock trading volume activity is high.

3. Method

3.1 Research Approach

This study uses a quantitative approach aimed at collecting, processing, and analyzing data in the form of numbers and using descriptive analysis methods to describe explanations and problem descriptions regarding phenomena taken by researchers with the aim of testing the established hypotheses.

3.2 Variable Definition

1. Independent Variables

The independent variable is a variable that affects or is the cause of the change or emergence of the dependent variable. In this study the independent variable is the January effect.

2. Dependent Variable

The dependent variable is the variable that is affected or the result, because of the independent variable. In this study the dependent variable is as follows:

A. Price share

The share price is determined by market participants and is determined by the demand and supply of the shares concerned in the capital market. Stock prices can be measured by the formula:

\[ \text{Stock Price} = \frac{H_{St} - H_{St-1}}{H_{St-1}} \]

Where:

- \( H_{St} \) = Share price of company i in period t.
- \( H_{St-1} \) = Share price of company i in period t-1
B. Abnormal returns

Abnormal Return calculation can be done by reducing the actual return with the expected return, so that it can be formulated as follows (Jogiyanto, 2017):

\[ AR_{i,t} = R_{i,t} - E(R_{i,t}) \]

Where:

- \( AR_{i,t} \) = abnormal return of security \( i \) at time \( t \)
- \( R_{i,t} \) = Actual return of security \( i \) at time \( t \)
- \( E(R_{i,t}) \) = The expected return of security \( i \) at time \( t \)

C. Trading Volume Activity

Foster (1986) states that stock trading volume activity can be seen by using the trading volume activity indicator by dividing the company's shares traded with the company's outstanding shares.

\[ TVA = \frac{\text{shares of company } i \text{ traded at time } t}{\text{shares of company } i \text{ outstanding at time } t} \]

3.3 Population

The population in this study are all stocks listed in the LQ45 stock index on the Indonesia Stock Exchange as many as 45 companies.

3.4 Sample

The reason for using the LQ45 index stock as the research sample is because the companies included in the LQ45 index are companies whose stock price performance has high liquidity and large market capitalization and is supported by good company fundamentals, so that market reactions look clearer and more accurate. The sampling technique in this research is using a non-probability sampling approach with purposive sampling method, namely the method of determining the sample based on certain criteria. There are 24 LQ45 index stock companies that meet the sampling criteria.

Table 1. List of LQ45 Index Stock Companies Listed on the IDX

<table>
<thead>
<tr>
<th>NO</th>
<th>Stock code</th>
<th>Company name</th>
<th>IPO date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANTM</td>
<td>Aneka Tambang Tbk.</td>
<td>27 November 1997</td>
</tr>
<tr>
<td>2</td>
<td>ASII</td>
<td>Astra International Tbk</td>
<td>April 4, 1990</td>
</tr>
<tr>
<td>5</td>
<td>BBTN</td>
<td>State Savings Bank (Persero) Tbk.</td>
<td>December 17, 2009</td>
</tr>
<tr>
<td>7</td>
<td>BSDE</td>
<td>Bumi Serpong Damai Tbk.</td>
<td>June 6, 2008</td>
</tr>
<tr>
<td>8</td>
<td>EXCL</td>
<td>XL Axiata Tbk.</td>
<td>September 29, 2005</td>
</tr>
</tbody>
</table>
3.5 Analysis Tools

Hypothesis testing was carried out using a different test of two related averages, namely the paired sample t-test. The purpose of using paired sample t-test is to compare whether there are differences or similarities in the average of a group of data samples with a certain average value. The determination of the difference test is carried out by the normality test of the data. If the data is normally distributed, then the paired sample t-test is used parametric statistics, but if the data is not normally distributed then the nonparametric Wilcoxon signed rank test is used.

4. Research Results and Discussion

4.1 Descriptive Statistics

Descriptive statistical tests were conducted to find out the description or description of stock prices, abnormal returns, and trading volume activity before and during the event, as well as the total assets of the sample under study. The results of the descriptive statistical test of this study are:

Table 2. Descriptive Statistics of Stock Prices, Abnormal Returns, and Trading Volume Activity

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>mean</th>
<th>Std.deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS_BEFORE</td>
<td>20</td>
<td>-17365795.00</td>
<td>17122307.00</td>
<td>44,159,844,000</td>
<td>832,978,730,100</td>
</tr>
<tr>
<td>HS_HAPPENS</td>
<td>20</td>
<td>-5671254.00</td>
<td>29165816.00</td>
<td>62,799,598,000</td>
<td>966,148,440,500</td>
</tr>
<tr>
<td>AB_BEFORE</td>
<td>20</td>
<td>-10719586.00</td>
<td>13654391.00</td>
<td>26,664,105,500</td>
<td>676,021,940,200</td>
</tr>
<tr>
<td>AB_HAPPENS</td>
<td>20</td>
<td>-17288548.00</td>
<td>14666206.00</td>
<td>3,695,5122,000</td>
<td>712,465,348,100</td>
</tr>
<tr>
<td>TVA_BEFORE</td>
<td>20</td>
<td>1207.00</td>
<td>2433829.00</td>
<td>12,341,852,500</td>
<td>71,961,344,040</td>
</tr>
<tr>
<td>TVA_HAPPENS</td>
<td>20</td>
<td>82435.00</td>
<td>6364119.00</td>
<td>28,802,761,500</td>
<td>219,630,517,600</td>
</tr>
</tbody>
</table>

Source: Research Results, Processed Data, 2022

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Based on Table 2, the number of samples (N) 20 is period event data that shows a description of stock prices, abnormal returns, and trading volume activities, from 24 This company has the smallest value (minimum) is -5671254.00 while the highest value (maximum) is 6364119.00. The minimum value of the stock price before and during the event is -17365795.00 and -5671254.00, the maximum value before and after the event is 17122307.00 and 29165816.00, and the mean before and after the event is 44,159,844,000 and 62,799,598,000 which indicates an increase in the average share price when the event occurred.

Abnormal returns before and when the event occurs The minimum values are -10719586.00 and -17288548.00, the maximum values before and after are 13654391.00 and 14666206.00, and the mean before and after are 26,664,105,500 and 3,695,512,000, which indicates a decrease in the average when the event occurred.

Trading volume activity before and during the occurrence of the event has a minimum value of 1207.00 and 82435.00, a maximum value before and during the occurrence of an event of 2433829.00 and 6364119.00, and the mean before and during the occurrence of an event that is 12,341,852,500 and 28,802,761,500 which indicates an increase in trading activity when the event occurs.

4.2 Hypothesis Test

Hypothesis Testing 1

Table 3. Test Results Paired Sample T-Test Stock Prices Before and During the Event

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>T</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>95% Confidence Interval of the Difference</td>
</tr>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS_Before - HS_Occurrence</td>
<td>143304</td>
<td>1863</td>
<td>57.040</td>
<td>1950</td>
</tr>
<tr>
<td></td>
<td>8570835.7 94300</td>
<td>4842884</td>
<td>58</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3 explains that the results of the paired sample t-test are the same price has a value of Sig. (2-tailed) of 0.568. In accordance with the test criteria where Sig. 0.568 is greater than the 0.05 significance level, then Ho is accepted and H1 is rejected or in other words there is no significant difference in stock prices in the January effect event before the 2019-2020 covid-19 even and the January effect event when the covid - 19 event occurred.
Hypothesis Testing 2

Table 4. Test Results *Paired Sample T-Test Abnormal Return Before and During the Event*

Source: Research Results, Processed Data, 2022

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>T</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>95% Confidence Interval of the Difference</td>
<td>Lower</td>
</tr>
<tr>
<td>Pair 1</td>
<td>AB_ Before – AB_ Occurrence</td>
<td>2296 859.3</td>
<td>109737 17.840</td>
<td>-245 790</td>
</tr>
</tbody>
</table>

Table 4 explains that the results of the *paired sample t-test abnormal return* have a *Sig value. (2-tailed)* of 0.361. In accordance with the test criteria where Sig. 0.361 is greater than the 0.05 significance level, then Ho is accepted and H1 is rejected or in other words, there is no significant difference in *abnormal returns* in the *January effect* before the 2019-2020 *covid-19* event and the *January effect event* during the COVID-19 outbreak. 19 years 2021-2022.

Table 5. *Wilcoxon Sign Rank Test Results Trading Volume Activity Before and During the Event*

<table>
<thead>
<tr>
<th></th>
<th>TVAShapping – TVABefore</th>
<th>Z</th>
<th>asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>-3.061 b</td>
<td>.002</td>
</tr>
</tbody>
</table>

Source: Research Results, Processed Data, 2022.

Table 5 explains that the results of the *Wilcoxon sign rank test trading volume activity* for the *January effect* before the *Covid-19* event and the *January effect event* during the *Covid-19* event have a *p-value* of 0.002. In accordance with the test criteria with a *p-value* (0.002) < 0.05, H1 is accepted and Ho is rejected, which means that there is a significant difference in *trading volume activity* in the *January effect event* before the 2019-2020 *covid-19* event and the *January effect event* when the *covid-19* occurs in 2021-2022.

5. Cover

5.1 Conclusion

Referring to the results of the analysis and discussion described in the previous chapter, the conclusions of this study are:

1. There is no significant difference in the stock price of the LQ45 index in the *January effect* before the 2019-2020 *covid-19* and the *January effect* during the 2021-2022 *covid-19* event.

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2. There is no significant difference in abnormal returns for the LQ45 index in the January effect before the 2019-2020 covid-19 and the January effect during the 2021-2022 covid-19 event.
3. There is a significant difference in the trading volume activity of the LQ45 index in the January effect before the 2019-2020 covid-19 and the January effect during the 2021-2022 covid-19 event.

5.2 Suggestions
Based on the results of research, data analysis, discussion and conclusions, the researchers put forward the following suggestions:

1. Further research that has the same research focus can add research samples by using all companies listed on the Indonesia Stock Exchange as research samples. It is hoped that the addition of a larger research sample will result in a more accurate test of the effect of a big event on calendar anomalies in the Indonesian capital market. In addition, it is expected to add other calculation instruments that can be used to see the reaction of the capital market to an event.
2. Investors are advised not to make the January effect phenomenon as the only main guideline for investment decisions, so that investors can make more informed decisions regarding their investments.

References

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www.idx.co.id, diakses 28 April 2021


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