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Analysis of LQ 45 stock index performance during the covid-19 pandemic

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Article Info

Abstract

The purpose of this study is to test and prove the significant differences in the performance of LQ45 stocks before and after the national announcement of the Covid-19 outbreak. This research uses secondary data and quantitative research with the event study method. The events observed in this study were the Covid-19 outbreak on stock performance as measured by changes in stock prices and LQ45 stock returns before and after the Covid-19 pandemic was announced. The sampling technique in this study used a saturated sampling technique. Therefore, the sample of this study is all listing companies listed on the Indonesia Stock Exchange (IDX) with the LQ45 index category, namely 45 issuers. The analysis technique used is paired sample t-test if the data is normally distributed, but if it is not normal then use the Wilcoxon signed rank test. The results of the study showed that there were significant differences in LQ45 stock prices and stock returns before and after the national announcement of the Covid-19 outbreak. Thus, the existence of the Covid-19 outbreak in Indonesia affected the stock price and stock returns of LQ45.

Keywords: Covid-19, stock prices, LQ45 index, and stock returns

Introduction

Corona virus disease or commonly known as Covid-19 is a disease outbreak that can cause death, especially in the elderly population. In just a short time, the spread of the virus increased rapidly and increased the number of deaths (Martini *et al*., 2020) [23]. Based on information obtained from CNBC Indonesia news, it stated that the Covid-19 outbreak was announced and determined on March 2, 2020. The total population affected by the Covid-19 virus as of May 2, 2020 was 10,843 (CNBC Indonesia, 2020).

According to Darmayanti *et al*. (2020) [12] the impact of Covid-19 urgently requires a quick and appropriate response from the government, both in the economic and health sectors. In the economic sector, the Covid-19 virus has had an impact on the business world where sales have dropped dramatically, production has decreased so that many employees have been selected for layoffs and this has resulted in an increase in the unemployment rate and also affected the capital market. This was shown by the decline in the Jakarta Composite Index (IHSG) on the Indonesia Stock Exchange on March 9 2020, which decreased by 6.5% to a level of 5,136. On March 2, 2020, the JCI also experienced a decline of more than 5%, so that the Financial Services Authority (OJK) provided a policy as a means of defense until global economic conditions recovered (CNBC Indonesia, 2020).

Based on the presentation of the Covid-19 pandemic in Indonesia, it is known that it has the potential to cause a market reaction on the Indonesia Stock Exchange on share prices, trading volume and stock returns. In line with the view according to Darmayanti *et al*. (2020) [12] which explains that the capital market can affect stock prices because stock prices are a reference for analysis of yields or stock returns. Martini *et al*. (2020) [23] stated that stock performance declined during the Covid-19 pandemic. Besides that, all LQ45 index shares also experienced a decline. One of which was proven, namely Indofood CBP shares which experienced the lowest decline of 11.66%. Based on this explanation, it can be concluded that the Covid-19 pandemic also had an impact on the decline in the performance of the LQ45 stock index.

Based on the results of previous research conducted by Martini *et al*. (2020) [23] showed that there was a significant difference in the performance of LQ45 shares before and during the Covid-19 pandemic in Indonesia for companies listed on the Indonesia Stock Exchange. Supported by the results of research conducted by Khan *et al*. (2020) [19] and Budiyanti (2020) [9] that there is a negative influence from the spread of Covid-19 which can be detrimental to various related parties. The research results of Thomas *et al*. (2020) show that there is an impact of Covid-19 on NIFTY (National Stock Exchange of India). The impact of other events that can affect stock performance is evidenced in the research results of Ayu *et al*. (2015) [7] which states that there are differences in stock performance before and after a stock split. Meanwhile, the results of Al-Awadhi & Alhammadi's research (2020) [1] show that major events significantly affect stock returns. The major event in question is a condition that has a global influence or an enormous impact such as the Covid-19 pandemic.

Another incident major has been described by Darmayanti *et al*. (2020) [12] that political events also influence stock returns. Research related to stock performance analysis during the Covid-19 pandemic is still difficult to find. This is because the research topic is still relatively new, so this study links the Covid-19 event variable to the LQ45 stock performance.

Based on the background above, this study aims to analyze and prove whether there are significant differences in stock performance before and after the national announcement of the Covid-19 outbreak.

According to Fama (1970) and Hanafi (2004) [14] in market efficiency theory explains that the capital market can be said to be efficient if stock prices reflect all of the information available on the market. Meanwhile, according to Markowitz (1952) [22] efficient market theory explains the relationship between trust and investor choice in the context of selecting portfolios that have lower risk expectations. Therefore, there is a very close relationship between an efficient capital market and the Covid-19 pandemic phenomenon, where stock returns are correlated with systematic risk. This means that the less information a company provides regarding its stock returns, the less interested investors will be in investing. In line with the signaling theory according to Connelly *et al*. (2011) [10] that when a company has information related to company performance including good financial performance and stock performance, it will be able to attract investors to invest in the company, so that this can be called a good signal (good news) by investors. The Covid-19 event is a bad signal (bad news) which can affect the decline in stock prices so that it also influences company stock returns (Anh & Gan, 2020) [3].

According to Antono *et al*. (2019) [4] stock price is a reflection of the performance of a company. Stock prices can affect investment interest because the value of the company is reflected in the stock price, where if the stock price increases, it will also be followed by an increase in investor interest in investing. According to Sartono (2010: 41) the stock price is the present value of the cash flow that is expected to be received. Therefore, the stock price at any given time will depend on the cash flows expected to be received in the future by the investor who buys the stock.

According to Jogiyanto (2014: 235) [18] stock returns are defined when investors invest their capital with the aim of obtaining returns or yields on funds that have been invested in the company. The rewards are in the form of dividends and capital gains. In line with Astohar (2012) [6] which states that

stock returns are the results obtained from an investment. According to (MacKinlay, 1997) [20] event study is a research method that uses financial market data to measure the impact or influence of an event or events on an object such as company value, can be seen from the share price and transaction volume. The event study method is generally used to analyze the impact of financial market emergencies.

According to Tjiptono & Fakhruddin (2008: 109) and Polakitan (2015) the LQ45 index is a collection of 45 selected issuer shares based on the highest level of liquidity. The LQ45 index can show decreases and increases in stock prices at certain times rather than the overall stock prices at different times. This information is very useful for investors as a consideration in making investment decisions, considering that obtaining returns is so important in the future. Therefore, according to Martini *et al*. (2020) [23] the LQ45 index is an indicator of the stock index on the Indonesia Stock Exchange which can be used as a reference as material for assessing stock trading performance. Thus, the LQ45 index is in great demand by investors because it has a high capitalization which results in better prospects for company growth and the financial condition of the stock.

Based on the previous exposure, the following hypotheses can be obtained:

H1: there is a significant difference in LQ45 stock prices before and after the national announcement of the Covid-19 outbreak.

H2: there is a significant difference in LQ45 stock returns before and after the national announcement of the Covid-19 outbreak.

Research Methods

This research uses a quantitative approach with the event study method. According to Hartono (2017: 643) [16] event study is a method used to measure directly the magnitude of the effect of the event. In this study, the events observed were the Covid-19 outbreak on stock performance as measured by stock prices and stock returns before and after Indonesia's national announcement of Covid-19.

The type of data used in this study is secondary data obtained from the official website of the Indonesia Stock Exchange (IDX), including daily closing prices before and after the national announcement of the Covid-19 outbreak in Indonesia. The collection of research data is based on the observation period (event window), which is 11 days consisting of 2 parts, namely 5 days (t-5) before the national announcement of Covid-19 and 5 days (t+5) after the national announcement of Covid-19 while t0 is on the day the announcement of the COVID-19 outbreak in Indonesia was set to be 02 March 2020. Supported by the research of Ayu *et al*. (2015) [7] which states that event study observations in research are not recommended to exceed the 11 day period because it is feared that performance or stock returns will be affected by other factors.

The sampling technique in this study used a saturated sampling technique, which is a sampling technique if the entire study population is used as a research sample (Sugiyono, 2017:27). Thus, the sample of this study were all listing companies listed on the Indonesia Stock Exchange (IDX) with the LQ45 index category, namely 45 issuers.

The measurement of this research variable uses Ayu *et al*. (2015) [7], Martini *et al*. (2020) [23], and Darmayanti *et al*. (2020) [12]. Stock performance as the dependent variable as measured by stock prices and LQ45 stock returns. The Covid-

19 pandemic event as an independent variable as well as an event study variable, namely in the form of data taken before and after the announcement of the Covid-19 outbreak was established. In contrast to previous research, Ayu *et al*. (2015) [7] who used a stock split as an event study variable.

Based on Darmayanti al. (2020) [12] stock prices are obtained from daily closing prices. While stock returns use measurement indicators Alex & Latheef (2017), namely the daily stock return formula as follows:

Daily stock returns = (p1 – p0) / p0

Information:

P1 = current day's closing price

P0 = previous day's closing price

The measurement of the Covid-19 event variable uses the measurement indicator Darmayanti *et al*. (2020) [12] namely as follows:

1. Data before the national announcement of the covid-19 outbreak in Indonesia (X1)
2. Data after the national announcement of the covid-19 outbreak in Indonesia (X2)

Data from these events include price data and LQ45 stock returns.

In this study, a normality test was used to test whether the data contained in these variables was normally distributed (Ghozali, 2018: 161) [14]. The normality test can use the Kolmogrov-Smirnov (KS) test, but if the research sample data is less than 50 then the Shapiro Wilk normality test can be used with the condition that the value of Sig. smaller than 0.05 then the data is normally distributed, but if the Sig value is greater than 0.05 then the data is not normally distributed.

Testing the hypothesis in this study used a different test on the LQ45 stock price and stock return variables to find out whether there were differences that occurred before and after the national announcement of the Covid-19 outbreak in Indonesia. In this study, the difference test between variables can use the Paired Sample t-Test if the data is normally distributed, and the Wilcoxon Signed Rank test if the data is not normally distributed. The basis for making decisions about the Paired Sample t-Test and the Wilcoxon Signed Rank test according to Santoso (2014: 265) are as follows:

▪ If the Sig. (2-tailed) < 0.05, then H0 is rejected and Ha is accepted
▪ If the Sig. (2-tailed) > 0.05, then H0 is accepted and Ha is rejected

Based on the previous explanation, H0 meant that there was no difference in stock prices and stock returns of LQ45 before and after the national announcement of Covid-19, while Ha meant there was a difference in stock prices and stock returns of LQ45 before and after the national announcement of Covid-19.

Results and Discussion

With computer aids that use the SPSS program, the results of the descriptive statistical test are obtained which can be seen in the following table:

Table 1: Descriptive Statistical Test Results

	Min.	Maks.	Mean	Std. Dev
Pre test- CP	203	53,785	5806,8	9316,0
Post test- CP	201	49,775	5589,2	8780,7
Pre test–RS	-0,050	0,01346	-0,0198	0,0109
Post test- RS	-0,035	0,02295	-0,0129	0,0129

Based on table 1, information can be obtained related to the results of the descriptive statistical test so that it can be explained as follows:

1. LQ45 Share Price Variable before the National Announcement of Covid-19 in Indonesia the minimum value obtained for the LQ45 stock price variable before the national announcement of the Covid-19 outbreak in Indonesia was 203 and the maximum value was 53,785. The average value is 5806.80 with a standard deviation of 9316.047.
2. LQ45 Share Price Variable after the National Announcement of Covid-19 in Indonesia the minimum value obtained for the LQ45 stock price variable after the national announcement of Covid-19 in Indonesia was 201 and the maximum value was 49.775. The average value is 5589.20 with a standard deviation of 8780.703.
3. LQ45 Stock Return Variable before the National Announcement of Covid-19 in Indonesia the minimum value obtained for the LQ45 stock return variable before the national announcement of Covid-19 in Indonesia was -0.05053 and the maximum value was 0.01346. The average value is -0.0198 with a standard deviation of 0.01098551.
4. LQ45 Stock Return Variable after the National Announcement of Covid-19 in Indonesia the minimum value obtained for the LQ45 stock return variable after the national announcement of Covid-19 in Indonesia was -0.0354 and the maximum value was 0.02295. The average value is -0.0129 with a standard deviation of 0.010298127.

With computer aids using the SPSS 25 program, the normality test results are obtained which can be seen in the following table:

Table 2: Normality Test Results

	Kolmogorov Smirnov		Shapiro-Wilk	
	df	Sig.	df	Sig.
Pre Test_CP	45	0,000	45	0,000
Post Test_CP	45	0,000	45	0,000
Pre Test_RS	45	0,200	45	0,174
Post Test_RS	45	0,200	45	0,414

Based on table 2 it can be seen that df = 45, this means that the sample data contained in this study is less than 50, so the normality test used is the Shapiro Wilk Normality test.

The normality test results show that the LQ45 stock price data before and after the national announcement of the Covid-19 outbreak in Indonesia has a significant value of 0.000 which is less than 0.05, so it can be concluded that the data is not normally distributed. Other test results actually show that stock return data before the national announcement of the Covid-19 outbreak in Indonesia has a significant value of 0.174 and stock return data after the national announcement of the Covid-19 outbreak in Indonesia has a significant value of 0.414. This means that the significant value is greater than 0.05 at the predetermined significant level, so it can be concluded that LQ45 stock returns both before and after the national announcement of the Covid-19 outbreak in Indonesia were normally distributed.

Based on the results of the normality test which says that the stock price variable both before and after the national announcement of the Covid-19 outbreak in Indonesia is not normally distributed so when testing the hypothesis with a

different test using the Wilcoxon signed rank test. Meanwhile, stock return variables both before and after the national announcement of the Covid-19 outbreak in Indonesia which had a normal distribution used the paired sample t-test.

Table 3: Ranks Results - Wilcoxon Signed Ranks Test

	N	Mean Rank	Sum of Ranks
Negative Ranks	37	23,42	866,50
Positive Ranks	8	21,06	168,50
Ties	0		
Total	45		

Based on table 3 it can be seen that Negative Ranks or the (negative) difference between LQ45 stock prices both before and after the announcement of Covid-19 in Indonesia amounted to 37 negative data (N) which means that 37 LQ45 companies experienced a decline in LQ45 stock prices before the national announcement of Covid-19 19 until after the national announcement of Covid-19 in Indonesia was made. The Mean Rank or average decrease is 23.42, while the number of negative rankings or Sum of Ranks is 866.50.
Positive Ranks or the difference (positive) between LQ45 stock prices both before and after the announcement of Covid-19 in Indonesia is 8 positive data (N), which means that there are 8 LQ45 companies that experienced an increase in LQ45 stock prices before the national announcement of Covid-19 until after the national announcement of Covid-19 in Indonesia is set. The Mean Rank or average increase is 21.06, while the number of negative rankings or Sum of Ranks is 168.50.
Besides that, Ties is the similarity of the LQ45 stock price before the national announcement of Covid-19 and the value of the LQ45 stock after the national announcement of Covid-19 is 0. This means that there is no similar value between the value of the LQ45 stock price before the national announcement of Covid-19. 19 with the LQ45 share price value after the Covid-19 national announcement.
The following are the results of the Test Statistics for the LQ45 stock price before the national announcement of Covid-19 and the price for LQ45 after the national announcement of Covid-19 from the Wilcoxon signed rank test.

Table 4: Test Statistics Results Wilcoxon Test Signed Rank - LQ45 Stock Price

	Harga Saham Sebelum Covid-19 - Harga Saham Setelah Covid-19	Simpulan
Z	-3,939	H1 diterima
Asymp. Sig. (2-tailed)	0,000	

Based on the results of the statistical tests contained in table 4, it shows that the Asymp.Sig (2-tailed) value is 0.000 which is smaller than the 0.05 significant level that has been determined, so it can be concluded that the Hypothesis (H1) is accepted. This means that there is a significant difference between the LQ45 stock price before and after the national announcement of the Covid-19 outbreak in Indonesia. In addition, the results of testing the hypothesis also show that there is an influence of the Covid-19 event on the LQ45 stock price.
The results of this study are in line with the results of research conducted by Darmayanti et al. (2020) [12] that there is a

difference in the share price of PT. Indosat Tbk before and after the announcement of the first case of COVID-19 in Indonesia. Supported by the results of Nurmasari's research (2020) that there is a significant difference between the stock prices at PT. Ramayana Lestari Sentosa Tbk. before and after the announcement of the first case of Covid-19 in Indonesia. According to Tjiptono & Fakhruddin (2008:109) the LQ45 stock price index is a collection of 45 stocks with the highest liquidity. Therefore, when investors make investment decisions, investors consider the level of liquidity of a stock first. According to (Sartono, 2010) the stock price is the present value of the cash flow that is expected to be received in the future. In short periods, stock prices can be very unstable or changeable, this is due to events that have occurred such as the Covid-19 pandemic which is currently a case of a global disease which has a sizable impact on the economy. According to Fama (1970) the theory of capital market efficiency is important for investors and issuers to know where the market can be said to be efficient if stock prices reflect all of the information available on the market.
For investors, according to Nurmasari (2020) the Covid-19 pandemic is very detrimental because investors who previously hoped to have great opportunities but instead experienced capital losses. Supported by the view according to Mazur et al. (2020) that changes in prices during a pandemic can occur due to the pressure of spending without income so that companies reduce their income prospects which will also have an impact on the market reassessment of value and a sizeable fall in share prices.
Based on the research results of Shehzad et al. (2020) shows that the stock markets for the US, UK, Spain, Hong Kong and China have experienced a decline in stock prices. This is in line with the results of research by Seto & Septianti (2019) which stated that there was a difference in the share price of PT Garuda Indonesia Tbk before and after the increase in flight ticket prices. The results of research conducted by Novitasari et al. (2020) states that there are differences in stock prices before and after a stock split. Previous research can be an example of a manifestation of the influence of events that occur both in the company and the capital market which can affect fluctuations in the company's stock price.
Based on some of the events previously described, it can be obtained information that the stock price can affect investment interest because the value of the company has been reflected in the stock price. As an increase in stock prices will also have an impact on increasing investor interest in making investment efforts. An increase in the number of investors can be used to encourage companies, for example in the mining sector, to carry out exploration. Public investment will encourage a country's economic growth so that the government does not need to increase state debt if awareness of public investment is high (Antono et al., 2019) [4].
Supported by Signaling theory according to Connelly et al. (2011) [11] which explains when a company has information on a good project or investment in the future, it will be able to attract investors and will also be considered by investors as a good signal (good news). Therefore, the signal theory explains that the disclosure of information related to the company can be a signal for parties external companies, especially investors to help determine investment decisions. According to Fahmi (2012) signaling theory is a theory that discusses the rise and fall of stock prices in the market, so that it will have an impact on investors.

In the following, the results of the correlation or relationship between the two variables are presented, namely LQ45 stock returns before and after the announcement of Covid-19 in Indonesia.

Table 5: Paired Samples Correlations – Stock returns

	N	Correlation	Sig.
Pre Test Return Saham & Post Test Return Saham	45	-0,225	0,138

Based on table 5 shows that the significant value of paired sample correlations is 0.138. This means that there is no correlation or a very weak relationship between LQ45 stock returns before the national announcement of the Covid-19 outbreak and LQ45 stock returns after the national announcement of the Covid-19 outbreak in Indonesia. As the basis for making decisions on the Pearson product moment correlation test, because the significant value is greater than 0.05, it can be concluded that there is no relationship between the two variables.

The following presents the results of the paired sample t-test to find out whether there is a difference between LQ45 stock returns before the national announcement of the Covid-19 outbreak and LQ45 stock returns after the national announcement of the Covid-19 outbreak in Indonesia:

Table 6: Results of the Paired Sample t-Test of Stock Returns

Mean	St. Dev	t	df	Sig. (2-tail)
-0,0069	0,01879	-2485	44	0,017

Based on table 6, it can be seen that the results of the paired sample t-test on stock returns show the Sig. (2-tailed) is 0.017 smaller than 0.05 at the predetermined significance level. It can be concluded from the results of the paired sample t-test in this study that H2 is accepted, meaning that there is a significant difference between LQ45 stock returns before and after the national announcement of the Covid-19 outbreak in Indonesia.

Other test results contained in table 6 also state that the mean paired differences are -0.0069 with a standard deviation of 0.1879. The t-count value is -2.485 and the df value is 44. The t-count and df values can be used as a reference in finding t-tables. Because the t-count value is a negative value, the basic decision making uses the one-tailed probability test. Supported by the view according to Santoso (2014) in the case of negative t-count values can have a positive meaning. This only applies to the one-tailed test, so the t-value in this study is 2,485.

Thus it can be seen that the t-count value is 2.485 greater than the t-table which is 1.6802. This means that H0 is rejected and Ha is accepted. In other words, there is an average difference between LQ45 stock returns before the national announcement of Covid-19 and LQ45 stock returns after national announcement of Covid-19 in Indonesia. In addition, the test results also show that there is a significant influence between the Covid-19 event and LQ45 stock returns.

The results of this study are in line with the results of research conducted by Martini *et al*. (2020) [23] that there was a significant difference in the performance of LQ45 shares before and during the Covid-19 pandemic in companies listed on the Indonesian Stock Exchange. LQ45 stock performance is measured using stock returns.

According to Jogiyanto (2014: 235) [18] investors invest their

capital with the aim of obtaining a return or yield on the funds that have been invested in the company. These rewards are in the form of dividends and capital gains or commonly referred to as stock returns.

When investors decide to dare to invest, investors will be faced with uncertainty between the return to be obtained and the risk to be faced. The greater the return expected to be obtained from an investment, the greater the risk, so it is said that the expected return has a positive relationship with risk. Higher risk is usually correlated with the opportunity to get a higher return (high risk high return, low risk low return). However, high returns do not always have to be accompanied by risky investments. This could have happened in an irrational market. If the current stock price (Pt) is higher than the previous period's stock price (Pt-1), then the shareholder experiences a capital gain. If the opposite happens, the shareholders will experience capital loss (Irwansyah *et al*., 2014).

The results of this study are in line with the results of research conducted by Martini *et al*. (2020) [23] that there was a decline in stock performance as seen from stock returns during the Covid-19 pandemic in Indonesia. The decline in stock performance during the Covid-19 pandemic can be seen from the performance of stocks that are included in the LQ45 category, which during the pandemic experienced a decline in stock performance because the entire world economy also experienced a decline. This certainly can affect the performance of LQ45 shares, even though these shares have a high market capitalization value. However, if it is related to the level of risk, LQ45 shares have a lower risk level compared to other stocks because joint stocks are from companies that have high liquidity so that their turnover is faster than ordinary shares.

Based on the efficient market theory according to Markowitz (1952) [22] explains the relationship between trust and investor choice in the context of choosing a portfolio that has lower or minimum risk expectations, so it can be concluded that there is a very close relationship between efficient capital markets and the Covid-19 pandemic phenomenon. The less information a company provides to investors regarding its stock returns, the less interested investors will be in investing in the company (Budiarso *et al*., 2020).

The capital market can affect stock prices because stock prices are a reference for analysis of yields or stock returns. Supported by Signaling theory which explains that a decline in stock prices in the capital market can be a bad news signal for investors so that it affects stock returns (Connelly *et al*., 2011) [10].

The results of this study are also supported by several studies previously namely Ashraf (2020), Thomas *et al*. (2020), and Manurung (2019) which show that there are differences in stock returns before and after events, both economic and non-economic events, as indicated by changes in stock returns.

According to Astohar (2012) [6] microeconomic events that often occur in companies can affect price activity and stock trading activity of the company concerned. While external events are macroeconomic events where the impact affects prices and trading activities of company shares in all sectors of the capital market (Tambunan, 2020).

In addition, the research results of Al-Awadhi & Alhammadi (2020) [1] explain that major events significantly affect stock market returns, including what has happened now, namely the Covid-19 pandemic, which has resulted in extraordinary uncertainties that have had an impact on stock returns. This

is proven by the results of research by Shehzad *et al*. (2020) which shows that the Covid-19 pandemic event has a significant effect on stock returns. Supported by the research of Thomas *et al*. (2020) which states that there is an impact of Covid-19 on NIFTY (National Stock Exchange of India). According to Darmayanti *et al*. (2020) [12] the current Covid-19 pandemic is an event that has a major impact on all sectors, including the economic sector in the capital market. In addition, other events such as political events also affect stock returns.

Thus, the Covid-19 incident has caused many companies to suffer losses. Before the Covid-19 pandemic was declared in Indonesia, stock performance on the Indonesian stock exchange did not experience a drastic spike in decline, but after entering the Covid-19 virus pandemic, Indonesia's finances experienced a recession and decreased financial performance and stock performance on the Indonesian stock exchange, including shares LQ45 (Martini *et al*., 2020) [23].

Conclusion
Based on the results of the analysis and testing that has been done before, there are several things that can be concluded, namely that there are significant differences in stock prices and LQ45 stock returns before and after the national announcement of the Covid-19 outbreak. The existence of the Covid-19 case in Indonesia caused stock prices to decline, this was of course offset by a decrease in the value of stock returns.

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