

INDONESIA STOCK MARKET REACTION BEFORE AND AFTER THE ANNOUNCEMENT OF COVID-19 CASE

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Abstract

This study aims to analyze the effect of COVID-19, which announced on March 2nd, 2020 in Indonesia on abnormal return, volatility, trading volume and market capitalization of companies 10 days before and after the announcement. This type of research is an event study. The populations are 70 firms listed on the JII70 and 12 firms on SRI-Kehati on the Indonesian Stock Exchange and take all firms in the issuer under study as samples. Hypothesis testing will use the paired sample t-test for abnormal return and volatility variables then wilcoxon signed-rank test for trading volume and market capitalization variables. The results of the study show that there is no difference in abnormal return but there is a difference in volatility, trading volume and market capitalization before and after the announcement of COVID-19 in Indonesia.

Keywords: COVID-19, Abnormal Return, Volatility, Trading volume, Market Capitalization.

1. INTRODUCTION

In December 2019, a virus shocked the whole world called coronavirus (COVID-19) started from Wuhan. There were confusing news states that the emergence of the coronavirus starts from food and poultry, and some even think that it came from bats. Alignment of the full-length genomic sequence of the COVID19 virus with other available betacoronavirus genomes showed that the closest association to the identity of coronavirus strains BatCov RaTG13, such as Bat SARS, was 96% (WHO, 2020). Due to the massive migration during Chinese New Year and the geographical location of Wuhan as China's main transportation hub, the disease has spread to other states of China since early January 2020. On January 19, the first three confirmed cases were reported outside Wuhan. One was reported in Guangdong and two were reported in Beijing (He et al., 2020). President Joko Widodo announce the COVID-19 first case in Indonesia was announced on March 2, 2020. It was announced two positive Indonesians (Kompas.com, 2020).

The stock market is part of the capital market which is a market for a variety of long-term tradable financial instruments such as bonds, mutual funds, derivative instruments and so on becoming funding means for firms and government-run institutions than to invest (IDX, 2020). This pandemic condition has harmed global stock exchanges and occurred in Indonesia. The IDX Development Director stated that the risk that several investors and capital market analysts often project is the potential for a recession or economic crisis. However, the IDX keeps trying to create harmony and market with integrity (Kompas.com 2020).

The stock of PT Kimia Farma Tbk. (KAEF) shows that 18.64% weakness was recorded that report about a week after COVID-19 was announced in Indonesia. So as the stock of Bank Negara Indonesia Tbk. (BBNI) also experienced the sharpest weakness at 18.75%, the share price fell to a level of Rp5.200 per share. Bank Mandiri Tbk. (BMRI) also fell as much as 12.41% to Rp6.350 per share. Then Bank Central Asia Tbk. (BBCA) recorded an accumulated decline of 8.71%. Not much different, the performance of Bank Rakyat Indonesia Tbk. (BBRI) fell 7.23% to the level of Rp3.720 per share. PT Pembangunan

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Perumahan Tbk. (PP) is also currently falling to the position of IDR780 per share (CNN, 2020).

Firms above listed in JII70 and SRI-Kehati. JII70 firm's criteria are Islamic or sharia stocks included in the Indonesian Sharia Stock Index (ISSI) constituents and have been recorded for the last six months, 150 stocks with the highest average market capitalization in one year were selected. From 150 stocks, then 70 stocks were selected based on the stock market's highest average daily transaction value (IDX, 2020). Then SRI-Kehati index criteria are stocks listed on the IDX with good practices to support sustainability through environmental, social, and good corporate governance (Jogiyanto, 2016:177).

The firm is called the one that influences the country's economic cycle. Besides turnover, the firm's condition is also seen from stock performance. Several variables are presumed that COVID-19 affected a few things such as abnormal returns, volatility, trading volume, and market capitalization before and after the arrival of COVID-19 to firms. Abnormal returns are used as a measure of price change. In the event of an abnormal return, an informational event announcement will bring an abnormal return to the market (Sambuari et al., 2020).

Volatility is a standard indicator of the risk of excessive volatility, which often coincides with market volatility or a high level of uncertainty (Eva, 2020). Volatility is significant in the operation of financial markets acts as a financial risk barometer, pressure, or uncertainty around financial investments.

The firm's condition is advanced or not can be seen from its trading volume. Due to the high demands from investor, active stock transactions predicted that will influence large trading volume. An increased trading volume caused by high demand will push up stock prices and increase stock returns. In stock exchange or capital market activity, stock trading volume activity is one element to see the market's response to information that enters the capital market (Silviyani et al., 2014).

Large market capitalization is one of the attractions of investors in determining which stocks are chosen. The greater the market capitalization of a stock, the longer the investor will hold their stock ownership because investors assume that large firms will tend to be more stable from a financial side, have less risk, bright prospects in the long term with a significant chance of return (Silviyani et al., 2014).

This research used event study which is the Indonesian stock market reaction before and after the announcement of COVID-19 on March 2nd, 2020. In this study, we observed the movement of stock prices and analyzed differences in abnormal return, volatility, trading volume, and market capitalization. This research used event study with an event window t-10 to t-1 (before) and t+1 to t+10 (after) the period February 17, 2020 - March 16, 2020 with t0 (event occur) in March 02, 2020.

The author reason did this Study because the issue of the coronavirus arrival impact on the stock market has not been widely carried out in Indonesia. The basis for this Study is because the stock market provides an up-to-date summary of what investors believe is the impact of the COVID-19 pandemic. Therefore, there should be a strong correlation between the COVID-19 pandemic and stock market index returns.

Based on statement, researchers aim to analyze and describe the COVID-19 impact on abnormal return, volatility, trading volume, and market capitalization before and after the announcement.

2. LITERATURE STUDY

Abnormal Return

Abnormal returns usually occur because of certain events. The arrival of COVID-19 is an extraordinary event that can affect abnormal returns, whether it has a positive, negative, or no effect at all. Jogiyanto (2016, pp.667-679) explained the market efficiency test by analyzing at the abnormal returns that occur so that if market participants can feel abnormal returns in an extended period, the market is not efficient.

According to Kusnandar & Bintari (2020) indicated that there was a market reaction to the announcement of changes in trading time on exchange transactions. This study shows that investors are interested in making transactions throughout the period and responding to changes in trading time on exchange transactions. Investor interest shows a market reaction that affects significant activity before and after the announcement of changes in trading time on exchange transactions. Dilla et al (2020) represented by firms with the largest market capitalization in their research. To identify abnormal returns due to the outbreak, the date of the incident has included chronological effects from the first confirmed cases in Wuhan to the large-scale restrictions that have been implemented in Indonesia. The hypotheses can be formulated:

H1: There is a difference in abnormal return before and after the COVID-19 phenomenon in Indonesia on March 2, 2020

Volatility

Significant in the financial markets operation is volatility. Volatility is a barometer of financial risk, pressure, or uncertainty around financial investments (Albulescu, 2020; Onali, 2020). High volatility means that prices go up high quickly and then suddenly drop too rapidly, creating a large gap between the lowest and the highest price at any given time. The low volatility represents that the stock price does not show a high variation in the short term and price changes at a stable level during a certain period.

Chaudhary & Bakhshi (2020) in their studies showed that the COVID-19 coefficient in the conditional variance equation has a substantial positive effect on the conditional variance for all indexes, which indicates that the virus has increased the volatility on that index. The Study of Bai et al (2020) quantifying the volatilities of 4 major international stock market finds that pandemics occurring within the last 24 months can significantly impact the present permanent volatility of international stock markets. Moreover, due to governments' specific actions in response to infectious disease pandemics, different stock markets have different reactions to the pandemic. The hypotheses can be formulated:

H2: There is a difference in volatility before and after the COVID-19 phenomenon in Indonesia on March 2, 2020

Trading Volume

In stock exchanges or capital market activity, trading volume activity is one of the crucial elements to see the market reaction to information entering the capital market (Silviyani et al., 2014). Stock prices and stock returns will increase due to high demand. So if the market response is good, then the company's condition is also excellent and vice versa.

Rori et al. (2021) research about Telecommunication Industries listed on the Indonesia Stock Exchange and how COVID-19 affects it. The research result related to Trading Volume Activity shows no significant difference either partially or in combination. The situation can happen because the strategy of each investor is different. Investors use the wait and see technique or wait for the right moment to enter or exit the market. Sambuari *et al.* (2020) researched food and beverage firms listed on the Indonesia Stock Exchange before and after

COVID-19. The research result related to trading volume showed that there were differences before and after the COVID-19 announcement in combined test indicated this information is bad news for investors due to sentiment, causes investors to panic after the increasing number of COVID-19 victims so that investors do panic selling. As a result, foreign investor funds in the domestic stock market continue to experience withdrawals towards gold investment when the stock market is faltering. Based on the description above, the following hypothesis can be formulated:

H3: There is a difference in trading volume before and after the COVID-19 phenomenon in Indonesia on March 2, 2020

Market Capitalization

Market Capitalization is a public firm's value on the stock market. Then the thing that becomes a benchmark for investors to see which stocks are the best to choose as an investment vehicle is observing market capitalization. The greater the market capitalization of a stock, the investors who have bought shares will have a solid reason to continue to hold their stocks because of the more stable financial side, low risk and the opportunity for return is quite prominent in the long term with promising prospects so that it can benefit investors.

Praveen Kumar & Manoj Kumara (2020), in his Study which discusses Market capitalization: Pre and posts COVID-19 analysis, showed that the total market capitalization had lost 27.31%, which is surprising since the beginning of the year had a negative effect with a sizeable decrease value. The study by Sambuari *et al.* (2020) discussed market capitalization, which showed no difference in market capitalization before and after the announcement of the COVID-19 first case in Indonesia, both from combined test results and partial daily test results (before vs. after). This event lacks information content to investors and traders so that it does not affect investment decision making and because investors still see investment opportunities in stocks in food and beverage firms. The hypotheses can be formulated:

H4: There is a difference in market capitalization before and after the COVID-19 phenomenon in Indonesia on March 2, 2020

3. RESEARCH METHOD

The Population in this study were 70 firms included in JII70 stock index and 25 firms in the SRI-KEHATI which was selected again because there are 13 firms that also listed on JII70 so that researcher only took 12 firms from SRI-Kehati issuer with the 2020 research period.

A sample is a population subset that comprises some members selected from it (Sekaran & Bougie, 2016: 237). The sampling technique is that all population sampled because all populations meet the criteria to be used as samples where the criteria set in this study are firms included in the JII70 and SRI-KEHATI issuers on the IDX during the research period from February 17, 2020 - March 16, 2020 (not included weekend); actively traded during the study period

This study type is comparative with quantitative method. Quantitative research data is measured on a numerical scale. This study uses secondary data which is stock data listed on the JII70 and SRI-Kehati issuers in 2020.

Data source in this Study obtained from direct access to www.idx.co.id a firm stock data summary and historical stock data through yahoo finance to collect daily stock prices, stock volatility, trading volume, and market capitalization.

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The data collection technique uses the documentation method. The documentation method is a method that studies, classifies and analyzes documented secondary data.

The abnormal return's operational definition is the Excess of real returns to normal returns. The formulation is as follow (Jogiyanto, 2016):

$$RTNI_{i,t} = R_{i,t} - E [R_{i,t}]$$

Notation:

$RTNI_{i,t}$ = The abnormal return

$R_{i,t}$ = Actual return

$E [R_{i,t}]$ = Expected return

An expected return is the return that investors expect will be obtained in the future where it has not occurred. In this study, the calculation uses the market-adjusted model, which assumes the best predictor for estimating the security's return is the market index return at that time. With this model, it is not necessary to use the estimation period to form the estimation model because the estimated security return is same as the market index return. The formulation is as follows (Jogiyanto, 2016:679):

$$E[R_{i,t}] = R_{mt}$$

Notation:

$E [R_{i,t}]$ = Expected return

R_{mt} = Security's return at the t-th time

$$R_{mt} = \frac{IHSG^t - IHSG^{t-1}}{IHSG^{t-1}}$$

The actual return is the difference between the current price and the previous price.

$$R_{i,t} = (P_{i,t} - P_{i,t-1}) / P_{i,t-1}$$

Notation:

$R_{i,t}$ = actual return on stock i that occurs on day t

$P_{i,t}$ = stock price at time t

$P_{i,t-1}$ = stock price at time t-1

Volatility is the difference between the increase and decrease of the stock price or foreign currency. The calculating formula of share price volatility is as follow:

$$PV = \frac{Hit - Lit}{(Hit + Lit)/2}$$

Notation:

Hit = the highest stock price

Lit = the lowest stock price

Trading Volume is the stocks total traded on a particular day. The formula is:

$$TVA = \frac{\sum \text{saham perusahaan i yang diperdagangkan pada waktu t}}{\sum \text{saham perusahaan i yang tercatat di BEI}}$$

Market Capitalization is Public firm value on the stock market. According to (Praveen Kumar & Manoj Kumara, 2020) the formulation is as follows:

$$MC = N \times P$$

Notation:

MC = Market capitalization

N = Listed Shares

P = Closing Price per stock

The first data analysis method used is normality test which determines if the data is normally distributed or vice versa. The normality test used in this study is the Kolmogorov-Smirnov (KS) nonparametric statistical test. There is no difference in perception in this test.

The second data analysis is the paired sample t-test. If the normality test result is normal then the next step is to perform a paired t-test to analyze whether the observations of two data are different. We use paired t-test to test the differences between two paired samples. This test specializes in testing or comparative testing (Santoso, 2001).

The third is wilcoxon signed-rank test which is a corresponding alternative of paired sample t-test when the normality assumptions are not met (Machmuddah et al., 2020). In other word that pre-test and post-test results will be checked.

4. RESULT AND DISCUSSION

Descriptive statistics describe the data by looking at the minimum, maximum, mean and standard deviation values. According to Sugiyono (2014), this statistic is used to describe or describe the collected data as is and analyze the data without the intention of drawing generalized conclusions.

Table 1. Descriptive Statistic Result

Descriptive Statistics					
Variables	N	Minimum	Maximum	Mean	Std. Deviation
PreTest AbnormalReturn	82	-,0309	,0193	-,002101	,0084658
PostTest Abnormal Return	82	-,0318	,0246	-,004892	,0139936
PreTest Volatility	82	,0088	,0955	,041029	,0145205
PostTest Volatility	82	,0167	,1484	,058907	,0230091
PreTest TVA	82	,0000	,0050	,001065	,0010003
PostTest TVA	82	,0000	,0069	,001500	,0013648
PreTest MarCap	82	27,9302	34,3129	30,491464	1,3811090
PostTest MarCap	82	27,8113	34,2218	30,356010	1,3893346
Valid N (listwise)	82				

Source: SPSS 25 Processed Data Results, 2021

From the table above, prior to the announcement of COVID19, the average return was -0.002101 with a minimum was -0.0309 and a maximum was 0.0193 and the standard deviation was 0,0084658. However, after the announcement, all the numbers listed have changed slightly to an average of -0.004892, a minimum value of -0.318, a maximum value of 0.0246 and a standard deviation of 0.139936.

Volatility variables can be interpreted as mean 0.041029, minimum 0.0088, maximum 0.0955, standard deviation 0.0145205 prior to the announcement of COVID19. Nevertheless, after the announcement, a slight improvement in the mean (mean) was recorded at 0.058907, a minimum of 0.0167, and a maximum of 0.1484 and a standard deviation of 0.0230091. So that makes the highest value of the four aspects already mentioned.

In addition, the trading volume mean value was 0.001065, the minimum value was 0, and the maximum value was 0.0050 and a standard deviation of 0.0010003. After the

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announcement, same with volatility, the trading volume also experienced a slight increase, except for the minimum value which remained at 0, making the minimum and maximum values the smallest among all variables during the study period. The mean is 0.001500 with a maximum value of 0.0069 and a standard deviation of 0.0013648.

To simplify the processing of research result, market capitalization data is converted to natural logarithm (Ln(MC)). The results of descriptive statistical analysis of market capital were 30.491464 average, 27.9302 minimum, 34.3129 maximum, and 1.3811090 standard deviation. However, after the announcement, market capitalization decreased slightly, in contrast to the slight increase in volatility variables. The average is 30.356010, minimum is 27.8113, maximum is 34.2218, and standard deviation is 1.3893346.

Kolmogorov – Smirnov Normality Test

This test is works to find out if data is normal or vice versa. The criteria for determining the Kolmogorov-Smirnov normality test are:

- a. If the significance value is less than 0.05, then H_0 is rejected, which means that the residual data is not normally distributed.
- b. If the significance value is more significant than 0.05, then H_0 is accepted, meaning that the residual data is a normal distributed.

Table 2. Normality Test Results

Tests of Normality			
Variables	Kolmogorov-Smirnov ^a		
	Statistic	Df	Sig.
PreTest AbnormalReturn	,089	82	,159
PostTest Abnormal Return	,059	82	,200*
PreTest Volatility	,077	82	,200*
PostTest Volatility	,096	82	,060
PreTest TVA	,190	82	,000
PostTest TVA	,181	82	,000
PreTest MarCap	,081	82	,200*
PostTest MarCap	,087	82	,193
*. This is a lower bound of the true significance.			
a. Lilliefors Significance Correction			

Source: SPSS 25 Processed Data, 2021

Table 4 above shows that three pretest and posttest variables have a sig. >0.05 value including pretest abnormal return 0.159, posttest abnormal return 0.200, pretest volatility 0.200, posttest volatility 0.060, pretest market capitalization 0.200 and posttest market capitalization 0.193. While trading volume have a value of sig. < 0.05, which is 0.000. So it can be concluded that abnormal returns, volatility and market capitalization are normal distribution and then hypotheses testing can be continued by using paired sample t-test. Next, the trading volume activity shows that the data is not normally distributed. Hypotheses tests cannot be continued with paired sample tests, but can be continued with nonparametric tests, that is, wilcoxon signed rank tests, especially for anomalous data. You can use this test because it is an alternative to the pair sample test when you cannot assume that the population is normally distributed (Sekaran & Bougie, 2016:309).

Hypothesis Testing

Paired Sample T - Test

Paired sample t-test is used for test the difference between two pair samples. This test is used in the normal data hypothesis testing step. The conditions for the decision are as follows:

- If the sig. (2-tailed) value < 0.05 , then H_0 is rejected and H_a is accepted
- If the sig.(2-tailed) value > 0.05 , then H_0 is accepted and H_a is rejected

The hypotheses to be tested use the paired sample t-test method are:

- H1: There is a difference in abnormal returns before and after the COVID-19 phenomenon in Indonesia on March 02, 2020
- H2: There is a difference in volatility before and after the COVID-19 phenomenon in Indonesia on March 02, 2020
- H4: There is a difference in market capitalization before and after the COVID-19 phenomenon in Indonesia on March 02, 2020

Table 3. Paired Sample T-test

Paired Samples Test	Variables		Pair 1	Pair 2	Pair 3	
			PreTes Abnormal Return- PostTest Abnormal Return	PreTest Volatility- PostTest Volatility	PreTest MarCap- PostTest MarCap	
	Paired Differences	Mean		0,002791	-0,01788	0,135454
		Std. Deviation		0,017162	0,015083	0,088034
		Std. Error Mean		0,001895	0,001666	0,009722
		95% Confidence Interval of the Difference	Lower	-0,00098	-0,02119	0,116111
	Upper		0,006561	-0,01456	0,154797	
	T			1,472	-10,734	13,933
	Df			81	81	81
	Sig. (2-tailed)			0,145	0	0

Source: SPSS 25 Processed Data, 2021

The table above shows the abnormal return significance value is 0.145, which is greater than 0.05. Then H_0 is accepted and H_1 is rejected. In other words, there is no difference in average before and after the announcement. The significance of volatility is 0, less than 0.05, but H_0 is rejected and H_2 is accepted. This means that there is a difference in the average before and after the announcement. Similarly, for volatility, market capitalization has a significance of 0 (< 0.05), so H_0 is rejected and H_4 is accepted. In other words, there is a difference in the average before and after the announcement.

The results obtained shows there is no difference in abnormal returns before and after the announcement of COVID19 in Indonesia for the JII70 and SRI-Kehati firms, most of which were observed upon arrival of COVID19. Arrivals do not affect the unusual returns of most

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companies observed. If there is no response, the abnormal return value will change significantly.

Investors took the proper steps during the emergence of COVID-19 by not carrying out transaction activities that could lead to positive or negative abnormal returns. Of course, the information is very important in market reaction because the abnormal return value resulting from price changes can give investors perceptions in making decisions. In other words, this event does not contain information so that there is no reaction and does not have a major influence on market participants on activities in the capital market, especially for companies registered in JII70 and SRI-Kehati because the submission of the first case in Indonesia is neutral so that the action taken is neutral. what investors do is just wait and see after the announcement, which means they don't want to rush into making decisions so it doesn't affect the value of their investments (Sambuuri et al., 2020).

Paired t-test shows that there is an average difference in volatility before and after the announcement. Observations seen from the results of the data tabulation show that since March 02, 2020, precisely the day when the first case of COVID-19 for the next 10 days, most of them experienced a decline in the highest and lowest prices, the difference in the distance between the highest and lowest prices or can be referred to as the volatility value as well primarily decreased. However, when averaged, the results show that the average 10 days after is higher than 10 days before the announcement. So it can be concluded that COVID-19 affects the volatility value to be high. The average posttest volatility is better than the pretest.

According to an empirical study, pandemic cases reported not only in Indonesia, but globally have had a significant and positive impact on mortality, which actually increased financial volatility and uncertainties associated with the COVID 19 crisis and the associated uncertainties strengthened volatility (Albulescu, 2020). The 2020 Indonesian Economic Report published by Bank Indonesia shows that volatility during COVID-19 is increasing. This was due to the large outflow of capital from developing countries to financial assets that were considered safe haven assets in developed countries and suppressed the exchange rates of various world currencies, including Indonesia. Capital flows have the potential to increase volatility and pressure on exchange rates, and in turn can affect monetary and financial system stability (Widodo & Suryanto, 2021). Volatility that considers something as the bad news then volatility will increase and in this study the bad news is the COVID-19 pandemic. In this case, investors act more carefully if they want to invest their stocks because high volatility is likely to provide high returns. Because high volatility will be followed by high risk. With a high risk, the possibility of the resulting return is also high.

Based on the paired sample t-test, it was determined there is a difference in market capitalization before and after the announcement. Observations made on the tabulation of the data show that almost all of the companies studied experienced a decline in market capitalization posttest value, so we can conclude that COVID 19 affects the value of the company. This is because, due to the pandemic, the stock market only reflects the attitudes of investors around the world. Firms are starting to reduce spending, leading to layoffs and unemployment (Praveen Kumar & Manoj Kumara, 2020).

Wilcoxon Signed-Rank Test

Wilcoxon signed-rank test is an alternative of paired sample test when data fails to assume normality or is not normally distributed with a significance value > 0.05 . According to Susetyo (2010:228), the wilcoxon is a statistical method to test the difference between two

paired data, so the number of data samples is always the same. Here is the basis for making decisions in the wilcoxon test are:

- a. If the Asymp Sig. (2-tailed) < 0.05, then H₀ is rejected and H_a is accepted
- b. If the Asymp Sig. (2-tailed) > 0.05, then H₀ is accepted and H_a is rejected

The hypotheses to be tested using the paired sample t-test method is:

H₃: There is a difference in trading volume before and after the COVID-19 phenomenon in Indonesia on March 02, 2020

Table 4. Wilcoxon Signed Rank Test

Test Statistics ^a	
PostTest TVA - PreTest TVA	
Z	-5,041 ^b
Asymp. Sig. (2-tailed)	,000
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

Source: SPSS 25 Processed Data 2021

The table shows that Asymp. If Sig (2tailed) is 0.000, H₀ is rejected and H₃ is accepted. This means that COVID-19 affected trading volume activity.

The wilcoxon test results show the difference in average trading volume before and after the COVID-19 announcement. Observations made by looking at the other wilcoxon table showed that the trading volume had 29 negative data and 57 positive data, which means that most of the data experienced a significant increase. The information on COVID-19 is bad news for investors, and the increase of positive victims causes investor panic so that investors take panic selling actions. As a result, foreign investors' funds in the domestic stock market continued to experience withdrawals from gold investment when the stock market was faltering. This can be seen from the increase in global gold price, followed by Antam's precious metal which jumped 12.14% (Sambuari et al., 2020).

5. CONCLUSION

There was no difference in the abnormal return before and after the COVID-19 announcement in Indonesia on March 02, 2020 This result shows that COVID-19 did not cause a reaction to the capital market, and investors also took the proper steps by not making transactions that could cause abnormal returns or called the wait and see action.

COVID-19 affected stock volatility because volatility increases due to bad news so investors act more carefully in investing their shares. Then there is a capital outflow from developing countries to financial assets that are considered safe in developed countries and suppress the exchange rates of various world currencies, including Indonesia.

There was differences or, in other words, COVID-19 affected trading volume activity. The effect obtained is positive because most of the data have increased. It can be concluded that stock trading activity is increasing. Similar to volatility, bad news is also a trigger for trading volume that makes investors take panic selling actions.

COVID19 affects market capitalization. This happened because most stock markets only reflected the pandemic attitude of investors around the world, and companies began to cut spending, which led to temporary dismissals and unemployment. This leads to a decrease in market capitalization.

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Implication

For future research, it is recommended to add more variables that are more varied with a more extended research period. In addition, it is also possible to use or add measurement indicators that are not used in this study. Then it is recommended to use or add other issuers whose numbers are still accessible so that the research results obtained can be more diverse and generalized to a broader population.

For firms be able to take information advantage and results obtained in this study as an information source that can assist in making decisions and conclusions regarding the performance of their companies which have been researched 10 days before and after the announcement of COVID-19 so that in the future they can take even better steps.

For investors not to make the COVID-19 phenomenon the main and only benchmark for investment decisions to be made, other aspects must be considered to support more accurate decision-making.

For the Government, move faster and pay more attention to the affected industries because this disease can affect the economic balance. This research is expected to be useful to assist the government in formulating policies for companies on the Stock Exchange during the COVID-19 pandemic. Then policies for the community also need to be considered to continue to carry out and generate economic benefits without any social restrictions. The point is that the Government has a massive role in the COVID-19 phenomenon, both for industry and the community.

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