

Reaction Of Capital Market To The Emergence Of Covid-19 In Indonesia StockIndex Lq-45

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Abstract

This research was conducted to see the analysis of the capital market reaction to the pandemic of COVID-19 in Indonesia, whether there is the difference in Abnormal Return and Trade Volume Activity before and after the COVID-19 first case in Indonesia on March 2, 2020 by using 38 sample of 45 stocks in Index LQ-45 which listed from the period of February to July 2020. This research type is quantitative with research method use were Paired Sample t-Test and Wilcoxon Signed Rank test. The results of this research indicated that there is no significant difference in Abnormal Return (AR) and Trade Volume Activity (TVA) before and after the emergence of Corona Virus (COVID-19) in Indonesia of stock index Lq45.

Keywords: Abnormal Return, Trade Volume Activity, Covid-19, Capital Market, Index LQ45

INTRODUCTION

The Capital Market is a financial market in which long-term debt or equity-backed securities are purchased and sold. A capital market is a marketplace for buying and selling equity and a debt instrument, and it serves as a source of funding for businesses all over the world. The capital market plays a vital role in national development because it is a financing source for businesses and a place to invest in the community. Investment is a human decision to postpone resource consumption or a portion of income to increase capacity and add/create value for life (income and wealth). There are two types of investments: (1) real assets, tangible investments such as buildings and land, and (2) financial assets, which are intangible investments such as stocks and bonds. In the national economy, the capital market boosts production and productivity.

Some information from a press release or an event can influence market reaction, either directly or indirectly, depending on the economic or non-economic environment. First, information released by publicly traded companies, such as earnings announcements, dividend distribution announcements, announcements of new product developments, announcements of company leadership changes, and so forth. Second, government or regulator-published information, such as government regulations on changes to specific industry regulations, political and economic conditions. With the economic value they contain, events or information can be considered either good or bad news.

The incidence of coronavirus cases in Indonesia between March and July, when the government finally implemented the new regular system, will be one of the non-economic events tested for information content on capital market activity in Indonesia. A group of pneumonia cases of unknown origin in Wuhan City, Hubei Province, China, was reported to

WHO on December 31st, 2019. On January 7th 2020, the *Chinese Centre for Disease Control and Prevention* (CCDC) identified the causative agent through throat swab samples.

METHOD

This research is an *event study* which analyzes the existence of a market reaction as a result of an event. This type of research used in this study is comparative. Comparative research is research that compares the existence of one or more variables in two or different samples, or at different times. In this study, the type of data used is quantitative data, namely in the form of stock price data of the issuers which were the research samples during the observation period. While the data source used in this research is secondary data, namely data in the form of documents and information in the form of a relationship with the object of research published by other parties, in this case the Indonesia Stock Exchange, namely the daily share price which can be accessed through the official website of the Indonesia Stock Exchange (www.idx.co.id) and the yahoo finance website (www.finance.yahoo.com).

The sample in this study amounted to 38 stock companies from 45 population of companies which listed in LQ45 Index from February to July 2020 with sampling technique in this study was taken using purposive sampling method. The purposive sampling method is a non-random selection of samples whose information is obtained using certain considerations, which are generally adjusted to the objectives or research problems. The test used in this study was *One Sample T - Test* to see the normality of *abnormal return and trading volume activity* data, *Paired Sample T - Test* and *Wilcoxon Signed Rank Test* to see comparisons before and after the event with IBM SPSS Statistic 22 application program by comparing the *asymptotic significance of $\alpha = 0.05$* .

The *Abnormal Return* method used is the *mean adjusted model* or often referred to as (*single index model*). In calculating the *mean adjusted model* to find the *expected return* data used is the number of *returns* realized during the estimation period and then divided by the number of days in the estimation period. *The event date* (period of event) ($t = 0$) in this study is on the day of the announcement of the emergence of Corona Virus (COVID-19) cases in Indonesia. Window period (*event*) *window*) consists of 7 days, namely 3 days before the *event date* ($t-3$), 1 day on the *event date* ($t = 0$) and 3 days after the *event date* ($t + 3$) and calculating the *Trading Volume activity* in the window period under study.

RESULTS AND DISCUSSION

The normality test used in this study was the *Kolmogorov-Smirnov one sample test* with IBM SPSS Statistic 22 application program by comparing the *asymptotic significance of $\alpha = 0.05$* . Guidelines for decision making in data normality testing using the *Kolmogorov-Smirnov one sample*, namely:

- a. The significance value or the probability value ≤ 0.05 , the data distribution is not normal.
- b. Significance value or probability value > 0.05 , then the data distribution is normal.

If the data is normally distributed, it is followed by the t test (*one sample t-test*). However, if the data is not normally distributed, the *t test* cannot be continued and is replaced with the *Wilcoxon Signed Rank Test*.

Data Normality Test

One-Sample Kolmogorov-Smirnov Test

		AR BEFORE	AR AFTER	TVA BEFORE	TVA AFTER
N		38	38	38	38
	Negative	-.080	-.074	-.154	-.185
Test Statistic		.080	.103	.227	.189
Asymp. Sig. (2-tailed)		.200 ^{c,d}	.200 ^{c,d}	.000 ^c	.001 ^c
Normal Parameters ^{a,b}	Mean	.00140451	-.00135802	.00176825	.00161071
	Std. Deviation	.019037647	.020261942	.001237172	.001398682
Most Extreme Differences	Absolute	.080	.103	.227	.189
	Positive	.073	.103	.227	.189

Source : One-Sample Kolmogorov-Smirnov Test

After passing the data processing stage using IBM SPSS Statistic 22, it was found that the value *significance* of the normality *Kolmogorov Smirnov test* on the variable *Abnormal Return* showed a value of 0.200 more than the value (0.05). While the *Trade Volume Activity (TVA)* shows a value of 0.000 less than the value (0.05). So it can be seen that the value of *Asymp.Sig.(2-tailed)* $0.000 < 0.05$ and $0.001 < 0.05$. That way it can be seen that the Abnormal Return data is normally distributed but the Trading Volume Activity data is not normally distributed. Thus, research for Abnormal Return data will be continued by using the t test (Paired sample t-test). However, the Trading Volume Activity data which is not normally distributed, the research can be continued by using an alternative test of difference, namely the *Wilcoxon signed rank*.

Hypothesis Test Results

1. Variable Abnormal Return

Paired Samples Test

			Paired Differences			95% Confidence Interval of the Difference		t	Df	Sig. (2-tailed)
			Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	ARBEFORE	–	.002762528	.036238577	.005878674	-.009148796	.014673852	.470	37	.641
	ARAFTER									

Source : Paired Sample Test Abnormal Return

The significance test was carried out by comparing sig. (2-tailed) with . The test results show that the value of sig. (0.641 > 0.05), it is said that there is no difference in *abnormal returns* stock. Based on the results of the analysis, it can be concluded that H_0 is accepted or H_a is rejected, meaning that there is no difference in *abnormal returns* stock before and after COVID-19.

1. Trade Volume Activity (TVA)

Test Statistics^a

TVAAFTER – TVABEFORE	
Z	-1.936 ^b
Asymp. Sig. (2-tailed)	.053

Source : Wilcoxon Signed Rank Test for Trade Volume Activity

The significance test was carried out by comparing sig. (2-tailed) with the test results show that the value of sig. (0.053 > 0.05), it is said that there is no difference in TVA. Based on the results of the analysis, it can be concluded that H_0 is accepted or H_b is rejected, meaning that there is no difference in TVA before and after COVID-19.

CONCLUSION

Based on the analysis of the research results and discussions that have been stated previously, the conclusions of this study are as follows:

1. There is no difference in *abnormal returns* stock before and after COVID-19. The results of testing the first hypothesis using the *Paired sample t test* show that the value of sig. (0.641 > 0.05), it is said that there is no difference in *abnormal returns* stock before and after COVID-19. Based on the results of the analysis, it can be concluded that H_0 is accepted or H_a is rejected.
2. There is no difference in TVA before and after COVID-19. The results of testing the second hypothesis using the *Wilcoxon signed rank test* showed that the value of sig. (0.053 > 0.05), it is said that there is no difference in TVA before and after COVID-19. Based on the results of the analysis, it can be concluded that H_0 is accepted or H_b is rejected.

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