

## Analysis of Market Reactions in Various Industry Sectors Before and After the Announcement of Indonesia's Exposure to the Covid-19 Outbreak

**Riska Rosdiana**

Universitas Mercu Buana, Jakarta, Indonesia, email: [riska.rosdiana@mercubuana.ac.id](mailto:riska.rosdiana@mercubuana.ac.id)

Corresponding Author: Riska Rosdiana

**Abstract:** This study aims to determine the effect of the announcement of the entry of COVID-19 in Indonesia on abnormal returns, trading volume activity and bid-ask spread in the Miscellaneous industry sector listed on the Indonesia Stock Exchange (IDX). The sampling technique used in this study was using the census sampling method and from this method data were obtained as many as 45 companies in the Miscellaneous industry. The method used in this study is an event study, where the event window in this study consists of 7 days before and 7 days after the announcement of the entry of COVID-19 in Indonesia. Hypothesis testing was carried out using the paired-sample t-test and the Wilcoxon signed rank test. The results showed that there were significant differences in trading volume activity before and after the announcement of the entry of COVID-19 in Indonesia. However, there are no significant differences in abnormal returns before and after the announcement of the entry of COVID-19 in Indonesia.

**Keywords:** Event Study, Abnormal Return, Trading Volume Activity

### INTRODUCTION

The case of a new type of corona virus, which is then commonly called Covid -19 was first discovered in Wuhan, the capital of Hubei Province, China at the end of 2019. In Indonesia, the first case of Covid-19 virus infection was found in the city of Jakarta on March 2, 2020. The Indonesian government officially announced that two Indonesian citizens were positively exposed to the corona virus. Both are the first cases reported in Indonesia (Kompas, 2020).

The outbreak of the Covid-19 virus is external information that can indirectly have an impact on buying shares in all business sectors. During the Covid-19 Pandemic, where the spread of the virus was speedy and a health protocol policy that limited community mobility, all economic sectors experienced a slowdown (Nugroho, etc 2021). This can be seen from the decline in stock prices in all sectors listed on the Indonesia Stock Exchange. This decline began with the announcement of the entry of Covid -19 in Indonesia, which was announced by the Indonesian Government on March 2, 2020.

All industrial sectors experienced a severe decline following the announcement of the entry of Covid-19 in Indonesia. However, of all the sectors listed on the Indonesia Stock Exchange, the Miscellaneous industry sector was the sector that had the most impact and experienced the deepest decline in stock returns, reaching -9.42% on March 9, 2020.

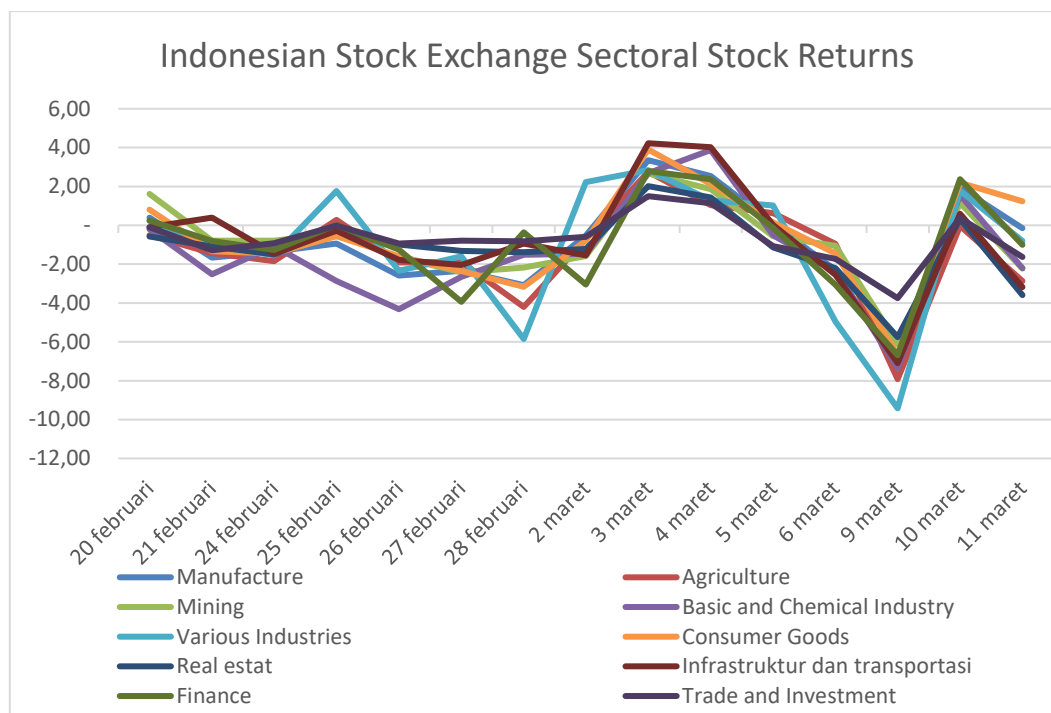


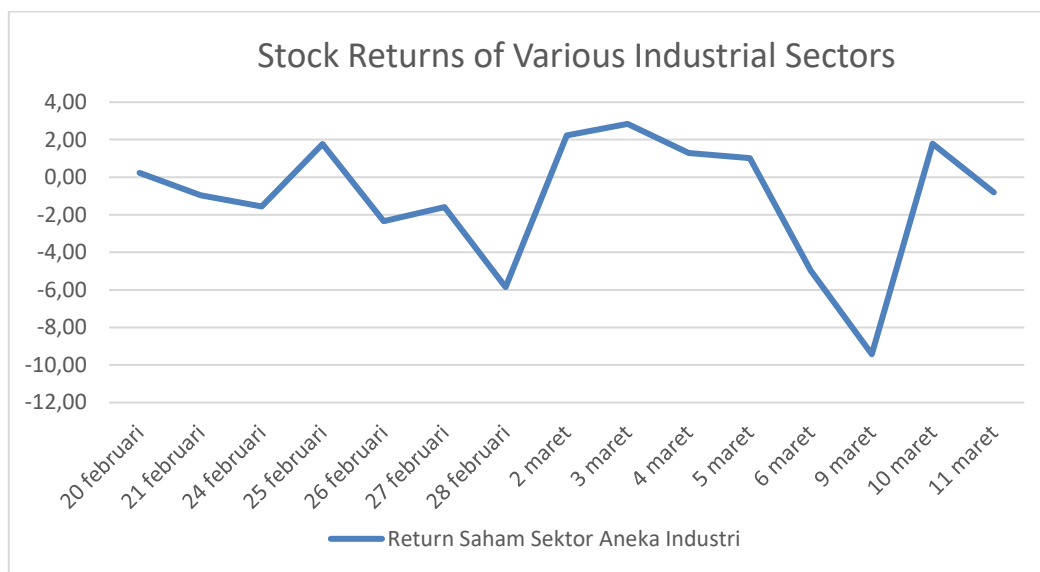
Figure 1. Indonesian Stock Exchange Sectoral Stock Returns

It can be seen from Figure 1 above that almost all industrial sectors experienced a fairly severe decline after the announcement of the arrival of Covid -19 in Indonesia. However, of the 9 sectors listed on the Indonesia Stock Exchange, the Various Industries sector was the sector that had the most impact and experienced the deepest decline in stock returns, reaching -9.42% on 9 March 2020.

The capital market is very profitable for domestic investors besides that provide benefits to foreign investors (Arief, 2019). To prove the entry of Covid - 19 in Indonesia on March 2 2020 had a more impact on the Indonesian capital market, a test will be carried out on the information content of this event using event studies in the Various Industries sector. This is because the various industrial sector is the sector that experienced the most severe decline in stock returns compared to other sectors.

The reaction of the capital market to an event that has information content can be measured using returns as the price change value or by using abnormal returns which are the difference between actual returns and returns expected by investors (Jogiyanto, 2018).

### Return of Stocks in Various Industrial Sectors Before and After Announcement of Indonesia's Exposure to the Covid-19 Outbreak



**Figure 2. Stock Returns of Various Industrial Sectors**

It can be seen from Figure 1.2 above that stock returns for the various industrial sectors experienced a very sharp decline a few days after Covid - 19 entered Indonesia on March 2 2020. The most severe decline was on day 5 after Covid - 19 entered Indonesia namely on March 9, 2020.

Apart from using abnormal returns, the market reaction to information can also be seen through the parameters of the movement of trading volume activity in the market. Trading volume activity (Trading Volume Activity) is an indicator that can be used to see the level of liquidity of a stock in the capital market to see how the capital market reacts to new information through the parameters of the movement of trading volume activity in the market. The changing pattern is not only on the value scale but also on the positive and negative mark changes (Sumarto, 2021). In addition, trading volume activity is one of the parameters that can be used to measure the reaction of the capital market to information.

To prove the event that the entry of Covid-19 in Indonesia on March 2, 2020 had more impact on the Indonesian capital market, a test will be carried out on the information content of the event by using an event study in the Miscellaneous industry sector. This is because the Miscellaneous industry sector is the sector that experienced the most severe decline in stock returns compared to other sectors. This study was conducted to determine and analyze the difference between the average abnormal return, the average trading volume activity and the average bid-ask spread before and after the announcement of Indonesia's exposure to the Covid-19 outbreak.

### **METHODS**

This study uses an event study to determine and analyze the differences in average abnormal returns, trading volume activity, and bid-ask spreads that occurred before and after the first announcement of the entry of Covid-19 in Indonesia. The observation period in this study was taken for 15 days around the date of the event on the stock day without calculating the holiday date, namely 7 days before the event, 1-day during the event, and 7 days after the event.

The population in this study are companies that are included in the Miscellaneous industry which are listed on the Indonesia Stock Exchange in 2020. The sample selection in

this study was determined using the saturated sampling method (census). Saturated Sampling is a sampling technique when all members of the population are used as samples. Another term for saturated sample is census (Sugiyono, 2014). In this study, the population as well as the research sample are the Miscellaneous industry companies listed on the Indonesia Stock Exchange, totaling 45 shares.

The normality test in this study used the Shapiro Wilk normality test. The results of the normality test of the data are used to determine what test tools are most suitable to be used in hypothesis testing. If the data is normally distributed, then the Paired Sample T-Test parametric test is used. Meanwhile, if the data is not normally distributed, a non-parametric test is used, namely the Wilcoxon Signed Rank Test, which is more suitable to be used. The Paired Sample T-Test or Wilcoxon Signed Rank difference test is used to explain whether or not there is a significant difference in the average abnormal return of shares, trading volume and bid-ask spread before and after the announcement of Indonesia's exposure to the Covid-19 virus.

### Variables Operationalization

#### Abnormal Return

The abnormal return is the excess of the actual return over the normal return (Jogiyanto, 2018). Normal returns are expected returns or returns expected by investors. Thus the abnormal return (abnormal return) is the difference between the actual return that occurs and the expected return.

#### Trading Volume Activity

Trading Volume Activity is a measurement of whether the announcement issued by the company is related to the increase in the volume of the company's stock trading activity at the time of the announcement.

#### Bid-Ask Spread

The reaction in the capital market can also be measured by the emergence of changes in the value of the spread of the purchase price and selling price of shares which is called the bid-ask spread. This is because the bid-ask spread of a stock has a relationship with the level of trading volume of a stock.

## RESULT AND DISCUSSION

### Descriptive Statistics

**Table 1. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Abnormal Return Before The Event	7	0,00319	0,10362	0,02203	0,03613
Abnormal Return After The Event	7	-0,02187	0,03713	0,00136	0,02213
Trading Volume Activity Before The Event	7	0,00037	0,00186	0,00107	0,00055
Trading Volume Activity After The Event	7	0,00034	0,00062	0,00042	0,0001

The average value of abnormal return before the event was 0.02203 and then decreased after the event to 0.00136. The average value of trading volume activity before the event was 0.00107 and then decreased after the event to 0.00042.

**Normality test**

Based on the normality test results, Average abnormal return and Average bid-ask spread show that the data are not normally distributed. So, that the hypothesis test was carried out with a non-parametric Wilcoxon signed rank test. While the normality test results of Average Trading Volume Activity show that the data are normally distributed. So, that the hypothesis test is carried out with the Paired Sample T-Test test.

**Hypothesis testing**

The results of the abnormal return hypothesis test before and after the event are shown in the table 2

**Table 2. Wilcoxon signed rank test Average Abnormal Return**

Test Statistics <sup>a</sup>	
Average Abnormal Return Before The Event – Average Abnormal Return After The Event	
Z	-1.183 <sup>b</sup>
Asymp. Sig. (2-tailed)	.237

The results of the Wilcoxon signed rank test on abnormal returns show a significant value of 0.237 ( $0.237 > 0.05$ ), meaning that there is no significant difference in abnormal returns before and after the first announcement of the entry of Covid -19 in Indonesia.

The results of the average trading volume activity hypothesis test before and after the event are shown in the table 3

**Table 3. Paired Sample T-Test test Average Trading Volume Activity**

		Paired Samples Test					t	df	Sig. (2-tailed)
		Mean	Paired Differences			Upper			
			Std. Deviation	Std. Error Mean	Lower		Upper		
Pair 1	Average Trading Volume Activity Before The Event - Average Trading Volume Activity After The Event	.0006571	.0005996	.0002266	.0001026	.0012117	2.900	6	.027

The results of the Paired Sample T-Test on stock trading volume activity showed a significance value of 0.027 ( $0.027 < 0.05$ ), meaning that there was a significant difference in trading volume activity before and after the first announcement of the entry of Covid-19 in Indonesia.

**Discussion**

**The Effect of the Announcement of Indonesia's Exposure to Covid -19 on Abnormal Returns**

Based on the results of the different average abnormal return test, the results showed that there was no significant effect of events on abnormal returns as indicated by the absence of differences in the average abnormal return before and after the event of Indonesia's exposure to Covid-19. It is concluded that the event of Indonesia's exposure to Covid-19 does not contain information so that there is no significant change in the average abnormal return.

This is because the announcements made by the President of Indonesia on March 2, 2020 tend to be announcements that are already known to investors, where other countries in Southeast Asia have already announced the first cases of the Corona Virus before this event occurred in Indonesia. This means that the information obtained by investors tends to be the same. For this reason, stock exchange activities tend to be characterized by a wait and see

actions after the announcement, and investors do not want to rush in making decisions, so this event does not significantly affect the average abnormal return for investors. The results of this study are similar to those of Inri B. Sambuari et al. (2020) which states that there is no difference in abnormal returns before and after the event.

### **The Effect of the Announcement of Indonesia's Exposure to Covid -19 on Trading Volume Activity**

Based on the results of the different average trading volume activity test, it was found that there was a significant effect of events on trading volume activity as indicated by the difference in average trading volume activity before and after the event of Indonesia's exposure to Covid-19. It was concluded that the event of Indonesia's exposure to Covid-19 had an effect on trading volume activity.

This significant decrease in trading volume activity further strengthens that investors prefer to take a wait and see action by not making stock transactions during this event or more precisely after the announcement of the entry of Covid-19 in Indonesia. These results are in line with the research results of Subrata and Werastuti (2020) which state that there are significant differences in trading volume activity before and after the event.

### **CONCLUSION**

Based on the data analysis and discussion previously described about the effect of the announcement of Indonesia's exposure to the Covid-19 virus on abnormal returns, trading volume activity, and bid-ask spreads in the Miscellaneous industry, it can be concluded as follows:

1. The announcement of Indonesia's exposure to the Covid-19 virus did not have an impact on abnormal stock returns. This shows that the announcement of Indonesia's exposure to the Covid-19 virus does not contain information or this event is neutral.
2. The announcement of Indonesia's exposure to the Covid-19 virus caused the trading volume of stock activity to decrease significantly. This further reinforces that investors prefer not make stock transactions during this event.

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