

HEALTH SECTOR SHARIA SHARES REACTION TO THE EVENTS OF THE 2019 CORONA VIRUS DISEASE DISTRIBUTION

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Abstract

The purpose of this study was to determine the reaction of ISSI-listed health stocks to Covid-19 which was divided into three events, namely the lockdown of the city of Wuhan, the announcement of the President of the Republic of Indonesia regarding the Covid-19 case, and the WHO announcement about the virus pandemic. This study uses a quantitative approach with the event study method. Market reaction is measured by the abnormal return variable and trading volume activity. Meanwhile, the Market model is used to find the expected return with a simple linear regression analysis technique, which is then carried out by the one-sample Kolmogorov Smirnov test for normality and one sample t-test for hypothesis testing. The results of the study found that the manufacturing and service sectors were not affected by the Wuhan lockdown. Because the indicators AAR, CAAR and ATVA do not show significant results. Meanwhile, the announcement of the President of the Republic of Indonesia regarding the Covid-19 case and the announcement of the WHO pandemic virus showed that there was an influence on the manufacturing sector and health services. Because the indicators AAR, CAAR and ATVA show significant results. The results of the study found that the manufacturing and service sectors were not affected by the Wuhan lockdown. Meanwhile, the announcement of the President of the Republic of Indonesia regarding the Covid-19 case and the announcement of the WHO pandemic virus showed that there was an influence on the manufacturing sector and health services.

Keywords: *Event study, ISSI, Lockdown of Wuhan city, Announcement of the President of the Republic of Indonesia regarding the Covid-19 case, Announcement of the WHO pandemic virus.*

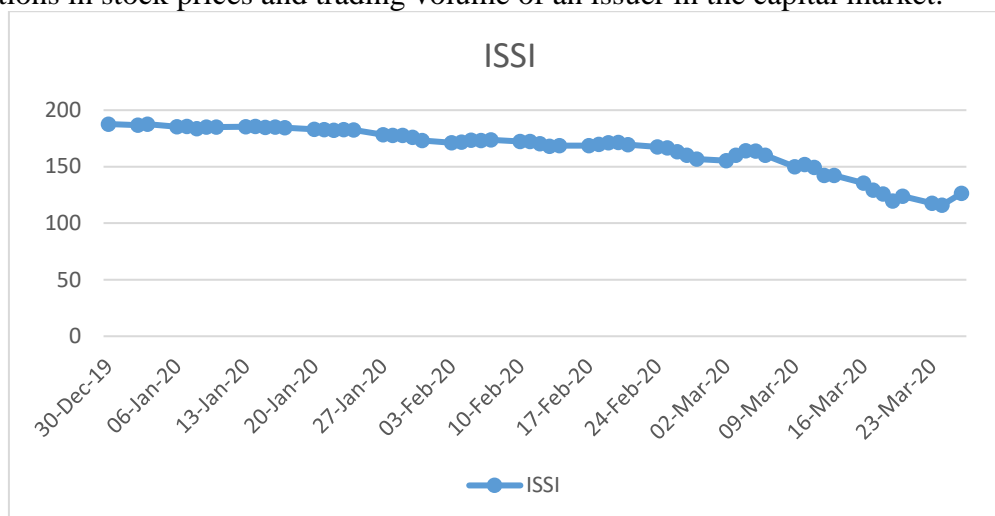
1. INTRODUCTION

The capital market can be said to be efficient if an event that contains information has succeeded in reflecting it on the price and volume formed in the market in the form of shares (Fama, 1970). One of the events that can affect the capital market is the corona virus disease 2019 (Covid-19). The beginning of the spread of Covid-19 came from a new type of corona virus disease called SARS-CoV-2. This virus was first reported by the Chinese government to WHO (World Health Organization) on December 31, 2019 in Wuhan. January 23, 2020, with the increasing number of Wuhan residents confirmed positive for Covid-19, the Chinese government again made the decision to lock down the city of Wuhan (WHO, 2020). On March 2, 2020, quoted from the official website www.presidentri.co.id, President Joko Widodo announced that there were 2 Indonesian citizens who were confirmed positive for Covid-19. Furthermore, on March 11, 2020, the spread of Covid-19 had spread and infected 113 countries besides China. With the increasing level of spread and worsening conditions, the WHO has changed the Covid-19 category from an epidemic to a pandemic (WHO, 2020).

Information in an event is very important for issuers or investors in making investment decisions (Chen et al., 2018). Factors that influence stock price movements can come from external or internal. The spread of Covid-19 is one of the external factors that affects the

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fluctuations in stock prices and trading volume of an issuer in the capital market.



Source: Bursa Efek Indonesia
Figure 1. ISSI Closing Price

Figure 1 shows the movement of the ISSI in each Covid-19 incident. From this figure, ISSI has experienced a weakening price which has an impact on the reaction of the Indonesian capital market. Quoting from KONTAN news (Thursday, 12/03/20) the decline in the JCI was caused by investors experiencing panic selling over the outbreak of the corona virus. The panic selling reaction by both local and foreign investors had an impact on stock sales. Investors sell their shares if the information gives a negative signal to the market. This is done because investors do not want to experience losses from an event.

Health sector stocks listed in ISSI are probably one of the stocks affected by panic selling, because health stocks are directly related to the Covid-19 incident, while health issuers are providers of health products in the form of medicines and medical devices or services in the form of hospital services and medical laboratory. Health sector stocks can be grouped into two, namely, the manufacturing health sector and the health services sector.

From this explanation, the purpose of this study is to determine the reaction of the Indonesian Islamic capital market, especially health sector stocks, to issuers listed in the ISSI index (Indonesian Sharia Stock Index) to the occurrence of the Covid-19 spread. This event study research uses three events, the first is the lockdown of the city of Wuhan, the second is the announcement of the President of the Republic of Indonesia regarding Covid-19, and the third is the announcement of WHO regarding the Covid-19 pandemic. This research also wants to know the efficiency of the capital market in ISSI-listed issuers using the abnormal return (AR) and trading volume activity (TVA) variables.

2. LITERATURE STUDY

Market efficiency measures the extent to which a market will react to information to reach a new equilibrium price (Jogiyanto, 2017: 605). Market efficiency occurs when the price of shares traded in the market reflects all available information, both past information and current information (Tandelilin, 2010: 219). On the other hand, the market is said to be inefficient if changes in stock prices do not reflect the information received by investors (Samsul, 2006: 270). Fama (1970) divides the market efficiency model as follows:

- a. Market efficiency is in the form of weak form, when the prices of securities fully reflect existing information in the past (historical data).

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- b. Market efficiency is in the form of a semi-strong form, when the prices of securities fully reflect all information, both published information and historical data.
- c. Market efficiency is a strong form, when the current stock price reflects all available data, be it historical data, published information and special or confidential information.

According to (Sutedi, 2011: 29) the Islamic capital market is a capital market that is run by using sharia principles. Sharia principles that are applied in the Islamic capital market, namely the absence of maysir, gharar, usury. As explained in the QS. Al Baqarah verse 275 which reads:

Meaning: "People who eat usury cannot stand but are like a person who is possessed by a demon because he is crazy. That is because they say that buying and selling is the same as usury. Even though Allah has made buying and selling legal and forbidden usury. Whoever gets a warning from his god, then he stops, then what he has obtained before becomes his and his business (it's up to Allah). Whoever repeats, then they are residents of hell, they are eternal in it (Qur'an Kemenag, 2020).

The Islamic capital market cannot be separated from the influence of the Covid-19 spread. According to the Deputy for Economic Affairs of the Ministry of National Development Planning / Bappenas, quoted from the news portal of the REPUBLIKA (15/06/20), the Islamic capital market is more immune in the midst of a pandemic. This can occur because Islamic instruments are more stable than conventional capital markets. Cahyaningrum (2017) explains that the principles of investment in the Islamic capital market are based on the real sector and the rate of return on the productivity of the fund. One of the real sectors in the Indonesian economy is the health sector, which includes manufactured products and services directly. Thus, the Islamic capital market in this sector is closer to the real economy in every event that occurs, especially during pandemic conditions like this at ISSI.

Research gaps can be seen in the various results of previous studies and the use of different methods or objects. Previous research by Chen et al. (2007) examined the relationship between the SARS (Severe Acute Respiratory Syndrome) virus on the reaction of hotel stocks in Taiwan. He et al. (2020) examines the impact of Covid-19 on share prices of all sectors in the Chinese capital market. Goker et al. (2020) examines the impact of Covid-19 on the index in Istanbul Turkey. Kumar et al. (2020) examined the efficient market hypothesis of the pharmaceutical industry in India. And Alam et al. (2020) which examines the response of the capital market during Covid-19 to India's lockdown. Meanwhile, this study focuses on health sector stocks. Health stocks were chosen because health issuers are providers of health products in the form of medicines and medical devices or services in the form of hospital and laboratory services that were badly needed during Covid-19. The research hypotheses are as follows:

- H1: The Wuhan lockdown has a significant effect on the occurrence of abnormal returns and trading volume around the event.
- H2: The announcement of the President of the Republic of Indonesia regarding the Covid-19 case has a significant effect on the occurrence of Abnormal Return and Trading Volume Activity around the event.
- H3: The WHO pandemic announcement event has a significant effect on the occurrence of abnormal returns and trading volume activity around the event.

3. RESEARCH METHOD

This study uses a quantitative approach using the event study method. Suganda (2018), event study research is a study conducted to analyze the impact of an event on the capital market. This study uses three events that are used to see market reactions, especially Islamic stocks in the health sector, manufacturing and services. The lockdown of the city of Wuhan,

the announcement of the President of the Republic of Indonesia regarding the Covid-19 case and the WHO announcement regarding the virus pandemic are all events of the spread of Covid-19.



Figure 2. Empirical Model

Type of Data

This study uses secondary data, in the form of the date of the event, closing stock price history, market index price history, stock trading volume history, number of shares outstanding and ISSI indexed issuers. Data sources were obtained from the official website www.presidentri.go.id, www.who.int, www.idx.co.id, and www.duniainvest.com. The population of this research is issuers listed on the Indonesia Stock Exchange (BEI) and listed in ISSI according to regulation No. : Peng-00073 / BEI.PQP / 03-2020 and a population of 440 issuers indexed by ISSI is obtained.

The sampling process used purposive sampling method with the appropriate criteria. The criteria used in sampling:

- a. All stocks indexed by ISSI during the research period 11 October 2019 - 26 November 2020 and according to the DES review as of May and November 2019.
- b. Shares of the consumer goods industry sector and the trade, service and investment sectors, especially those engaged in pharmaceutical and healthcare.
- c. Do not perform corporate actions such as dividend distribution, stock split, right issue, RUPS during the research period.

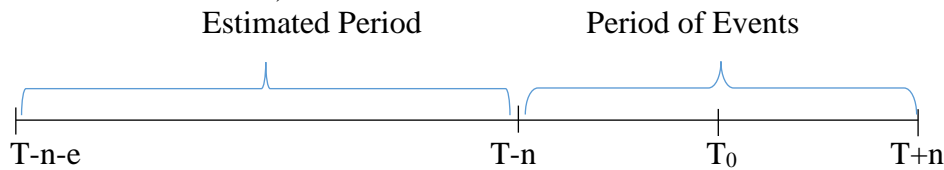
The sample of this study obtained 13 stocks which were then divided into the manufacturing and service sectors. The manufacturing sector includes INAF, KAEF, KLBF, PEHA, SIDO, and PYFA. Meanwhile, there are HEAL, MIKA, PRDA, PRIM, SAME, SILO, and SRAJ in the service sector.

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Data Analysis Technique

Tandelilin (2010: 565) describes the 10 steps used in the following event study method:

- a. Identify events
- b. Determine the observation period. The period used in this study is 60 days as the estimate period and 20 days for the window period. Within the window period is divided into before and after events. The first event, the lockdown of Wuhan city estimated period was taken (11 October 2019 - 08 January 2020) and the window period occurred on (09 January 2020 - 06 February 2020). The second event, the announcement of the President of the Republic of Indonesia regarding the Covid-19 case in the estimated period (19 November 2019 - 14 February 2020) and the window period (17 February 2020 - 16 March 2020). The third event, the WHO announcement on the virus pandemic estimated period (28 November 2019 - 25 February 2020) and the window period on (26 February 2020 - 26 March 2020).



- c. Determine the method used to calculate expected return in calculating abnormal returns using the market model.
- d. Calculating the abnormal return by first calculating the actual return and the expected return.

Actual Return:

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Expected Return:

$$E(R_{it}) = \alpha_i + \beta_i \cdot RM_t + \epsilon_{ij}$$

$E(R_{it})$ is the expected return of stock i in the estimated period t , α_i is the intercept in the regression on stock i , β_i is the slope coefficient which is the Beta of stock i and RM_t is the market index return in the j th estimate period which can be calculated by the formula:

$$RM_j = (ISSI_j - ISSI_{j-1}) / ISSI_{j-1},$$

ϵ_{it} is the regression error.

Abnormal Return:

$$RTN_{it} = R_{it} - E(R_{it})$$

$$AAR = \frac{\sum AR^t}{n}$$

$$CAAR = \frac{\sum_{i=1}^k AAR_{i,t}}{n}$$

$$TVA = \frac{\sum \text{saham emiten yang di perdagangkan hari ke } t}{\sum \text{saham emiten yang tercatat di BEI hari ke } t}$$

$$ATVA = \frac{\sum TVA_t}{n}$$

4. RESULT AND DISCUSSION

Result

The results of the normality test using the Kolmogorov Smirnov one sample test showed that AAR, CAAR and ATVA were normally distributed.

The results of the AAR test for the Wuhan city lockdown can be seen in appendix 1

Appendix 1 can be seen that the manufacturing AAR in the observation period after the Wuhan city lockdown has a significant value at $t + 7$ with a P-value of 0.058 or significant at the 10% (0.1) level. This indicates that there is no effect of locking the city of Wuhan on AR shares on the IDX. The existence of a significant value after the event is possible because of the optimism attitude of investors to obtain high returns so that it can influence investment decision making. Meanwhile, service AAR can be seen that there is no significant value either before or after the event. This indicates that hypothesis 1 accepts H_0 or there is no effect of locking the city of Wuhan on the occurrence of AR shares in the Indonesian capital market.

The results of the CAAR test for the Wuhan city lockdown can be seen in appendix 2

Appendix 2 can be seen that manufacturing CAAR was found to be significant in the window period $(-7, + 7)$ with a P-value of 0.077; $(-5, + 5)$ P-value 0.030; $(-3, + 3)$ P-value 0.089; and $(-2, + 2)$ with a P-value of 0.083. A significant CAAR indicates that there is an effect of locking the city of Wuhan on the cumulative calculation of AR. This happens because the AR value fluctuates during the observation period. Meanwhile, service CAAR during the 5 event window period has a significant value at $(-10, + 10)$ with a P-value of 0.005; $(-7, + 7)$ P-value 0.003; $(-5, + 5)$ P-value 0.004; $(-3, + 3)$ P-value 0.006 and $(-2, + 2)$ P-value 0.002. A significant CAAR in the 5 window period indicates that H_0 is rejected or there is an effect of the lockdown of the city of Wuhan on the cumulative AR occurrence in the Indonesian capital market.

The results of the Wuhan city lockdown ATVA test can be seen in appendix 3

Appendix 3 of the manufacturing ATVA results show that a significant value occurs at $t - 9$ before the event with a P-value of 0.013 and $t + 5$ after the event with a P-value of 0.051. The existence of a significant ATVA indicates that there is no effect of the Wuhan city lockdown on the occurrence of TVA in the Indonesian capital market. Meanwhile, service ATVA can be seen as a significant value around the event occurring at $t + 9$ with a P-value of 0.008 and $t + 10$ with a P-value of 0.019. The existence of a significant ATVA value around the event means that there is no effect of the lockdown in Wuhan city on the occurrence of TVA in the Indonesian capital market.

The results of the AAR test for the announcement of the President of the Republic of Indonesia can be seen in attachment 4

Appendix 4 shows the results of hypothesis testing using the one sample t-test statistical tool on AAR samples of goods and services around the event. Manufacturing AAR which has a significance value smaller than the significance level (α) of 1% or 5% or 10% occurs at $t - 9$ with a P-value of 0.072; t_0 with a P-value of 0.084; and $t + 6$ with a P-value of 0.049. This value shows that there is an effect of the announcement of the President of the Republic of Indonesia regarding the Covid-19 case on the abnormal return of health stocks on the Indonesian capital market. Significant manufacturing AARs before the event, during the event and after the event are possible because there are investors who hold their shares for precautionary motives. Meanwhile, the service AAR shows a significant value that occurs at $t - 10$ with a P-value of 0.019 and $t - 2$ with a P-value of 0.098 before the event, the significance value that occurs at $t + 4$ with a P-value of 0.032 after the event. The existence of a significant manufacturing and service AAR proves that there is an effect of the announcement of the

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President of the Republic of Indonesia regarding the Covid-19 case on the occurrence of abnormal returns on health stocks on the Indonesian capital market.

The results of the CAAR test for the announcement of the President of the Republic of Indonesia regarding Covid-19 can be seen in attachment 5

Appendix 5 shows the overall significant manufacturing CAAR for the entire window period. This proves that hypothesis 2 rejects H_0 , or in other words there is an effect of the announcement of the President of the Republic of Indonesia regarding the Covid-19 case on the cumulative abnormal return of shares in the Indonesian capital market. Meanwhile, service CAAR shows significant results during the window period. This proves that H_0 is rejected or in other words there is an effect of the announcement of the President of the Republic of Indonesia regarding the Covid-19 case on the cumulative abnormal return of shares in the Indonesian capital market.

The results of the ATVA test for the announcement of the President of the Republic of Indonesia can be seen in attachment 6

Appendix 6 shows the results of hypothesis testing on manufacturing and service ATVA during the observation period surrounding the event. There is a significant manufacturing ATVA value before the event at $t-10$ with a P-value of 0.001; $t-9$ with a P-value of 0.013; and significant at $t-7$ to $t-2$, respectively. Thus, there is an effect of the announcement of the President of the Republic of Indonesia regarding the Covid-19 case on the occurrence of stock trading volume activity in the Indonesian capital market. Meanwhile, service ATVA can be seen from the test results showing that there is a significant ATVA value for 9 days at $t-9$ to $t-1$ and $t+1$, $t+3$, $t+4$ and $t+10$. The test results prove that there is an effect of the announcement of the President of the Republic of Indonesia regarding the Covid-19 case on stock trading volume activity around the events on the Indonesian capital market.

The results of the AAR test for the announcement of the WHO pandemic virus can be seen in Appendix 7

Appendix 7 AAR manufacturing has a significant value at $t-1$ with a P-value of 0.051. This shows that there is an effect of the WHO announcement regarding the virus pandemic on the abnormal return of stocks that occur in the Indonesian capital market. Meanwhile, service AAR has a significant value at $t-9$ with a P-value of 0.077 and $t-3$ with a P-value of 0.046. This proves that there is an effect of the WHO announcement regarding the virus pandemic on the abnormal return of stocks that occur in the Indonesian capital market.

The results of the CAAR test for the announcement of the WHO pandemic virus can be seen in appendix 8

Appendix 8 shows that the CAAR test results have a significant value, this proves that H_0 is rejected or it can be interpreted that there is an effect of the WHO announcement about the virus pandemic on the abnormal return of stocks in the Indonesian capital market. Meanwhile, service CAAR shows the same result, namely rejecting H_0 . So that the WHO announcement about the virus pandemic has an effect on the cumulative abnormal return of shares that occurs in the Indonesian capital market.

The results of the ATVA test for the announcement of the WHO pandemic virus can be seen in appendix 9

Appendix 9 which shows the ATVA values before and after the events in the window period. It can be seen that the significant ATVA value around the event occurred at $t-10$ with a P-value of 0.018; $t-9$ with a P-value of 0.078 and $t+6$ with a P-value of 0.059. So that the WHO announcement about the virus pandemic has no effect on the trading volume activity of shares that occur in the Indonesian capital market. Meanwhile, service ATVA has a significant value 5 days before the event that occurred at $t-10$, $t-9$, $t-8$, $t-6$ and $t-4$. And 5 days are

significant at $t + 3$, $t + 5$, $t + 6$, $t + 8$ and $t + 9$ after the event. That way it can prove that the WHO announcement about the pandemic virus affects the trading volume activity of stocks around the events that occur in the Indonesian capital market.

Discussion

The Wuhan City Lockdown

The statistical test results showed a significant manufacturing AAR at $t + 7$. This means that this event has no effect on the Indonesian capital market. This happens because investors have not seen the information contained in the Wuhan city lockdown as important information. So that it is considered worthless and does not need to be considered in making investment decisions.

Whereas at CAAR manufacturing the test results show significant throughout the window around the event. But on a daily basis it is not significant, meaning that the return that occurs during the day is not different from the expected return. However, after the accumulation shows significant results, it means that the return experiences a development trend after the gradual and alternate days of the event are still being observed by investors. So investors follow the developments that occur from that event, although on a daily basis it is not significant. A significant CAAR value is positive, meaning that there is a cumulative upward trend in share prices. This is due to investors' assessment that health sector stocks will experience an increase in production. So that will cause the demand for health goods such as medical devices and medicines will increase. So that the analysis shows a cumulative positive AR reaction by showing an increase in stock prices. However, individual daily AR did not show significant results.

Meanwhile in the service sector the AAR test results showed insignificance in all daily tests. This was possible because investors did not consider the Wuhan incident as something important and should be considered. Thus, according to investors, the information contained in the Wuhan city lockdown is of no value and will not cause AR. In addition, the level of service, be it hospitals or medical laboratories, did not increase. This happened because the spread of Covid-19 at that time had not yet entered Indonesia.

On the other hand, the service CAAR shows significant results across the event window. This is possible because investors suspect that there will be an increase in occupation, one of which is the hospital. This is considered as a form of anticipation if the spread of Covid-19 has entered Indonesia. Therefore, the market reacts positively by experiencing an increasing trend in the share price of service health issuers, which is what causes a positive return. Individually, AR on testing per day does not show significant results, but cumulatively on average it shows significant results and affects the Indonesian capital market.

The results of the manufacturing ATVA test showed significant at $t-9$ and $t + 5$. Even though there is a significant result it is not considered a spike in transactions because it did not occur on an ongoing basis. This happened because investors considered the information in the lockdown of Wuhan to be of no value and had no direct impact on the Indonesian capital market. So that trade transactions in the Indonesian capital market run normally.

Meanwhile, the service ATVA also shows significant results at $t + 9$ and $t + 10$. This means that there is no surge in buying or selling transactions around the event. This happened because investors did not properly assess the information contained in the Wuhan city lockdown. So this is in line with the test results on the AAR where the information presented in the lockdown of the city of Wuhan is worthless and trade in the Indonesian capital market is running normally.

Announcement of the President of the Republic of Indonesia regarding Covid-19

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The manufacturing AAR test shows significant results at $t-9$, t_0 and $t + 6$. At t_0 , it shows a significant result, it is possible to have panic buying because investors think that the press release by President Jokowi is very important and must be considered. With the announcement of the positive case of Indonesian citizens with Covid-19, this has made investors think that manufacturing health stocks will experience an increase in sales and share prices, which is what causes investors to experience buying pressure. At $t + 1$ and the next day investors have evaluated the information that occurs at t_0 so that there is no significant AR at $t + 1$. Information has also been distributed evenly because the information is public, so there is no buying pressure from investors. At $t + 6$, this significant result is likely to occur because there are still investors who wait and see the performance of issuers on the development of Covid-19 information or there is an influence from other events that are happening.

Meanwhile, manufacturing CAAR showed significant results in 5 event windows. The largest positive CAAR value occurs in the event window around $-3, + 3$, this happens because cumulatively, AAR shows an increase in stock prices even though on daily tests there is no increase. The increase in share prices occurred because investors considered that there would be an increase in demand for health goods such as medicines and medical devices. So that cumulatively can produce AR but not on a daily test. This confirms the statistical test results of AAR, where the CAAR around $-3, +3$ which is close to the date of the event shows a significant result.

Meanwhile, from the service AAR test, there are significant results at $t-10$, $t-2$ and $t + 4$. This probably happened because investors did not see the cases of the two Indonesian citizens who were positive for Covid-19 as a surge in patients, because the cases were considered by investors as cases with a small number. Therefore, the information is considered as invaluable information by investors. A negative service AAR value indicates that there is no increase in occupational health services. So that investors assess that there will be no increase in occupation either in hospitals or medical laboratories because of the small number of victims. Thus, AAR services relatively have no effect on the Indonesian capital market, but the majority of the daily tests show a negative investor response.

On the other hand, the service CAAR shows significance in the entire event window. This may occur because investors see that the cumulative service AAR has decreased in share prices as indicated by negative reactions by investors. This is because the actual return is smaller than the expected return, meaning that investors hope that the return will increase. However, it is experiencing a downward trend which causes a negative CAAR value. This happened because the number of victims was still small, so there was no increase in occupation. This is what causes cumulatively significant service AARs around the event. However, individual testing per day did not show a significant effect.

The results of the manufacturing ATVA test showed significant at $t-10$; $t-9$ and $t-7$ to $t-2$. This is because investors' assessments are based on information from WHO that the spread of Covid-19 has spread to various countries. This may lead to transaction panic resulting in a transfer of share ownership even though the stock price is not too large because abnormal returns are not formed on a daily basis but cumulatively an abnormal return is formed. $T-0$ shows insignificant results, this proves that investors have evaluated the information before the President of the Republic of Indonesia announced that 2 Indonesian citizens were confirmed positive for Covid-19. With the investor's evaluation, the transactions in the market subside as evidenced at $t-1$ and when officially announced at t_0 the results show insignificance up to $t + 10$. However, the ATVA value shows positive, which means that the trading volume has increased. This may occur because investors see that there will be an increase in demand for medical goods or medical devices. On average, at t_0 to $t + 6$, transactions occur above the

average ATVA in the estimated period. This happens because investors suspect an announcement, but after it is announced, investors evaluate the information and the market returns to stability or trading continues normally.

Meanwhile, service ATVA shows significance at $t-9$ to $t-1$. This happened because investors suspected the announcement but the information had not been proven to be true. So that when it was officially announced by the President of the Republic of Indonesia that the trade transaction returned to normal, this happened because investors had analyzed the information so that transaction panic would not occur. Even so, there are still significant results at $t + 1$, $t + 3$, $t + 4$ and $t + 10$. This may occur because investors are still waiting and seeing the announcement of the President of the Republic of Indonesia regarding the Covid-19 case.

WHO Pandemic Virus Announcements

The manufacturing AAR test showed significant results at $t-1$. This is likely because the distance between the President's announcement regarding Covid-19 and the WHO's announcement of the virus pandemic is still very close. So it is possible that there is still investor behavior that takes a wait and see position on the President's announcement. In addition, prior to the WHO announcement of the virus pandemic, investors were still panic buying. This occurs because of an imbalance between the supply and demand of health goods such as medicines and other medical devices. However, after the announcement of the WHO pandemic virus, the market reaction decreased because investors were no longer panic buying.

Meanwhile, the manufacturing CAAR showed positive and significant results in the entire event window. This happens because investors think that there will be an increase in demand for health goods. Around the cumulative events, there is an increase in stock prices which causes a cumulative AR to be formed. However, in individual AR tests and tests per day, daily AR was not formed. This happens because the information presented is considered by investors to be of no value to the Indonesian capital market.

The service AAR test results have significant results at $t-9$ and $t-3$. The AAR value is negative, meaning that the occupation of the hospital and medical laboratory has decreased. Seheggan causes a negative AAR. This is possible because investors see the information presented in the WHO pandemic virus announcement as insignificant. This is because investors are still waiting and seeing the announcement of the President of the Republic of Indonesia regarding the Covid-19 case. That is what causes the $t-3$ to have an abnormal return. However, investors are quick to evaluate the information. So that there is no effect found the next day.

Meanwhile, the results of the CAAR service test showed negative and significant results around the incident. This is because investors think that the occupation of hospitals and medical laboratories has not increased. So this is what causes a negative price trend. AAR cumulatively decreases in share price thus forming AR around cumulative events. However, individually do not form daily AR around events. Thus the information presented in the WHO announcement of the virus pandemic is considered of no value.

The manufacturing ATVA test showed significant results at $t-10$, $t-9$ and $t + 6$. This is because trade transactions are not affected by the WHO announcement of the virus pandemic and during the announcement there were no jumps in transactions. So that investors see this information as invaluable information on the Indonesian capital market.

Meanwhile, the service ATVA test showed significant results on several days of testing. This shows that there was a surge in trade transactions which was probably due to the increasing number of victims who were confirmed positive for Covid-19. With the increasing number of victims, there will be an increase in hospital occupation, which will cause an increase in stock prices due to a surge in transactions. However, 3 days before the announcement, at the time of the announcement and 2 days after the announcement did not show any significant results, it means that there was no spike in transactions on that day. This is probably because investors

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can evaluate the information presented, so that trading runs stable. However, it did not last long, trading again took place, possibly due to a more important announcement that investors considered more valuable.

5. CONCLUSION

The purpose of this study is to determine the market reaction that occurred in the Wuhan city lockdown, the announcement of the President of the Republic of Indonesia regarding the Covid-19 case and the announcement of the WHO pandemic virus. All events in statistical testing show that the Indonesian capital market, especially health stocks, reacted to the announcement of the President of the Republic of Indonesia and the announcement of the WHO regarding the virus pandemic. This is due to investor behavior such as panic buying during the President's announcement. In addition, the application of physical distancing and the increasing number of patients led to an increase in the manufacturing industry and health services. Meanwhile, the Wuhan lockdown has no effect on the capital market, especially health stocks. This happens because the market views the information presented as insignificant.

Suggestions in this study are divided into three, namely for policy makers, for investors and for further researchers. The following is a further explanation of the suggestions from the researchers.

For policy makers, such as the Indonesia Stock Exchange, they can observe an event that is happening both internationally and nationally. policies such as auto rejection and trading halt. For investors, in order to sort out which stocks are potential and relevant to events. For future researchers, it is expected to use other variable indicators such as BHAR (Buy and Hold Abnormal Return) and ABHAR (Average Buy and Hold Abnormal Return), which are suitable for long-term events.

Reference

- Alam, M. N., Alam, S., & Chavali, K. (2020). *Stock Market Response during COVID-19 Lockdown Period in India : An Event Study*. 7(7), 131–137. <https://doi.org/10.13106/jafeb.2020.vol7.no7.131>
- Cahyaningrum, I. S. (2017). Pengaruh Sektor Riil Dan Keuangan Syariah Terhadap Pertumbuhan Ekonomi Di Indonesia Tahun 2007-2014. *An-Nisbah: Jurnal Ekonomi Syariah*, 4(1). <https://doi.org/10.21274/an.2017.4.1.106-128>
- Chen, M., Lee, C., Lin, Y., & Chen, W. (2018). Did the S.A.R.S. epidemic weaken the integration of Asian stock markets ? Evidence from smooth time-varying cointegration analysis. *Economic Research-Ekonomiska Istraživanja*, 31(1), 1–19. <https://doi.org/10.1080/1331677X.2018.1456354>
- Chen, M., Shawn, S., & Gon, W. (2007). *The impact of the SARS outbreak on Taiwanese hotel stock performance : An event-study approach*. 26(November 2002), 200–212. <https://doi.org/10.1016/j.ijhm.2005.11.004>
- Duniainvestasi.com. (2020). Dunia Investasi Data Bursa Efek. Retrieved March 11, 2020, from www.duniainvestasi.com website: <http://www.duniainvestasi.com/bei/prices/stock/statistic>
- Elif, İ., Göker, K., Selman, B., & Serdar, S. (2020). *The Impact of the COVID-19 (Coronavirus) on The Borsa Istanbul Sector Index Returns : An Event Study COVID- 19 (Koronavirüs) ' un Borsa İstanbul Sektör Endeks Getirileri Üzerindeki Etkisi : Bir Olay*. (14), 14–41.
- Fama, E. F. (1970). American Finance Association Efficient Capital Markets : A Review of Theory and Empirical Work Author (s): Eugene F. Fama Source : The Journal of Finance,

- Vol . 25, No. 2, Papers and Proceedings of the Twenty- Eighth Annual Meeting of the American. *The Journal of Finance*, 25(2), 383–417.
- Hartono, J. (2017). *Teori Portofolio dan Analisis Investasi* (ke sebelas). Yogyakarta: BPFE.
- He, P., Sun, Y., Zhang, Y., & Li, T. (2020). COVID – 19’ s Impact on Stock Prices Across Different Sectors — An Event Study Based on the Chinese Stock Market. *Emerging Markets Finance and Trade*, 56(10), 2198–2212. <https://doi.org/10.1080/1540496X.2020.1785865>
- IDX. (2020). Indeks Saham. Retrieved March 11, 2020, from www.idx.co.id website: <https://www.idx.co.id/data-pasar/data-saham/indeks-saham/>
- Kemenag. (2020). Al Qur’an. Retrieved May 18, 2020, from www.quran.kemenag.go.id website: <https://quran.kemenag.go.id/>
- Kumar, A., Soni, R., Hawaldar, I. T., Vyas, M., & Yadav, V. (2020). *The Testing of Efficient Market Hypotheses : A Study of Indian Pharmaceutical Industry*. 10(3), 208–216.
- Presidenri.go.id. (2020). Keterangan Pers Presiden RI Terkait Dua WNI Positif Korona. Retrieved March 11, 2020, from www.presidentri.go.id website: <https://www.presidentri.go.id/video/keterangan-pers-presiden-ri-terkait-dua-wni-positif-korona/>
- Puspaningtyas, L. (2020). Pasar Modal Syariah Lebih Kebal di Tengah Pandemi. Retrieved October 12, 2020, from www.republika.co.id website: <https://republika.co.id/berita/qbx6k9396/pasar-modal-syariah-lebih-kebal-di-tengah-pandemi>
- Qolbi, N. (2020). IHSG anjlok 5,01%, pandemi virus corona masih jadi penyebabnya. Retrieved September 5, 2020, from www.investasi.kontan.go.id website: <https://investasi.kontan.co.id/news/ihsg-anjlok-501-pandemi-virus-corona-masih-jadi-penyebabnya>
- Siregar, S. (2017). *Statistika Terapan Untuk Perguruan Tinggi*. Jakarta: Kencana.
- Suganda, T. R. (n.d.). *Event Study Teori dan Pembahasan Reaksi Pasar Modal Indonesia*.
- Sukmaningrum, P. S., & Madyan, M. (2019). REAKSI PASAR SAHAM YANG TERDAFTAR DALAM JAKARTA ISLAMIC INDEX (JII) TERHADAP PENGUMUMAN PENETAPAN GUBERNUR DKI JAKARTA TAHUN 2017. 5(1), 1–14.
- Sutedi, A. (2011). *Good corporate governance*. Sinar Grafika.
- Tandelilin, E. (2010). *Portofolio dan Investasi: Teori dan Aplikasi*. Yogyakarta: Kanisius.
- Who.int. (2020). Coronavirus disease (COVID-19) Weekly Epidemiological Update and Weekly Operational Update. Retrieved March 11, 2020, from www.who.int website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/>