



THE INFLUENCE OF COVID-19 ON ECONOMICS IN INDONESIAN HEALTHCARE AND FINANCE

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ARTICLE INFO	ABSTRACT
Published: June 26th, 2023 Keywords: economics, healthcare, finance, COVID-19	<i>This research is a research with event study method. The events observed are events that are affected by the Covid-19 epidemic. There are 3 events that will be examined in this study, namely the announcement of the covid-19 epidemic by WHO, which means including in Indonesia on March 11, 2020. The second event is the implementation of the PSBB for the first time in Indonesia, namely in the Capital Region of DKI Jakarta, which took effect on April 10, 2020. The third event was the announcement of OJK regulations, namely POJK Policy Number 11/POJK.02/2020, on March 20 2020. From these events it will be associated with the economy in Indonesia, which is proxied by stock returns, because by looking at this stock return it describes the economy in a country. For this research it is only limited to the health care and financial sectors. These two sectors are considered to be the most affected by the presence of Covid-19. The methodology used in this research is the study of abnormal return testing events. The abnormal return calculation method uses the Market Model, with an estimated period of 60 days and a window period of 15 days. Testing with the average difference test before and after the event, with an error rate of 5%. The window period was taken at the start of the pandemic, then when the second period was at its peak, and when the pandemic had slumped. Differences in observations to be used as comparison material.</i>

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INTRODUCTION

Corona virus was first discovered in Wuhan, China with cases in December reaching 27 cases and spreading very easily until the end of December 266 cases had been recorded. At the beginning of 2020, 381 cases were recorded in China. Since the virus appeared in China, Chinese industries have been forced to close businesses and factories, this has also had an impact on industry in the country because Indonesia is a country that has business relations with China and many goods are exported and imported directly from China.

About 29% of goods exported by China for raw and auxiliary materials come from Indonesia, the decline in commodities and mining goods will have an impact on the income of workers in this sector. Indonesia's economy is still dependent on commodities and mining goods, if purchasing power decreases, there is no incentive for entrepreneurs to increase their investment. The restrictions imposed by China have disrupted the availability of imported goods from China which has resulted in industries or sectors whose raw materials or capital goods originate from China will have their production process disrupted, this also has an impact on consumer goods, if local availability is not available then prices will increase, until now the economy Indonesia has been disturbed or it can be said that there have been many declines in stock prices in various sectors.

Santi from Kompas.com (2021) stated that the closing of trading session 1 on the Indonesia Stock Exchange (IDX), closed the Jakarta Composite Index and decreased by 2.94% or 151.54 points at the level of 5,002.55. WHO announcement raised the status of the corona virus to a pandemic. This announcement causes market participants to transfer assets to safer investment instruments.

Riyandi from Ayobandung.com (2022) quoted data from Mirae Asset Sekuritas Monday (23/3/2020) also reported that shares decreased by 24 percent in the telecommunications sector such as PT Telkom Indonesia Tbk (TLKM). Not only stocks in the telecommunication sector but this also had an impact on other sectors such as PT Indosat Tbk (ISAT) which fell to a level of 52%, in the health sector such as hospitals and pharmaceuticals which also experienced a decline in share prices due to the virus epidemic. Seeing the various declines in these stocks, the Indonesian economy in 2020 and in the coming years will be very dependent on the handling of the corona virus pandemic.

Investors are taking various actions to deal with the corona virus pandemic. Many investors have disbursed their investment instruments due to the corona virus pandemic (Endraria, 2022; Ichsan, 2021). The process of rebalancing the portfolio must be carried out in order to minimize losses that may occur in the midst of the pandemic (Haitao & Ali, 2022; Jogiyanto, 2013; Tandelilin, 2010). The Indonesian government is trying to prevent transmission by one of them implementing Large-Scale Social Restrictions (PSBB). Regulations regarding PSBB issued by the Ministry of Health (Kemenkes) in the context of accelerating the handling of COVID-19 so that they can be immediately implemented in various regions (Alnizar & Manshur, 2022; Aviariska, 2020). The PSBB rules are listed in the Minister of Health Regulation Number 9 of 2020. Secretary General of the Ministry of Health Oscar Primadi in his written statement said the PSBB covers restrictions on the activities of certain residents in an area suspected of being infected with COVID-19. These restrictions include closing schools and workplaces, restrictions on religious activities, restrictions on activities in public places or facilities, restrictions on socio-cultural activities, restrictions on modes of transportation, and restrictions on other activities specifically related to aspects of defense and security (Mawar et al., 2021; Napitu et al., 2020). Cases and deaths from COVID-19 disease significantly and rapidly and have epidemiological links with similar events in other regions or countries.

PSBB is carried out during the longest incubation period and can be extended if there is still evidence of spread (Herdiana, 2020). The Minister of Health explains that schools and workplaces are closed except for strategic offices or agencies that provide services related to defense and security, public order, food needs, fuel oil and gas, health services, the economy, finance, communications, industry, export and import, distribution. logistics, and other basic needs (Mahadewi, 2021; Rohman, 2021; Safitri & Dewa, 2022).

March 13, 2020 was a tense and historic date for capital market participants. The decision to temporarily freeze (trading halt) was taken by the Indonesia Stock Exchange because the Jakarta Composite Index (IHSG) was sharply corrected by 5%. Since President Jokowi announced the first case of covid in Indonesia on March 2, 2020, the JCI has been increasingly volatile after

previously being influenced by the international market. The decline in the JCI to 6.5% occurred on March 9, 2020, after that, the Jakarta Stock Exchange has repeatedly implemented trading halts. The stock market is indeed sensitive to news about Covid 19 which has hit most countries in the world.

Concerns about banking liquidity and an increase in non-performing loans were the main issues during the covid period (Ichsan et al., 2021; Kurniasari et al., 2023). With social distancing, laying off employees and a weakening economy, most creditors will find it difficult to repay their loans. The fear of economic uncertainty also makes people hesitate to deposit their funds in banks. This affects the amount of third party funds that can be managed by banks. Several factors affecting the health of the banking sector are the reason for the capital market to consider its decision.

These conditions forced the Government to adopt financial policies. To maintain financial stability, maintain economic growth and optimize the banking intermediary function, the government issued several financial policies in anticipation of the impact of Covid 19. The Indonesian Financial Services Authority issued regulations regarding national economic stimulus as a measure to anticipate the impact of the spread of Covid 19 by issuing POJK No. 11/POJK.02/2020.

In summary, this POJK regulates banking policies to support economic growth by providing leeway for debtors in fulfilling their obligations. This POJK applies to national banks, both BUK, BUS, UUS, BPR and BPRS. Some of the business sectors that received stimulus were tourism, transportation, hospitality, trade, processing, agriculture and mining. Allowance for settlement of debtor obligations with a ceiling of up to 10 billion. This policy targets MSMEs and the lower middle class who have been affected by Covid 19. Another policy is the restructuring of credit payment schedules without limiting credit limits. The Stimulus Provisions as a countercyclical policy on the impact of the spread of Covid-19 were promulgated on March 20, 2020 and are valid until March 31, 2021.

Until this November, it can be said that the pandemic has slumped or has fallen to level 1. Transmission in Indonesia has reached below 1,000 people per day. However, in July 2021 there was a very high wave of the pandemic, so that the transmission of Covid-19 reached above 50 thousand people per day. Therefore the research will look at the differences in the economic impact from the start of the pandemic, to the peak of the pandemic and when the pandemic has started to disappear.

This research was made to see how financial markets influence the POJK Policy Number 11/POJK.02/2020. Some time before the POJK was published, the money market had been affected by the spread of Covid-19 and also the movement of international stocks. The question is whether the government's stimulus policy has a positive effect on the national banking stock market or not. The effect can also be the other way around, with creditor restructuring it will disrupt banking liquidity, because some credit payments are delayed. The end of this situation is the decline in bank profitability. This can be a consideration for the capital market to invest in the banking market.

The results of this study are expected to provide additional references regarding the impact that has occurred with the Covid-19 epidemic in Indonesia. These findings form the conclusion of the impact on the healthcare sector and the financial sector. For the health sector, it can be used as a basis for government policy in increasing health sector companies. Meanwhile, in the banking sector, the impact of credit payment jams has been felt and this has had an impact on the real sector.

METHODS

The type of research being carried out is a descriptive type of research that will use the study method for the announcement of the COVID-19 corona outbreak as a national emergency disaster in health sector companies and the banking sector listed on the Indonesia Stock Exchange. This research was conducted at 4 points of occurrence, starting from 3 March 2020 when the pandemic was first announced nationally, then when the banking policy was announced on 11 March 2021, when the second peak of the pandemic was in July 2021 and when levels 1-3 were announced in October 2021.

The population in this study are indexes listed on the Indonesia Stock Exchange, the index referred to is companies in the health care and financial sectors. The sample used in this study uses a purposive sample, namely a sampling technique in which the research determines sampling by establishing special characteristics that are in accordance with the research objectives so that it is expected to be able to answer research problems. Based on these provisions, there are 15 companies in the health sector and 53 in the financial sector.

The technique in this research uses secondary data collection techniques, secondary data collection techniques are techniques where research takes data obtained indirectly from the object or research subject. The data collection technique was done in a secondary way, namely by searching manually (via books, indexes, bibliography, references, and relevant literature) and searching online (via internet databases).

RESULTS AND DISCUSSION

This research retrieves data from the Indonesia Stock Exchange in 2020 related to the official announcement from the Indonesian government which was announced on March 11, 2020. The data obtained are stock price data for the financial sector and the health sector. There are 105 lists of the financial sector and data on the health sector (healthcare) there are 24. The list of stocks for each can be seen in Appendix-1.

The share price seen from returns during January 2020 is as follows.

Table 1. Return of Healthcare shares during January 2020

Trading day to	Average Total Returns	JCI returns
1	30.512%	0.635%
2	10.706%	-1.045%
3	-1.792%	0.351%

Trading day to	Average Total Returns	JCI returns
4	21.075%	-0.855%
5	26.412%	0.784%
6	-0.842%	0.007%
7	-2.059%	0.345%
8	-1.809%	0.458%
9	3.850%	-0.665%
10	-0.064%	0.043%
11	-0.305%	0.089%
12	-0.658%	-0.741%
13	0.242%	-0.110%
14	0.356%	-0.075%
15	0.647%	0.253%
16	-0.832%	-0.082%
17	-0.914%	-1.776%
18	-0.264%	-0.359%
19	-0.766%	0.030%
20	-1.311%	-0.907%

Source: Processed IDX data

From the table it can be seen that during January there has been a sharp decline. From the 1st trading day of 30.512% to the 20th trading day on January 31, 2020 it became -1.311%. When compared with the IHSG return, it is also almost the same, on January 1 2020 it was 0.635% while on January 31 2020 it was -0.907%. The decline in the JCI was slower than the average for the health sector in January 2020.

In February 2020, the movement of stock returns will appear as follows:

Table 2. Return on Healthcare shares during February 2020

Trading Day to	Average Total Returns	JCI returns
1	6.196%	-1.941%
2	16.912%	-0.941%
3	-2.582%	0.649%
4	15.024%	0.948%
5	9.690%	0.144%
6	-1.104%	0.208%
7	-20.520%	-0.792%
8	-21.162%	0.039%
9	-13.972%	-0.694%
10	20.507%	-0.696%

Trading Day to	Average Total Returns	JCI returns
11	-11.861%	-0.085%
12	-17.614%	0.010%
13	24.138%	0.331%
14	-16.244%	0.711%
15	4.821%	0.231%
16	-32.382%	-1.014%
17	-15.861%	-1.279%
18	-37.952%	-0.343%
19	-32.890%	-1.697%
20	-78.779%	-2.693%

Source: Processed IDX data

From the table it can be seen that during February also began a sharp decline. From the 1st trading day of 6.196% to the 20th trading day on January 31, 2020 it became -78.779%. When compared with the JCI return, it is also almost the same, in the 1st trade on February 1 2020 it was -1.941%. while on February 28 2020 it was -2,693%. The decline in the JCI was slower than the average for the health sector in January 2020. On the 2nd trading day, nearing the official Covid announcement, stock returns fell to -78.779%. This indicates that there are early symptoms of the Covid-19 event which was announced on March 12, 2020.

For financial sector stocks in January 2020 can be seen as follows:

Table 3. Stock returns in the financial sector during January 2020

Day trading to	Stock returns	JCI
1	-2.799%	0.635%
2	-0.259%	-1.045%
3	-1.126%	0.351%
4	-0.310%	-0.855%
5	-0.030%	0.784%
6	0.250%	0.007%
7	0.462%	0.345%
8	-0.168%	0.458%
9	-0.609%	-0.665%
10	-0.671%	0.043%
11	-0.724%	0.089%
12	-0.940%	-0.741%
13	-0.738%	-0.110%
14	-0.301%	-0.075%
15	-0.070%	0.253%

Day trading to	Stock returns	JCI
16	-0.400%	-0.082%
17	-0.867%	-1.776%
18	0.158%	-0.359%
19	0.429%	0.030%
20	-1.010%	-0.907%

Source: processed IDX data

From the table, it can be explained that the movement starting from the 1st trading day in January 2020, until the 20th trading day on January 31 2020 did not decrease smoothly. Even the last trade in January 2020 was better than the return earlier in the month. At the beginning of the month it was -2,799%, while at the end of the month it was -1,010%. Meanwhile, financial sector stocks in February 2020 can be seen as follows:

Table 4. Stock returns in the financial sector during February 2020

Day trading to	Stock returns	JCI
1	-0.988%	0.635%
2	0.045%	-1.045%
3	0.251%	0.351%
4	0.597%	-0.855%
5	0.356%	0.784%
6	-0.782%	0.007%
7	0.259%	0.345%
8	-0.710%	0.458%
9	-0.578%	-0.665%
10	0.108%	0.043%
11	-0.436%	0.089%
12	0.563%	-0.741%
13	0.474%	-0.110%
14	-0.076%	-0.075%
15	-1.136%	0.253%
16	-0.273%	-0.082%
17	-0.661%	-1.776%
18	-0.555%	-0.359%
19	-1.131%	0.030%
20	-1.156%	-0.907%

Source: Processed IDX data

From the table, it can be explained that the movement starting from the 1st trading day in February 2020, until the 20th trading day on 31 February 2020 did not decrease just a little. in the

last trade in February 2020 it was -0.988%, while at the end of the month it was -1.156%. This slight decline signals that there is not too much in the financial sector.

Analysis

To analyze the data the steps are as follows:

- 1) Looking for stock returns in the estimated period, for 2 (two) months, 1 January 2022 to 2 March 2022 for 60 estimated days or 42 trading days;
- 2) Make a search for α (alpha) and β (beta) stocks to create a regression equation;
- 3) With this equation, the expected return is calculated in the window period, in this study for 15 trading days (3 March 2022 to 23 March 2022); and
- 4) Calculating the average expected return and realized return.
- 5) Analyze with the t test to test whether there is a difference between expectations and realization.

Analysis for the Health Sector

During the estimated return period that occurs as shown in table 4.1 and table 4.2. The results of the analysis during the estimation period can be seen in the attachment. From the data obtained, a regression model can be calculated which is calculated by regressing stock returns on IHSG returns. The models that can be made are as follows:

$$Y = -0.004 + 0.199 X. \dots\dots\dots(4-1)$$

By entering the JCI return into the regression equation, it will be possible to find the expected return during the Window period. The following period data window;

Table 5. Window Period

Date	JCI	JCI returns	Expected Return ($Y = -0.004 + 0.199 X$)	Return Realization	Window Period
03-03-20	5518628	2.936%	0.184%	2.943%	-7
04-03-20	5650136	2.383%	0.074%	2.807%	-6
05-03-20	5638.13	-0.212%	-0.442%	0.930%	-5
06-03-20	5498.54	-2.476%	-0.893%	0.018%	-4
09-03-20	5136.809	-6.579%	-1.709%	-6.888%	-3
10-03-20	5220.826	1.636%	-0.075%	1.261%	-2
11-03-20	5154.105	-1.278%	-0.654%	-3.339%	-1
12-03-20	4895.748	-5.013%	-1.398%	-2.841%	0
13-03-20	4907.571	0.241%	-0.352%	-1.320%	+1
16-03-20	4690.657	-4.420%	-1.280%	-1.470%	+2
17-03-20	4456.749	-4.987%	-1.392%	-3.323%	+3
18-03-20	4330.674	-2.829%	-0.963%	0.155%	+4
19-03-20	4105.422	-5.201%	-1.435%	-3.866%	+5

Date	JCI	JCI returns	Expected Return ($Y = -0.004 + 0.199X$)	Return Realization	Window Period
20-03-20	4194.944	2.181%	0.034%	2.199%	+6
23-03-20	3989517	-4.897%	-1.375%	-0.083%	+7

The 5th analysis is to look for whether there is a significant difference in the Window period. If it is significantly different, it means that there is an abnormal return/average abnormal return. The results of the analysis can be seen in the following table:

Table 6. Average Abnormal Return

Date	JCI	JCI returns	Expected Return ($Y = -0.004 + 0.199X$)	Return Realization	Window Period	The abnormal average return	Significance
03-03-20	5518.62793	2.936%	0.184%	2.943%	-7	-0.02759	significant 5%
04-03-20	5650.13623	2.383%	0.074%	2.807%	-6	-0.02733	significant 5%
05-03-20	5638.129883	-0.212%	-0.442%	0.930%	-5	-0.01372	significant 5%
06-03-20	5498.540039	-2.476%	-0.893%	0.018%	-4	-0.00911	significant 1%
09-03-20	5136.809082	-6.579%	-1.709%	-6.888%	-3	0.05179	significant 10%
10-03-20	5220.826172	1.636%	-0.075%	1.261%	-2	-0.01335	significant 5%
11-03-20	5154.10498	-1.278%	-0.654%	-3.339%	-1	0.02685	significant 5%
12-03-20	4895.748047	-5.013%	-1.398%	-2.841%	0	0.01444	significant 5%
13-03-20	4907.570801	0.241%	-0.352%	-1.320%	+1	0.00968	significant 1%
16-03-20	4690.657227	-4.420%	-1.280%	-1.470%	+2	0.00191	significant 1%
17-03-20	4456.749023	-4.987%	-1.392%	-3.323%	+3	0.01931	significant 5%
18-03-20	4330.673828	-2.829%	-0.963%	0.155%	+4	-0.01118	significant 5%
19-03-20	4105.421875	-5.201%	-1.435%	-3.866%	+5	0.02431	significant 5%
20-03-20	4194.943848	2.181%	0.034%	2.199%	+6	-0.02165	significant 5%
23-03-20	3989.51709	-4.897%	-1.375%	-0.083%	+7	-0.01292	significant 5%

Analysis for the Financial sector

For financial stocks, data returns in tables 4.3 and 4.4. The models that can be made are as follows:

$$Y = -0.002 - 0.147 X \dots\dots\dots(4-1)$$

From the regression results, the expected return data is generated which is then compared with the realized return. The data that has been processed are as follows:

Table 7. Average Abnormal Return and Its Significance

Date	JCI	JCI returns	Expected Return (Y=-0.002-0.147 X)	Return Realization	Window Period	The abnormal average return	Significance
03-03-20	5518.63	2.936%	-0.632%	11.031%	-7	-0.11662	not significant
04-03-20	5650.14	2.383%	-0.550%	0.571%	-6	-0.01121	significant 5%
05-03-20	5638.13	-0.212%	-0.169%	1.451%	-5	-0.01620	significant 5%
06-03-20	5498.54	-2.476%	0.164%	-3.782%	-4	0.03946	significant 5%
09-03-20	5136.81	-6.579%	0.767%	1.263%	-3	-0.00496	significant 1%
10-03-20	5220.83	1.636%	-0.440%	-1.051%	-2	0.00611	significant 5%
11-03-20	5154.1	-1.278%	-0.012%	-3.025%	-1	0.03013	significant 5%
12-03-20	4895.75	-5.013%	0.537%	0.625%	0	-0.00088	significant 5%
13-03-20	4907.57	0.241%	-0.235%	-1.631%	+1	0.01396	significant 5%
16-03-20	4690.66	-4.420%	0.450%	-1.626%	+2	0.02075	significant 5%
17-03-20	4456.75	-4.987%	0.533%	-1.708%	+3	0.02241	significant 5%
18-03-20	4330.67	-2.829%	0.216%	-2.228%	+4	0.02444	significant 5%
19-03-20	4105.42	-5.201%	0.565%	-0.111%	+5	0.00676	significant 1%
20-03-20	4194.94	2.181%	-0.521%	-1.715%	+6	0.01195	significant 5%
23-03-20	3989.52	-4.897%	0.520%	-0.111%	+7	0.00631	significant 1%

Source: processed IDX data

CONCLUSION

The first conclusion for health sector stocks. From day minus 7 to day H+7 all are significant, meaning that the official announcement of COVID-19 has affected the healthcare sector stock returns on the Indonesia Stock Exchange after the announcement of the COVID-19 virus outbreak as a national disaster. On the day of the event, namely the announcement of Covid-19 as a national epidemic, the market was affected.

Then for the financial sector, on minus 7 days to D+7 days all are significant, except at the beginning of the window. meaning that the official announcement of COVID-19 affected the stock returns of the financial sector except on the first day, on the Indonesia Stock Exchange after the announcement of the COVID-19 virus outbreak as a national disaster. On the day of the incident, namely when the national epidemic was announced, a significant 1%.

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