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Capital Market Reaction to the Implementation of PSBB in the Middle of Pandemic Covid 19

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Abstract

This research is an event study research that aims to determine differences by analyzing the market reaction represented by the average abnormal stock returns that occurred in the period before, during, and after the implementation of the PSBB policy in the mids of the COVID 19 pandemic by the Indonesian government. This study uses secondary data in the form of daily stock activity data from before to after the implementation of the PSBB policy by the government. The sample selection method in the study used saturated sampling where there were 33 sample companies with a 21-day observation period. Data analysis was performed using the paired sample t-test parametric statistical test. The results showed that there was no significant difference in the average abnormal return in the before- time and before-after periods. However, in the period after which the results of the study prove that there is a significant difference in the average abnormal return.

Keywords: *capital market, covid-19 pandemic, PSBB policy.*

INTRODUCTION

The capital market is one of the financial instruments that has an important role in helping the country's economic growth. The role of the capital market is as a means for parties with excess funds (investors) to be able to allocate their funds to parties who lack funds. For investors, this activity is usually referred to as investing. The types of investments that investors can make in the capital market include bonds, stocks, mutual funds, and others. Through investment, of course, investors will be able to get a return on the allocated funds that have been made. Get returns, investors before investing or investing must be able to consider several factors, both internal and external, that can affect capital market conditions. Internal factors that can affect the capital market include company performance, financial reports, company strategy and so on. Meanwhile, external factors include political stability, inflation, uncertain economic conditions, and so on. An event basically contains information that can affect conditions in the capital market. Information obtained from an event must be absorbed properly by investors because it can help in making investment decisions. As happened recently, Indonesia is being attacked by a deadly virus, namely Corona Virus Disease (COVID 19). The virus was first discovered in the city of Wuhan, China in December 2019 and began to spread to almost all countries in the world including Indonesia. Corona virus is a virus that can cause disease for animals or humans, this virus attacks the respiratory tract so that this virus is considered deadly. The spread of the corona virus is also very fast, counting in just 4 months the virus

has spread almost throughout the world. Corona virus can be transmitted quickly through water droplets when someone who is infected sneezes or coughs. Symptoms of this virus are fever, cough, and shortness of breath which can also be symptoms of various diseases such as influenza, throat infections, and colds (WHO, 2020). This condition makes government policies to maintain mutual distance between individuals and limit community activities, even in several countries such as Italy, Ireland and Spain implementing lockdown policies. However, President Jokowi on March 31, 2020 decided to choose the PSBB (Large-Scale Social Restrictions) option in accordance with Law Number 6 of 2018 concerning health quarantine, in efforts to mitigate COVID 19 in Indonesia. PSBB is carried out by imposing limits on the number of people and setting the distance between people in activities in public places and public facilities. Conditions like this will certainly have an impact on national economic conditions, especially the tourism sector. According to statistical data from the Ministry of Tourism and Creative Economy of the Republic of Indonesia (2020), the number of foreign tourist arrivals in March 2020 decreased by 64.11 percent when compared to March 2019. In March, the total number of visits by foreign tourists was 470,989 visits, while in February the total number of visits was 863,960. The decrease in the number of visits was due to the closure of access to and from the country and several regions as a measure to prevent the spread of COVID 19. Public demand for holidays has also decreased, resulting in many tourism service companies and restaurants experiencing a decline in performance. Conditions like this will certainly have an influence on the existing capital market. On the Indonesia Stock Exchange (IDX), shares of tourism issuers / companies are included in the restaurant, hotel and tourism sub-sector which is part of the trade, services and investment sector. According to its development, currently the shares of issuers in the tourism sector, including hotels, have decreased, such as at PT Pembangunan Jaya Ancol Tbk and PT Citra Putra Realty Tbk. It was recorded that on March 27, 2020, PT Pembangunan Jaya Ancol Tbk had decreased by 2.17 percent to the position of Rp.450 per share and the decline that occurred since early March was 45.45 percent. A decline of 0.43 percent also occurred at PT Citra Putra Realty, so that the issuer was in the position of Rp. 2,330 per share and since early March this issuer has decreased by 41.90 percent. This declining figure illustrates that the market is responding to the COVID 19 pandemic. According to Sujana (2017), the capital market is said to be more efficient if the share price of the issuer or company can fully reflect existing information. Investment decision making made by investors, of course, does not only rely on technical analysis, but it is also necessary to pay attention to events that may directly or indirectly affect the capital market. Some of these considerations can help investors to get returns and profits on their investment. Several previous studies conducted research by seeing or observing an event, this research is usually referred to as research using an event study. As has been done by Rahmawati and Pandansari (2016), they observed the capital market reaction through the BOM Plaza Sarinah incident that took place in 2016. The results of their research indicate that based on the average value of abnormal stock returns, there is no difference, but on the fourth and fifth days after the incident, there is a market reaction that affects market players in making decisions. Research using an event study was also conducted by Tecualu and Megge (2010) by observing the BOM incident in the Kuningan area in 2009. The results of his research show that the observed events cannot produce abnormal returns for investors and the difference in abnormal return values is also not found in the study. Sirait, Tiswiyanti, and Mansur (2012) also conducted a similar study by observing the change of Indonesia's finance minister in 2012, showing that during the period before, during and during an event there were significant differences in the average abnormal return value. Based on the above background, this study intends to observe the capital market reaction in the hotel, restaurant and tourism sub-sector companies listed on the

IDX to the enactment of PSBB in Indonesia in the midst of the COVID 19 pandemic using the event study method. The purpose of this study was to determine the differences by analyzing the market reaction represented by the average abnormal stock returns that occurred in the period before, during, and after the implementation of the PSBB policy from the government. This research is expected to provide investors with an overview of whether or not there is a market reaction when an event occurs. In addition, this research is expected to add new literature to the tourism, hotel and restaurant sector considering that research in this sector is still rarely carried out. This research is also expected to be a reference for similar research in the future.

CONCEPTUAL FRAMEWORK

Capital Market

The capital market is a vehicle for bringing together parties who need long-term funds with those who have funds. Same as the market in general, but in the capital market the goods traded are capital in the form of company ownership rights (shares), corporate debt statements (bonds), mutual funds, derivative instruments and other instruments. Capital buyers can be carried out by individuals or organizations with excess funds who are willing to set aside excess funds for activities that can generate income through the capital market, while capital sellers are companies that are in need of capital or additional capital for the continuity of their business (Sawitri & Hartanto, 2007). The capital market owned by Indonesia is the Indonesia Stock Exchange (IDX), which is the result of a merger between the Jakarta Stock Exchange and the Surabaya Stock Exchange. For the economy of a country, the capital market has a very important role. The capital market plays two roles, namely as a means for companies or business actors to obtain funds from investors / investors or in other words, as a means of business funding. In addition, another role of the capital market is as a means for society or institutions to invest. Forms of investment that can be made by the public or institutions are such as bonds, stocks, mutual funds, and others (Indonesia Stock Exchange, 2018).

Capital Market Efficiency

Fama (1970) states that the capital market can be said to be efficient if the stock price can fully reflect all historical, public, and private relevant information. So it can be said that an efficient market can be shown by the stock price which has the same value as its fundamental value. Fama's theory (1970) states that there is no trading strategy that can produce an unreasonable return because stock prices always follow random movements or random walks. Efficient market forms can be grouped into three forms, namely weak-form efficiency, semistrong-form efficiency, and strong- form efficiency. Efficient market in the form of weak-form is when investors cannot get abnormal returns or profits above the normal category based on past information. Semistrong-form means an efficient market when investors are unable to obtain abnormal returns or profits above the normal category by utilizing public information. The market is said to be efficient in the strong-form form, when no one can get an abnormal return or profit above the normal category by using publicly available information or information that is private in nature. Suganda & Sabbat (2014) argue that signaling theory is a theory that shows that an announcement will contain information if investors can react to the announcement. Information that has been published through an announcement will be received by investors as a signal to help make decisions. In general, information that has been received by the public will first be analyzed and then the information will be interpreted. If the information received shows a positive signal then the market will consider it good news and if it shows a negative signal then the information will be considered bad news by the market. After the market has interpreted these signals, the market will react according to the signals it has received.

When the market acts on a signal from an announcement, it can cause changes in the capital market, one of which is a change in the abnormal rate of stock returns.

Abnormal Return

Abnormal return is the result of subtraction from the pure value of profits obtained by investors (actual return) and the value of profits that investors expect to obtain from their investment (expected return) The return value obtained can change according to the changing stock price or in accordance with the current economic events (Barus & Christina, 2014).

The formula for the abnormal return is:

$$AR_{i,t} = R_{i,t} - ER_{i,t} \quad \text{.....1}$$

$AR_{i,t}$ is the abnormal return of stock i in period t, $R_{i,t}$ is the real return of stock i in period t; and $ER_{i,t}$ is the expected return of stock i in period t.

The formula for actual return is:

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}} \quad \text{..... 2}$$

$R_{i,t}$ is the real return of stock i in period t, $P_{i,t}$ is the price (closing price) of share i in period t; and $P_{i,t}$ is the price before period t on stock i. The process of estimating expected return can be obtained using three types of models, namely the mean- adjusted model, the market model, and the market-adjusted model. The following is the formula for estimating the expected return using the market-adjusted model.

$$ER_{i,t} = \frac{IHSG_{t} - IHSG_{t-1}}{IHSG_{t-1}} \quad \text{..... 3}$$

$ER_{i,t}$ is the expected return of stock i in period t; $IHSG_{t-1}$ is the Composite Stock Price Index in stock i period t; and $IHSG_{i,t}$ is the Composite Stock Price Index before period t on stock i.

HYPOTHESIS

H_1 = There was a significant market reaction in the hotel, restaurant and tourism sub-sector companies in the period before the implementation of the PSBB as measured by the average abnormal return.

H_2 = There is a significant market reaction in the hotel, restaurant and tourism sub-sector companies in the period after the implementation of the PSBB which is measured using the average abnormal return.

H_3 = There is a significant market reaction in the hotel, restaurant and tourism sub-sector companies in the period before-after the implementation of PSBB which is measured using the average abnormal return.

RESEARCH METHOD

This research uses the Event Study method where research is carried out by observing the impact of an announcement of information on securities prices (Tandelilin, 2010). The event study used in this research is the implementation of the PSBB policy by the government in the midst of the COVID 19 pandemic. This research uses an observation

period of 21 days where a 10 day observation period is carried out before the implementation of the PSBB policy which is marked by the day -10,-9,-8,…,-1. Day 0 is a day that reflects the announcement of the president's decision to implement the PSBB policy. Meanwhile, day + 1, + 2, + 3,…, + 10 is a period that reflects after the announcement. The population in this research is 33 companies included in the hotel, restaurant and tourism sub-sector which are listed on the Indonesia Stock Exchange. The sample selection in this study used a saturated sampling method, where in this technique all members of the population were used as samples in the study. The use of saturated sampling method in this study intends to make generalizations with a relatively small error rate. The type of data used in this research is a type of secondary data where data is obtained indirectly or through other people or intermediary media such as books, documents, and others. The data in this study were obtained from the official website of the Indonesia Stock Exchange, namely www.idx.co.id and the website finance.yahoo.com. Secondary data used in this study include:

1. The date the President Jokowi announced the implementation of the PSBB policy was March 31, 2020.
2. List of companies incorporated in the hotel, restaurant and tourism sub-sector category on the IDX in 2020.
3. The closing price of shares (closing price) for the specified period is 21 days.

The operational definitions of the variables and measurements used in the study are shown in Table 1 as follows.

Table 1. Operational Definition of Variables

Variable	Definition	Parameter
Actual return saham	The difference between share price i in period t and stock price before period t in company i is divided by share price before period t in stock I	$R_{!} = \frac{P_{!,!} - P_{!,!!!}}{P_{!,!!!}}$
Expected return saham	The difference between the IHSG in stock i period t and the IHSG before period t in i stock, divided by the IHSG before period t in i stock	$ER_{!,!} = \frac{HSG_{!,!} - IHS_{!,!!!}}{IHS_{!,!!!}}$
Abnormal return saham	The difference between actual return with expected return	$AR_{!,!} = R_{!,!} - ER_{!,!}$
Average abnormal return	Dividing between the number of abnormal return values of all samples in period t with the total number of samples	$AAR_{!} = \frac{\sum AR_{!,!}}{n}$

The analytical method used in this research is through comparative test or different test. The purpose of conducting a comparative test is to measure the presence or absence of differences between two groups or several groups.

The data in this study were processed using the 2016 version of Microsoft Office Excel software and then data testing was carried out using the SPSS version 25 statistical software. The steps in data analysis techniques in this study are as follows:

1. Data processing uses the 2016 version of Microsoft Office Excel software
   - Record the closing price for each sample and the predetermined event period.
   - Perform abnormal return calculations for each sample and predetermined event period.
   - Perform calculations on the average abnormal returns in each predetermined event period.
2. Testing data

- Record the closing price for each sample and the predetermined event period.
- Perform abnormal return calculations for each sample and predetermined event period.
- Perform calculations on the average abnormal returns in each predetermined event period.
- Interpretation of test results

RESULTS AND DISCUSSION

Results

The data processed in this study is in the form of daily data on shares of the hotel, restaurant and tourism sub-sector companies, totaling 33 companies. The research period was conducted for 21 days, starting from March 16, 2020 to April 15, 2020. The data is processed to produce an average value of abnormal stock returns in the observation period which has been classified into three, namely the period before, during, and after.
The results of descriptive statistical testing of the average value of stock abnormal returns.

Table 2. Descriptive Statistics Test Results & Normality Test

Parameter	AAR Before	AAR When	AAR After
Obs	21	21	21
Mean	0,0021	-0,0202	-0,0052
Std. Dev.	0,0475	0,0000	0,0192
Min	-0,1047	-0,0202	-0,0403
Max	0,0429	-0,0202	0,0257
Komlogorov-Smirnov Sig.	0,181		0,200

Source: Results of Data Processing (2020)

Based on Table 2, it shows that the results of the normality test in the period before and after the implementation of the PSBB policy are 0.18 and 0.20, meaning that the value is greater than the value of α (0.05). So it can be concluded that the research data used is normally distributed or in other words the Ho hypothesis is accepted. Based on the results shown in Table 2 above, it can be seen that from the 21 research data, the average value from the period before the implementation of the PSBB policy by the government was 0.0021 or 0.21 percent with a standard deviation value of 0.0475. The minimum value of the period before the implementation of the PSBB was -0.1047 or -10.47 percent which occurred on March 26, 2020 or Day-3. The maximum value from the period before the implementation of the PSBB was 0.0429 or 4.29 percent which occurred on March 17, 2020 or Day-9. When the PSBB policy was implemented by the government, based on Table 2 above, it can be seen that the average abnormal return value of shares produced is -0.0202 or -2.02 percent. In the period after the implementation of the PSBB policy by the government, it is known that the average value generated from the 21 research data was -0.0052 or -0.52 percent with a standard deviation value of 0.0192. The minimum value in the period after the implementation of the PSBB is -0.0403 or -4.03 percent which occurs on April 6, 2020 or day + 4. The maximum value in the period after the implementation of the PSBB is 0.0257 or 2.57 percent which occurs on April 8, 2020 or day + 6. Before conducting a comparative test, the research data must first be tested for normality. The purpose of conducting the normality test is to determine whether the research data used is normally distributed or not. The hypothesis in the normality test is Ho: data is normally distributed and Ha: data is not normally distributed. The research data is said to be normally distributed if the p value (Sig.)> A (0.05) and vice versa. Based on Table 2 above, it shows that the results of the normality test in the period before and after the implementation of the PSBB policy are 0.18 and 0.20, meaning that the value is greater

than the value of α (0.05). So it can be concluded that the research data used is normally distributed or in other words the Ho hypothesis is accepted. After doing the normality test, then doing the comparative test. The comparative test on normally distributed data was carried out using a test called the Paired Sample t Test. According to Montolalu & Langi (2018), paired sample t test is a test method used for two related or paired data. Usually the paired sample t test is used to measure whether there is a difference or not in the same subject but seen from a before and after perspective. The test results show the Sig. (2-tailed) <α (0.05) means that there is a significant difference in the research data or in other words Ha is accepted and vice versa. The following are the results of the paired sample t test on the research data.

Table 3. Test results Paired Sample T Test

Period	t	Sig. (2-tailed)
Before – Moment	1,480	0,173
Moment – After	-2,459	0,036
Before – After	0,463	0,654

Source: Results of data processing (2020)

Based on Table 3, in the period before the implementation of the PSBB policy by the government, there was no significant difference in the average abnormal return. This is indicated by the Sig. (2-tailed) of 0.17, which means that the value is greater than the value of α (0.05). So it can be said that the first hypothesis in research that shows a market reaction in the hotel, restaurant and tourism sub-sector companies before the implementation of the PSBB policy through the average abnormal return measurement is rejected. The period after the implementation of the PSBB policy by the government, if seen in Table 3, the results show that there is a significant difference in the average abnormal return. This is indicated by the Sig. (2-tailed) of 0.04, which means that the value is smaller than the value of α (0.05). So it can be said that the second hypothesis in the study which shows a market reaction in the hotel, restaurant and tourism sub-sector companies in the period after the implementation of the PSBB policy through the average abnormal return measurement is accepted. However, in the period before-after the implementation of the PSBB by the government, it can be seen in Table 3 that there is no significant difference in the average abnormal return. This is indicated by the Sig. (2-tailed) of 0.65, which means that the value is greater than the value of α (0.05). So it can be said that the third hypothesis in the study which shows that there is a market reaction in the hotel, restaurant and tourism sub-sector companies before-after the implementation of the PSBB policy through the measurement of the average abnormal return is rejected.

Discussion

H_1 testing in this research is about the existence of market reactions in the hotel, restaurant and tourism sub-sector companies in the period before the implementation of the PSBB policy by the government through the measurement of the average abnormal return. The results of the test statistics show that there is no significant difference in the average abnormal return in the research data during the period before the event. The average value of research data generated in the period prior to the event when the PSBB policy was implemented has decreased. The average value in the period before the event was 0.0021 or 0.21 percent, while at the time of the event the average value of abnormal stock returns was -0.0202 or -2.02 percent. This decline can mean that the implementation of the PSBB policy in the midst of the COVID 19 pandemic contains negative signals or as bad news for investors in the capital market. However, not all investors who choose to invest in the

hotel, restaurant and tourism sub-sector companies respond to the event of implementing the PSBB policy because there is no significant difference in the comparison test in the preceding period. So it can be concluded that H_1 in the study is rejected or not supported.
H_2 testing in the research is about the existence of market reactions in the hotel, restaurant and tourism sub-sector companies in the period after the implementation of the PSBB policy by the government through the measurement of the average abnormal return. The statistical results of the test show that there is a significant difference in the average abnormal return in the research data during the period from time to time after the event. This shows that there is a market reaction in the period after the event. This means that information regarding the implementation of the PSBB policy in the midst of the COVID 19 pandemic can be equally accepted by the market. An increase in the average value of abnormal returns occurs in the period after the event. At the time of the incident, the average value of the abnormal return on shares was -0.0202 or -2.02 percent. After the occurrence of the implementation of the PSBB policy by the government, the average value of the stock abnormal return rose to -0.0052 or -0.52 percent. This increase means that investors choose to hold on to their shares while watching and waiting for market developments. So it can be concluded that H_2 in the study is accepted or supported because the market responds to the information on events.

H_3 testing H_3 in research regarding the existence of market reactions in the hotel, restaurant and tourism sub-sector companies in the period before-after the implementation of the PSBB policy by the government through measuring the average abnormal return shows rejection. The statistical test results show that there is no significant difference in the average abnormal return in the research data during the pre-post event period. The average value of research data produced in the pre- post-event period of the implementation of the PSBB policy has decreased. The average value in the period before the event was 0.0021 or 0.21 percent, while after the event the average value of abnormal stock returns was -0.0052 or -0.52 percent. The decline in the average abnormal return value before-after period can mean that investors tend to perceive the implementation of the PSBB policy amid the COVID 19 pandemic as bad news. There is no significant difference in the average abnormal return because investors will tend to choose to watch and wait for market developments to avoid risks. The results of this study support the research of Fanni (2013), Rahmawati and Pandansari (2016) where the results of the study show that there is no significant difference in the average abnormal return in the pre-post event period. So it can be concluded that H_3 in the study is rejected or not supported. According to CNBC Indonesia (2020), COVID 19 has made the hotel and restaurant business experience a decline. Hotel room occupancy rates have decreased to 30 percent in Jakarta and 20 percent in Bali. In addition, according to BBC News (2020), COVID 19 has made tourism lose 30 percent of profits due to the cancellation or delay of travel. The decline in interest in tourism and also the number of hotel occupations caused companies in the hotel, restaurant and tourism sector to experience a decline in performance which resulted in a decrease in the number of profits. A decrease in the level of profit by the company results in a decrease in the average abnormal return value of the company, from positive to negative. The Indonesian government has mitigation measures to revive the tourism sector. The steps are the first, the emergency response stage. The second is the recovery stage after the COVID 19 pandemic. The third is the normalization phase. The existence of these steps makes investors who choose to invest in hotel, restaurant and tourism companies to hold their shares by waiting and seeing developments in the market. This makes there is no significant difference in the average abnormal return of stocks.

CONCLUSION

This study aims to determine the differences by analyzing the market reaction represented by the average abnormal stock returns that occurred in the period before, during, and after the implementation of the PSBB policy by the government. The results of the study prove that there is no significant difference in the average abnormal return of shares in the sub-sector of the hotel, restaurant and tourism companies before and after the implementation of the PSBB policy in Indonesia. The conclusion of the announcement of the implementation of the PSBB policy in the midst of the COVID 19 pandemic by the government contains no information because most investors did not respond to this incident. The theoretical contribution of research is to provide empirical evidence related to market efficiency in semistrong- form. Investors will not get abnormal returns or profits above the normal category by utilizing public information. In practical terms, the signals received by investors through the announcement of an event are taken into consideration in making investment decisions. The sample in this study only used the hotel, restaurant and tourism sub-sector companies listed on the IDX. It is hoped that further research can increase the sample coverage so that it is not only conducting research in one sector.

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