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Analysis of Abnormal Return before and after the Announcement of Covid – 19 in Companies Engaged in the Hotel Sector

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Abstract
The rate of return on shares that benefit investors will have an impact on the level of investor interest in investing in companies that issue shares. However, the presence of the Covid-19 Virus has almost destroyed the Indonesian economy and even the world. Many businesses have to lose and result in employee layoffs being unavoidable. Therefore, many are interested in playing stocks in order to benefit from the remaining savings. This study aims to determine whether there are differences in abnormal returns before, and after the announcement of the first COVID-19. The period taken is January 02, 2020 to March 9, 2020 or 5 days before and 5 days after the announcement of the pandemic in Indonesia. By using the abnormal return calculation method with a single index model. These results are expected to help investors in choosing the right stocks to become active investors and dare to take high risks by actively buying and selling shares.

Keywords
optimal portfolio; return; risk; single index model; pandemic Covid–19

I. Introduction

Nowadays, Investment has become a common thing for individuals and companies that have excess assets with the aim of getting profits from the assets invested. Even compared to before, investing in the 4.0 era has become easier to do, where everything can be done online using a gudget. In fact, there are many companies that offer online investments, such as Indo Premier Online Technology (IPOT), Mirae Asset Sekuritas, and others.

One form of investment that can be done is by playing stocks. The purpose of investment (shares) by individuals or organizations is to increase the value of the assets owned. Investment itself can be divided into two, namely: investment using financial assets and investment using real assets. According to the author, an example of an investment in financial assets is an intangible asset that has value because there is a contractual claim, in the form of bank deposits, bonds, mutual funds, deposits and also stocks. While examples of real assets are houses, land (which is in shape)(Herlianto 2011).

Investments made in the capital market (IDX) as an economic instrument cannot be separated from the influence of the economic and non-economic environment. The influence of the economic environment is certainly related to macro and micro economics in a country, while the influence of the non-economic environment can be exemplified such as the election of state leaders, instability of the political situation, the occurrence of wars, and other events that will also affect stock price fluctuations

The influence of the non-economic environment, although not directly related to the dynamics that occur in the capital market, cannot be separated from activities in the capital market (Diniar and Kiryanto, 2015) (Ria Kusumayanti and Gede Suarjaya 2018). Although

the covid 19 virus is not an economic event, but an event related to health, since its arrival on March 2, 2020, the corona virus/covid-19 has had an impact on the economy in Indonesia and globally. The economy almost stopped because the government made regulations that involved restrictions, ranging from students to office workers; from gathering bans to closing businesses, headquarters and others to prevent the spread of the virus.

Regulations made by the government have an influence on activities in many business sectors. For this reason, companies are also starting to worry about their existence, because at this time of restriction they have to stop or reduce their operations. A wider consequence or impact is that people's purchasing power also decreases as a result of the crisis caused by the covid 19 virus. Because many companies have terminated their employment with their employees.

This condition certainly has an impact on the profits obtained by the company. The condition of a company can be seen from the profits obtained. According to the, the decline in profits will also have an impact on the decline in stock prices in the capital market. This is in line with research conducted by Novan Bactiar (Kharisma 2020) in the manufacturing sector, where his research shows that net income has a positive and significant effect on stock prices and the results of the coefficient of determination of net income have a strong effect on stock prices.

Market participants are sensitive to all information related to the sustainability of the company. They usually observe an event to understand the conditions that occur in the company environment (Hindayani 2020).For stock investors who are used and experienced, a crisis like this will not have much effect on them. Especially for those who know all the theory about the stock game. The world has faced many crises that have had an impact on the economy. Examples of existing crises are the oil crisis of the 70s, the difficulty of long-term capital funds (1998), the financial crisis (2008) or the euro crisis (2010), where stock prices always rush to fall sharply. However, they still invest using a longer period of time.

But this does not apply to novice investors. The COVID-19 pandemic has certainly made novice investors panic. Sihombing (2020) state that Covid-19 pandemic caused everyone to behave beyond normal limits as usual. The outbreak of this virus has an impact especially on the economy of a nation and Globally (Ningrum, 2020). The problems posed by the Covid-19 pandemic which have become a global problem have the potential to trigger a new social order or reconstruction (Bara, 2021). Here what is meant by novice investors are not only those who have experienced layoffs, but it can also be those who are starting to realize the importance of investing. The decline in stock prices can be seen from the decline in the JCI that occurred from March 5 to March 9 by 6 percent. The Financial Services Authority (OJK) immediately responded by issuing a policy on the movement of the Composite Stock Price Index (JCI). The decline in the company's share price of course made the movement of Alpha from the JCI and the global stock market also fall.

In our opinion, the alpha indicator describes the performance of mutual funds/stocks that deviate from the overall development of the stock. This will measure the extent to which the fund is performing (better or worse) than the benchmark. Alpha measures the share of returns that cannot be explained by general market developments, but is based on the selection of shares in this market. Therefore, a positive alpha indicates very successful fund management. Alpha is the difference between the return of each stock and the market return which is compared, in other words the greater the Alpha value of a stock then the better the company is because its rate of return is affordable beat the return scored by market.(Salim and Rizal 2021).

By purchasing two or more stocks operating in different industries, investors can minimize the risk of possible losses. This case is commonly called stock portfolio diversification. This theory comes from Markowitz. In the journal Markowitz (1952) called portfolio selection Markowitz suggested that investors can create an optimized investment portfolio by taking into account assets and diversification. Markowitz later received the Nobel Prize in economics for this work in 1990.

The main idea in this paper is that the risk of individual assets and the potential return of individual investment instruments are not very important to the overall performance of the portfolio. In contrast, Markowitz sees how achieving an optimal portfolio is based on the expected return for a given level of risk. The idea is to diversify investments to reduce the risk of the entire portfolio. The analogy of this approach is that if one stock moves down, it is expected to be covered by other stocks. Thus, it is hoped that the losses suffered by stock investors will not be too large.

In this paper, the author tries to measure ten types of stocks engaged in the tourism (hotel) sector. stocks and look for the value of return, abnormal return, Risk, alpha, beta, average abnormal return, cumulative average abnormal return. According to Zubir (2013: 97), assumption of single index model is stock movement closely related to market movements. If the market price goes up, the stock price goes increases and if the market price decreases, then stock prices will also follow down. In addition, it also performs statistical tests. (Jayati, Ragil, and Zahro 2017)

This study takes data before, during, and after the announcement of the covid 19 case on March 2, 2020. And the stocks chosen by the authors are Public Company which is PT Hotel Sahid Jaya International Tbk (SHID.JK), Menteng Heritage Realty Tbk. (HRME.JK), PT Indonesian Paradise Property Tbk (INPP.JK), PT Eastparc Hotel Tbk (EAST.JK), PT Hotel Fitra International Tbk (FITT.JK), Anugerah Kagum Karya Utama Tbk PT (AKKU.JK), Bayu Buana Tbk (BAYU.JK), Jakarta International Hotel & Development Tbk (JIHD.JK), Saraswati Griya Lestari Tbk (HOTL.JK), Jakarta Setiabudi International Tbk (JSPT.JK). The reason for choosing a sample that works in the tourism industry is because the covid outbreak has a very negative impact on the sustainability of the business wheel in this sector, although in fact the tourism industry sector plays an important role in the country's income The sample taken is the price data of the ten stocks and the JCI from January 02, 2020 to March 09, 2020. The data from January 2, 2020 to February 21, 2020 is called the estimation period to find the alpha and beta values, and the event period is the last 11 days, starting from date 24.02. 2020 – 09 03. 2020, where five days before the announcement, one day during the announcement and five days after the announcement.

Therefore, this research is entitled: Analysis of Abnormal Returns Before and After the Announcement of Covid - 19 in Companies Engaged in the Hotel Sector

In this study, the formulation of the problem that the we try to raise include: Is there a significant abnormal return in the shares of companies tested in the tourism (hospitality) industry before and after the national announcement of the first case of COVID-19? And is there any difference in abnormal returns before and after the announcement of covid 19?

(10 pt) This section aims to entice the reader to the core compelling aspects of the research undertaken. State the motivation of the research by highlighting key managerial and/or theoretical context being addressed in the study. By avoiding a detailed literature survey or summarized results of the study, a good introduction should:

- States broad theme or topic of the study
- Highlights academic and practical importance
- Cites most important prior studies relevant to the current research
- Emphasizes most important knowledge gaps, inconsistencies, and/or controversies being addressed by the current research

- Indicates the research problem/questions, specific objectives, and the context of the current research
- Provides an outline pertaining to the structure of the remaining content in the article

II. Review of Literature

2.1 Investment

According to Reilly and Norton (2007) The purpose of someone making an investment is to be able to take money back at a later date according to the agreed time. (Tambunan 2020). ‘'Investment is the placement of a number of funds at this time with the hope of obtaining profits in the future" (Halim 2005: 4). "Investment is a commitment to a number of funds or other resources that are carried out at this time, with the aim of obtaining a number of benefits in the future" (Tandelilin, 2010:10)(Jayati, Ragil, and Zahro 2017)

Financial resources owned by individuals or companies will be used in investing activities to increase wealth. Investors need to know clearly the type of investment and the real motivation behind the investment made. Depending on these two factors, there are various calculation methods that must be adapted to the type of investment and also the motivation to make investors take or make the right investment decisions.

2.2 Share

Shares are traded on the stock exchange. If a stock is in high demand on the stock exchange, its price will certainly increase. This is of course closely related to the applicable rules of the law of supply and demand. According to the author, shares are proof of ownership in a company (public company) that is traded. So shareholders are co-owners who have a financial stake in the company. In return for the issued capital, the company gives one share to the shareholders.

By conducting a share transaction, the owner obtains certain rights such as: the opportunity to have a voice (administrative rights) and also the right to participate financially in the company's success (ownership rights). According to Hidayat (2010: 96), "Shares are a sign of participation, share or ownership of a person or institution in a company. There are two types of shares, namely preferred shares or special shares and ordinary shares. The two shares have differences in the rights and obligations of investors or shareholders (Nurmasari 2020). From the above definition, it can be concluded that shares are proof of ownership of a company in which the nominal value, company name, and rights and obligations are explained to each holder.

2.3 Stocks Market Return

In investing, every investor certainly really expects a return that is greater than the capital issued. Stock return is the result obtained by investors for the investments made and the reward for their courage to bear the risk of investing in the form of shares in the capital market (Tandelilin, 2010:102). Basically, there are two advantages that investors get by buying or owning shares (Bambang, 2009:27), namely dividends and capital gains.

From the description above, it can be said that investment is a way for investors to increase their assets, in this case stock returns. However, at the same time there are risks that may occur and must be borne by investors. Therefore, investors need to first study the state of the company before making an investment. This is in line with Toral (2002) revealed that investors in choosing investments need professionals so there is no anxiety in choosing investments when the market is sluggish, The information includes recommendations from brokers, recommendations from friends, and opinions of the family (Nagy and Obenberger, 1994). (Mahastanti 2011)

2.4 Expected Return

Expected return can also be said to be the percentage of return that investors will receive over a certain period of time, for example: year, quarter or month, is expected to be achieved. In other words, it is the percentage by which the value of an investment is expected to exceed its original value after a certain period of time. The expected return can be calculated either as a weighted average of all possible outcomes or using historical data on investment returns.

Jogiyanto (2010) stated that the expected return can be calculated by three models, namely the Mean Adjusted Model, Market Model, and Market Adjusted Model (Dewi and Rahyuda 2014). The three models have different calculation methods and characteristics. (Boons et al. 2020). From the description that has been made, it can be said that expected return is the profit obtained by investors from the capital that has been issued, and has been predicted in advance by investors. (Dewi and Rahyuda 2014)

2.5 Abnormal Return

Every investor certainly has estimated the percentage of profits or losses (expected value) that will be obtained in the future. However, unexpected gains or losses can also occur in investments. This is what is called abnormal return. So, abnormal return in our opinion describes the unusual return that can be generated by a particular security or portfolio over a certain period of time. This performance result is not the same as the expected or expected return on investment (ROI = RoR). The expected rate of return is an estimate of the rate of return based on an asset pricing model using long-term historical averages or multiple valuations.

Abnormal returns will play a critical role in determining the risk-adjusted performance of a security or portfolio relative to the overall market or benchmark index. Abnormal returns can help assess the skills of an investor or portfolio manager on a risk-adjusted basis. It also describes whether investors receive adequate compensation for the level of investment risk they have taken.

A positive abnormal return indicates a higher level of profit, namely between the actual return and the expected return. In connection with the stock split event, if there is a positive abnormal return after the stock split, it can provide above normal profits to investors and vice versa if there is a negative abnormal return, it indicates that the profits obtained are below normal.

For example, a return of 10% (actual return) in overall funds that is expected to average 5% (expected return) per year will result in a positive abnormal return of 5%. On the other hand, in the same example, if the actual rate of return is 2%, then the resulting abnormal rate of return is negative 3%.

The capital market efficiency test is to analyze the occurrence of unusual returns. Abnormal return can be said to be the excess of the actual return to normal return. Event study is an analysis of abnormal returns of securities that may occur around the announcement of an event. So, in other words, abnormal return is the difference that exists between the actual return that occurs and the expected return which is formulated as follows:

$$ARit = Rit - E(Rit)$$

Information:

ARit= abnormal rate of return of security i at time t

Rit = actual return of security i at time t

E (Rit) = expected return on security i in period t

2.6 Avarage Abnormal Return

Testing abnormal returns is not done for each security, but it is done in the aggregate by examining the average abnormal return around the securities in cross-section for each day of the event. period. From the same source, the average abnormal return on day t can be calculated as follows (Suryanto 2015):

$$AARt = (\Sigma\ i\ ARit)/N$$

Information:

AARt = Average Abnormal Return on day t

ARit = Abnormal return on the i-th security on day t

N = Number of securities affected by the event

2.7 Hypothesis

Research to test the market for events that are happening one of which can be measured through abnormal returns. Abnormal returns are obtained from the difference between the actual return and the expected return.

The author's hypothesis is:

1. H1: There is / are (were) a significant abnormal return in the range of 11 days of announcement of covid 19
2. H2: There are differences in abnormal returns before and after the first announcement of covid 19

III. Research Methods

In this study, the object of our research is a publicly listed company originating from the hotel sector. The basis of our goal in choosing the hotel sector is because of the travel ban rules made by the government. The data we get comes from the internet (yahoo finance). In addition, JCI data collection also comes from the same source and is carried out in the same period as stocks, namely January 2, 2020 – March 9, 2020. This research was conducted using the excel application in calculating abnormal returns with a single index model, and using the SPSS. 26 in an attempt to find a hypothesis. The aim is to find out the truth of the hypothesis put forward by the author.

The function of the event study in this study is to analyze the movement that occurs in abnormal returns from day to day with an event period of 11 days. Determination of the time in this study is the announcement of the right issue that is t = 0. The period of the event window will be divided into two parts, consisting of the first t=-5 (5 days before the announcement of the right issue) and the second t=5 (5 days after the announcement of the right issue). The determination of the event window period is based on previous studies and to avoid any confounding effect or mixed information. In addition, it is also due to the IDX working day which lasts for 5 days.

In an effort to complete this research, there are at least 3 stages in testing statistics and hypotheses, including:

3.1 The Normality Test

The normality test is a statistical test with the hope that it can be seen how the level of distribution of a data is. Normality test can be done by using Kolmogorov – Smirnov for data with a large number of samples, and using Shapiro – Wilk for data with a small number of samples. Thus, due to the small number of samples, the normality test of this study used

Shapiro Wilk. And the requirements that must be met are if the value of sig. greater than 0.05, then the data is normally distributed otherwise if the value of sig. less than 0.05, then the data is not normally distributed.

3.2 Abnormal Significance Test

a. Abnormal Significance Test (hypothesis 1)

In this study, there are two hypotheses that must be investigated for truth by statistical tests. To test the first hypothesis, the One sample t test will be used, if from the normality test the data is normally distributed. The requirements that must be met are if sig. 2 tailed <0.05 then H0 is rejected, otherwise if the value of sig. 2 tailed > 0,05 then H0 is accepted. One sample wilcoxon signed ranked test was used (with the same requirements), if the data were not normally distributed.

b. Abnormal Difference Test (Second Hypothesis)

Paired sample t test is used if the ARR data before and after the event have the same normal results. While the Paired samples wilcoxon signed ranked test is used if one of the data is not normally distributed (if one of the ARR data is not normal / there is a difference before and after).

IV. Discussion

4.1 Results

a. Normality Test

Below is a summary table of the normality test conducted by the author using SPSS 26.0. As previously described, due to the small amount of data, the normality test was carried out using Shapiro - Wilk.

Table 1. Data Normality Test

Data	Sig.	Conclusion
t-5	**0,001**	**not normal**
t-4	**0,000**	**not normal**
t-3	**0,010**	**not normal**
t-2	0,886	Normal
t-1	0,105	Normal
t 0	0,448	Normal
T+1	0,549	Normal
T+2	0,356	Normal
T+3	0,006	Normal
T+4	0,516	Normal
T+5	0,491	Normal
ARR before	0,161	Normal
ARR after	0,197	Normal

Source: Author's Processing Results, 2021

The results shown by the normality test using the SPSS 26 application prove that the average test results get numbers above 0.05, there are only three days that show results below 0.05, namely t – 5, t – 4, and t – 3. The exact result is t – 5 = 0,1%, t – 4 = 0, and t – 3 = 1%. From the test results 490 dominant above 0.05, it can be concluded that the data is normally

distributed because the significance value is greater than alpha. From the results of this test, it will be used as the basis for testing the first hypothesis

b. First Hypothesis Test

1. Abnormal Return Test

At this stage, an abnormal return test is carried out from the data in the normality test which has a normal conclusion, and is in the period t-5 to t + 5. It has been known previously that only t-5,t -4, t - 3 are not normally distributed. As already stated, the one-sample t test is used to calculate abnormal returns on data that have normal conclusions. Below are the results of the one - sample t test using SPSS 26.0 without following the ARR before and after the announcement of the COVID-19 pandemic in Indonesia by the government.

Table 2. One – Sample Test

Data	Sig.	Conclusion
t-5	**0,001**	**Not normal**
t-4	**0,000**	**Not normal**
t-3	**0,010**	**Not normal**
t-2	0,804	there is no significant abnormal return
t-1	0,814	there is no significant abnormal return
t 0	0,046	there is significant abnormal return
T+1	0,242	there is no significant abnormal return
T+2	0,424	there is no significant abnormal return
T+3	0,697	there is no significant abnormal return
T+4	0,980	there is no significant abnormal return
T+5	0,215	there is no significant abnormal return

Source: Author's Processing Results, 2021

From the table of data processing results with spss 26 above, it can be seen the results of the test from t-2 to t+5. While the results of t -5 to t -3 in the table are still the results of the normality test. From the test data using SPSS 26.0, it can be seen that from t-2 to t+5 the results are greater than the significance value of 0.05%. If the value of sig. greater than 0.05, it can be said that H0 is accepted, so the author can say that there was no significant abnormal return on the day around the announcement of the first covid-19 in Indonesia. Thus, it can be said that the first hypothesis (H1) is not accepted or rejected.

2. Abnormal Return Test

The table shown below is still part of the first hypothesis test. However, what will now be tested is for abnormal data in the normality test. As is known from the previous results, only the values of t-5, t-4, and t-3 were abnormal. Thus, the focus of subsequent data processing is only on the three data, namely t – 5, t – 4, t – 3. To perform the test, the

Wilcoxon one-sample signed range test was used. Below is the data from SPSS 26.0 that we have processed

Table 3. Wilcoxon One - Sample Signed Range Test

Data	Sig.	Conclusion
t-5	0,953	there is no significant abnormal return
t-4	0,953	there is no significant abnormal return
t-3	0,678	there is no significant abnormal return
t-2	0,804	there is no significant abnormal return
t-1	0,814	there is no significant abnormal return
t 0	0,046	there is significant abnormal return
T+1	0,242	there is no significant abnormal return
T+2	0,424	there is no significant abnormal return
T+3	0,697	there is no significant abnormal return
T+4	0,980	there is no significant abnormal return
T+5	0,215	there is no significant abnormal return

Source: Author's Processing Results, 2021

The table above is the result of the Wilcoxon one-sample signed range test. Already known, this result is the result of abnormal normality data test, namely t – 5, t – 4, t – 3. The results obtained show a significance value greater than 0.05, which means that ho is accepted. Thus, it can be concluded that there was no significant abnormal return on the day around the announcement of the first COVID-19 in Indonesia. Here, we only take 10 companies from the hospitality sector, with 49 samples for one company. Thus the overall sample for this study amounted to 490. Our assumption is that there is no significant abnormal return due to the lack of stock samples used. It means that the first hypothesis (H1) is rejected.

c. Second Hypothesis Test

After completing testing the first hypothesis, it will be followed by testing the second hypothesis. The second hypothesis test talks about the difference in ARR before and after the announcement of covid-19. From the results of the normality test using SPSS 26.0, it can be seen that the ARR data before and after the announcement of the pandemic is normally distributed. On the basis of this, this test must use a paired sample t test.

Table 3. Paired Samples Test

	Paired difference					
				95% Confidence Interval of the		

				Difference				
	Mean	Std. deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 AARSBLM - AARSSDH	1775145.400000000	38348075.967772484	12126726.394332680	25657415.574233707	29207706.374233704	146	9	0.887

Source: Author's Processing Results, 2021

From the pared sample t test using SPSS 26.0, the sig. (2 tailed) of 0.887%, which means greater than 0.05%. On this basis, it can be said that there is no difference in abnormal returns before and after the announcement of covid - 19 was first confirmed in Indonesia. If it refers to the hypothesis that was previously made, it can be said that H2 is rejected.

4.2 Discussion

The results of the test that was sourced from the normality test of the data calculated using the Shapiro - Wilk test showed that only the t-5 - t-3 data were not normally distributed because the value was below the 0.05 significance. Then, for testing abnormal returns from the two periods before and after the occurrence of the event, the data are normally distributed, namely t -2 to t + 5, which shows that the asymp significance does not occur. (2 tailed) from abnormal returns at t – 2 to t _5, except for t0 with a value of 0.046. Thus the first hypothesis is not accepted or rejected from t – 2 to t +5 except t0.

And testing for abnormal returns before and after events for data that are not normally distributed, namely t-5, t-4 and t-3, needs to be done using the Wilcoxon one-sample test. The results of the test prove that the three time periods that do not meet the normality test also do not show the occurrence of asymp significance. (2 tails) with each value is t -5 and also t - 4 is 0.953 and t - 2 is 0.678. Thus, it can be said that in almost the entire time period the first hypothesis was not accepted or rejected. Only in period t 0 the first hypothesis is accepted.

The results of the first hypothesis that were accepted specifically for t 0 and other t can actually be seen before carrying out statistical tests. The ARR data image below, which was performed using excel, shows an abnormal return in period t 0.

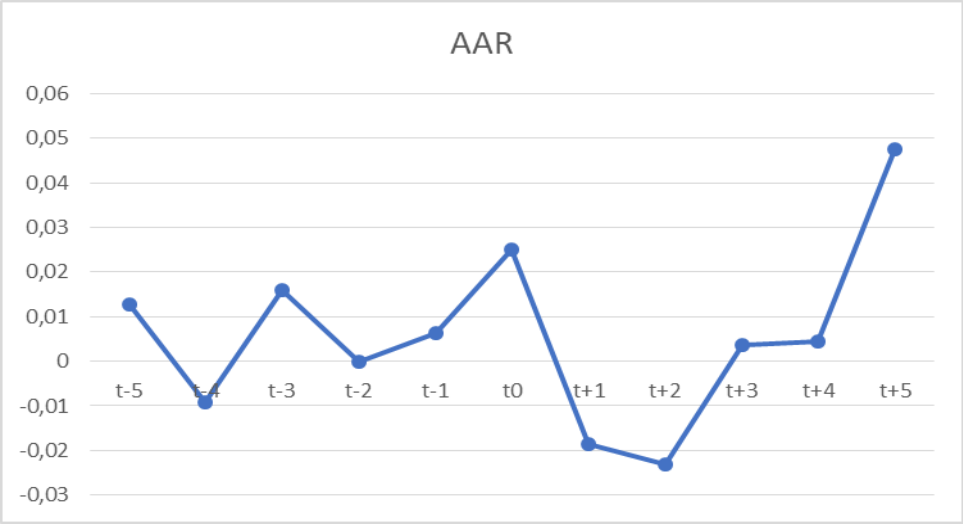

Figure 1. *The ARR Data*

The picture above shows a significant increase in the average abnormal return in period t 0 compared to t - 1. There is also a significant decrease in t + 1 compared to t 0. According to the author, this is a natural thing, because since the news of covid 19 was first reported in China has made great news around the world. This of course also affects the economy.

The focus of the author's attention is that the stock price at t +5 is the highest compared to other t periods. In the author's view, this may have happened because many tourists had booked lodging at the hotel before the announcement of the first entry of COVID-19 in Indonesia.

V. Conclusion

According to the results of the processing and testing that has been carried out, it can be seen that both hypotheses are rejected, except for the first hypothesis and only for the zero period (or right at the first announcement of covid-19). Rejection in both hypotheses and in almost all periods (both before and after) indicates no market reaction to this event. According to the authors, the results of this study may be caused by the sample being too small and only coming from one sector.

As a suggestion from the author for stock players is to take a larger sample and combine it with stocks from other sectors. Future research can also use other interesting event studies. It is important for investors to diversify their stocks. This is so that the impact of the decline in stock prices can be minimized. For stock investors it is important to study the company whose shares you want to buy and learn about the risks that may occur.

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