

## **ANALYSIS OF MARKET REACTION TO THE PUBLICATION OF FINANCIAL REPORTS OF PHARMACEUTICAL COMPANIES BEFORE AND DURING THE COVID-19 PANDEMIC**

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### **ABSTRACT**

The Covid-19 pandemic has had an impact on share prices on the capital market. This is different from pharmaceutical companies whose share prices increased during the Covid-19 pandemic. This research aims to determine the market reaction as seen from the difference in average abnormal returns before and after the publication of pharmaceutical company financial reports before and during the Covid-19 pandemic. The grand theory of this research is the Efficient Market Hypothesis. The research was conducted using an event study for 15 days (t-7 to t+7) of the publication of financial reports. The population of this study used 10 pharmaceutical companies registered on the IDX for the period 2019 and 2021. The sample for this study was 40 samples each year. The hypothesis test for this research is the one sample t-test and the Wilcoxon signed rank test. The results of the hypothesis test show that before Covid-19, there was no difference in the average abnormal return before and after the publication of financial reports. However, during the Covid-19 pandemic, there was a significant difference in average abnormal returns before and after the publication of financial reports. This shows a comparison of the difference in average abnormal returns before and after the publication of pharmaceutical company financial reports before and during the Covid-19 pandemic. This indicates that financial reports published during the Covid-19 pandemic influenced investors in making investment decisions.

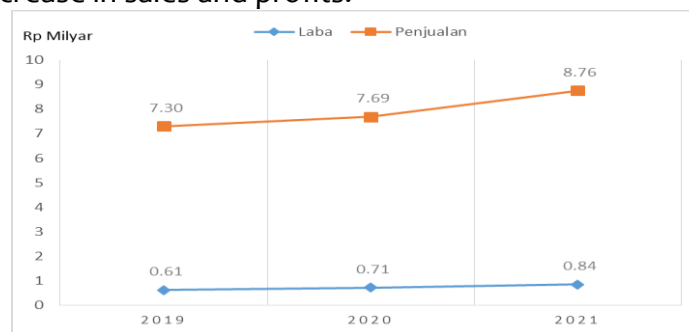
**Keywords:** Event study, abnormal returns, publication of financial reports.

### **INTRODUCTION**

At the beginning of 2020, the world was shocked by the presence of a virus that was first detected in the city of Wuhan, China, called the corona virus (Covid-19). This virus attacks the human respiratory system, causing problems with the human respiratory tract and causing death. Indonesia experienced an economic recession at the beginning of the spread of Covid-19, many companies had to make efficiency in their business by carrying out mass

layoffs of their employees. (Mohammad Arridho Nur Amin, 2022). In Indonesia itself, the first Covid-19 case was announced by Mr. Joko Widodo as president of the Republic of Indonesia in his speech at the Presidential Palace in Jakarta on March 2 2020. Jokowi said that there were two people who tested positive for Covid-19 who were infected by Japanese citizens who came to Indonesia. The Ministry of Health also designated the Covid-19 case as an Extraordinary Event (KLB) on March 3 2020. Since then, the number of positive Covid-19 cases in Indonesia has continued to increase from day to day, there are patients who have died, many have also tested negative. Covid-19 and finally recovered (Rahma Gusmawati Tammu et al., 2022). This has had a significant negative impact on the economic life of the community, such as unemployment and poverty which have increased over time (Fitria et al., 2022).

According to Anny Khabibah et al., (2021), the Covid-19 case in Indonesia has reduced investor confidence in the government's ability to prevent and overcome the outbreak that is currently occurring in many countries. However, unlike companies operating in the pharmaceutical sector, the share prices of companies in the pharmaceutical sector have actually increased. In published financial reports, pharmaceutical companies experienced a significant increase in sales and profits.



Source: Processed data, 2024

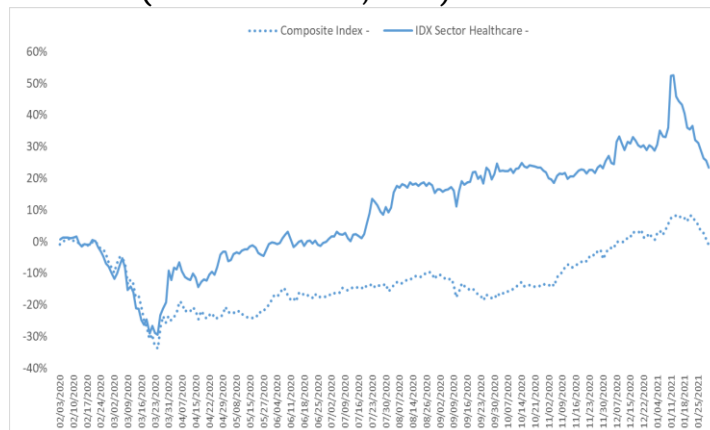
**Figure 1. Average Annual Sales and Profit Trends for Several Pharmaceutical Sector Companies in 2019-2021 Listed on the IDX**

Figure 1 shows that issuers in the pharmaceutical sector experienced an increase in sales and profits in 2019-2021 due to increasing demand for medicines and medical devices. During the Covid-19 pandemic, pharmaceutical companies were considered to have had a positive impact because their products became a primary need to deal with the Covid-19 pandemic. This is related to the information content created by various events which can be the background for investment decision making by investors. Which means Covid-19 is an event that allows the capital market to react (Florenza Christina & Ruslim, 2022)

Uncertainty among the public causes them to prefer to allocate their funds to basic needs rather than investing. These basic needs include food and medicines, with the pharmaceutical industry responsible for producing medicines to meet these needs. Investors who have careful analysis are likely to engage in stock trading in the pharmaceutical sector. This stock trading

activity can influence changes in stock prices and transaction volume, creating a dynamic situation in the stock market (Gunarso et al., 2021).

According to Rahma Gusmawati Tammu et al., (2022), Hidayah & Lupikawaty, (2022) and Lelengboto et al., (2021), during the Covid-19 pandemic, domestic stock prices fell significantly, causing the composite stock price index (IHSG) to reach its lowest price point. JCI also dropped out of the top eight for the first time (Cellina Trishana, 2022).



Source: Processed data, 2024

**Figure 2. Comparison of Pharmaceutical Sector Share Prices with the Composite Stock Price Index (IHSG)**

Figure 2 shows a comparison between stock prices in the pharmaceutical sector, shown by the dark blue line, compared to the IHSG, shown by the dotted line. If you look at the graphic image above, the stock price of the pharmaceutical sector began to increase in July 2020. In October 2020, the stock price of the pharmaceutical sector increased significantly. In contrast to the JCI which experienced a decline in October 2020. Changes in discount rates reflect, among other things, shifts in risk attitudes or uncertainty regarding long-term growth rates caused by Covid-19 (Heyden & Heyden, 2021).

The Covid-19 pandemic in Indonesia is one event that can cause a reaction to the capital market in Indonesia. The outbreak of the Covid-19 pandemic is external information that can indirectly impact share purchases (Alifah & Yunita, 2021). The Covid-19 pandemic has increased the level of public awareness of health, so that the need and demand for medicines, supplements and health equipment produced by pharmaceutical companies has increased. (Diah & Dewi, 2023). This increase in demand has resulted in an increase in sales and performance of companies operating in the pharmaceutical sector. Investors really pay attention to information coming from various events to make investment decisions. These events are the result of both economic and non-economic events. It is important for investors to carry out analysis before making investment decisions so that they can gain profits from the capital they have invested. The high or low profits that can be obtained will be proportional to the risks borne (Ary & Dewi, 2023).

The global outbreak of coronavirus has caused a major increase in economic anxiety and weakened economic sentiment among the public along with the spread of Covid-19 (Martins & Cro, 2022). The role of pharmaceutical companies is very important in global efforts to overcome the Covid-19 pandemic and mitigate its impact. According to the CSA Research Institute, increasing demand for pharmaceutical products provides positive sentiment for pharmaceutical stocks. This phenomenon is reflected in the extraordinary increase in the prices of these shares, especially after the announcement. The increase in share prices of pharmaceutical companies is in line with investors' expectations regarding the increasing demand for medicines, medical devices and supplements which causes share prices to rise. According to G et al., (2021), Wayan Agus Chandra & Alit Suardana, (2021), And Qomariah & Satoto, (2021) in his research stated that share prices in companies in the pharmaceutical industry had increased.

Research conducted by Scherf et al., (2022) And Costa & Matos, (2022) stated that the market reacted due to the presence of the corona virus with significant differences in the prices of traded shares. According to Siswantoro, (2020) in his research stated that there was a difference in the decline in stock prices before and after the first case of Covid-19 was announced. Research conducted by Dewi & Badera, (2016) shows that there is a difference in security prices before and after the announcement of the financial statements. In research conducted by Diah & Dewi, (2023) stated that there was no market reaction seen from the absence of differences in the average abnormal returns before and after the publication of the pharmaceutical industry financial reports on the IDX.

Tandelilin, (2017) revealed that "an efficient market is a market in which the prices of all traded securities reflect all available information". In an efficient market, security prices will immediately undergo evaluation when there is important information related to the security, such as published financial reports. Hartono, (2017) explains that "an efficient market in semi-strong form is a market in which security prices fully reflect all published information, including information contained in the company's announced financial statements". When a company publishes financial reports, the market will quickly process the information. This type of market efficiency is called a semi-strong form of informationally efficient market. A market is considered semi-strong form efficient if investors react quickly to reach the new equilibrium price. According to Tandelilin, (2017) "The basis of the efficient market hypothesis theory is that the market will be responsive to information that is openly announced to the public and is assumed to have important value and has the potential to fundamentally influence asset valuation." If information from financial reports is considered to have economic value, then the market will immediately respond quickly to reach a new price balance.

In essence, it presents information, notes or descriptions of past, present and future conditions for the survival of the company. Complete, relevant, accurate and timely information provided by investors in the capital

market as an analytical tool in making investment decisions (Sari & Suharti, 2021). The purpose of preparing financial reports is to provide information regarding the financial condition, financial performance and cash flow of an entity which can provide benefits for the majority of users of financial reports in the decision-making process (PSAK No. 1, 2017:09). In research conducted by Li et al., (2023), Ho et al., (2022) And Kapalu & Kodongo, (2022) stated that global investors and politicians were impacted by the major disruption to financial markets caused by the Covid-19 outbreak. Although the impact of the pandemic on financial markets has been studied previously, the size and spread of the Covid-19 pandemic throughout the world requires a new evaluation of its impact on important financial indices. The announcement of a public event reduces information asymmetry, and the flow of new information is quickly absorbed by market prices, the publication of financial reports can have an impact on the stock market because it provides financial information related to asset values or simply because it is related to investment decisions, this is expressed in the research carried out by Costola et al., (2023) And Jin et al., (2022). Financial reports act as a basis for making decisions regarding the sale, maintenance or purchase of shares. The existence of information in financial reports can be identified if the publication of the report causes the market to react by selling or buying shares. This market response is then reflected in changes in stock returns that occur around the time the financial reports are published.

*Event studies* can be used in testing the information content provided from a publication or announcement and can be used in testing semi-strong form market efficiency. Event study is a tool used to carry out tests related to the content of information obtained from various events. Hartono, (2018) states "if an event contains information, there will be a response from the market which can be seen from the abnormal return". Abnormal returns are a response from the market, namely returns caused by a phenomenon or event. In his book Hartono, (2018) states that "an event can be described as a surprise or something unexpected, an event that is not a surprise or has been anticipated will not cause a reaction". When pharmaceutical companies publish financial reports showing information, whether before the Covid-19 pandemic or during the Covid-19 pandemic, the market can react by seeing it as a surprise. The market reaction caused by an event is proxied by abnormal returns.

This research focuses on the publication of financial reports on pharmaceutical companies listed on the Indonesia Stock Exchange (BEI) before and during the Covid-19 pandemic. This event caused the need and demand for medicines, health supplements and health equipment which are the products of pharmaceutical companies to increase, which resulted in increased sales and performance of companies in the pharmaceutical sector. This event provides profitable information for investors. The ups and downs of company performance can be used as information for investors in determining

investment decisions. This information will be used by investors in choosing to invest in companies that have good performance.

## RESEARCH METHODS

This research uses the event study method. Event study is a study that studies the market reaction to an event that is published as an announcement. This research uses the event study method to see whether there is a difference in the average abnormal return for the publication of financial reports before and during the Covid-19 pandemic which focuses on companies operating in the pharmaceutical sector compared to the year before the Covid-19 pandemic, namely 2019 and in during the Covid-19 pandemic, namely 2021. The research period used in this event study was fifteen days, seven stock trading days before the event (t-7) to seven stock trading days after the event (t+7). One week before and one week after the event is sufficient time for investors to analyze the issuer's fundamentals for their investment decisions (Zulfitra & Tumanggor, 2020).

## RESULTS AND DISCUSSION

### Description of research data

#### Analysis of Average Abnormal Return

*Abnormal Returns* is the difference between realized returns and expected returns. A positive value for abnormal returns indicates that the realized return is greater than the expected return, a zero value indicates that the realized return is the same as the expected return, a negative value indicates that the realized return is smaller than the expected return. Table 1 is a recapitulation of the distribution of abnormal return values before Covid-19, namely in 2019, seen from positive and negative values.

**Table 1. Recapitulation of Abnormal Return Data Before the 2019 Covid-19 Pandemic**

Period	Positive	Negative	Total
t-7	16	24	40
t-6	11	29	40
t-5	19	21	40
t-4	21	19	40
t-3	20	20	40
t-2	19	21	40
t-1	19	21	40
t0	16	24	40
t+1	14	26	40
t+2	23	17	40
t+3	22	18	40
t+4	15	25	40

t+5	16	24	40
t+6	25	15	40
t+7	17	23	40
<b>Total</b>	<b>273</b>	<b>327</b>	<b>600</b>
	<b>45.5%</b>	<b>54.5%</b>	<b>100%</b>

*Source: Processed data, 2024*

The total observations on abnormal returns in 2019 were 600 observations within a period of 15 days, divided into 7 days before publication, 1 day as the event date, and 7 days after publication of the quarterly financial report. As a general illustration, the number of observed positive abnormal returns (45.5%) is less than negative abnormal returns (54.5%), this indicates that most companies experienced negative abnormal returns during the window period. However, it should be noted that the number of positive abnormal returns experienced a spike at t+2, but decreased again and at t+6 experienced another spike.

Table 2 is a recapitulation of the distribution of abnormal return values during Covid-19, namely in 2021, seen from positive and negative values.

**Table 2. Recapitulation of Abnormal Return Data During the 2021 Covid-19 Pandemic**

<b>Period</b>	<b>Positive</b>	<b>Negative</b>	<b>Total</b>
t-7	11	29	40
t-6	22	18	40
t-5	17	23	40
t-4	12	28	40
t-3	19	21	40
t-2	23	17	40
t-1	13	27	40
t0	19	21	40
t+1	24	16	40
t+2	20	20	40
t+3	14	26	40
t+4	19	21	40
t+5	20	20	40
t+6	14	26	40
t+7	20	20	40
<b>Total</b>	<b>267</b>	<b>333</b>	<b>600</b>
	<b>44.5%</b>	<b>55.5%</b>	<b>100%</b>

*Source: Processed data, 2024*

Just like in 2019, the total observations on abnormal returns in 2021 were 600 observations within a period of 15 days, divided into 7 days before publication, 1 day as the event date, and 7 days after publication of the quarterly financial report. As a general illustration, the number of observed positive abnormal returns (44.5%) is less than negative abnormal returns

(55.5%), this also indicates that most companies experienced negative abnormal returns during the window period in 2021. However, it should be noted that the number of positive abnormal returns experienced a spike at time t+1, but in the following period it decreased again.

**Table 3. Average Daily Abnormal Return Before the 2019 Covid-19 Pandemic**

Period	AAR- Daily
t-7	-0.00064
t-6	0.00322
t-5	0.00347
t-4	0.00176
t-3	0.00086
t-2	0.00351
t-1	0.00368
t0	0.00318
t+1	0.00148
t+2	0.00510
t+3	0.00596
t+4	-0.00769
t+5	-0.00217
t+6	0.01306
t+7	-0.00153

*Source: Processed data, 2024*

Table 3 presents and illustrates the average daily abnormal return during the 2019 window period. Before the publication of the financial report, there was an increase from t-6 to t+3. But average abnormal returns decreased at t+4. The reactions that emerge after the publication of financial reports indicate a market reaction caused by the publication of financial reports.

**Table 4. Average Daily Abnormal Return During the 2021 Covid-19 Pandemic**

Period	AAR- Daily
t-7	-0.00637
t-6	0.00207
t-5	-0.00010
t-4	-0.00431
t-3	0.00056
t-2	0.00250
t-1	-0.00110
t0	-0.00127
t+1	0.01121
t+2	0.00182
t+3	-0.00402
t+4	0.00171
t+5	0.00063
t+6	-0.00381

t+7 0.01451

*Source: Processed data, 2024*

Table 4 presents daily abnormal return data for the 2021 period, namely during the Covid-19 pandemic. Before the publication of the financial report, the average daily abnormal return decreased at t-1 and decreased again on the publication date of the financial report. However, after the publication of the financial report, at t+1 there was an increase and at t+3 the average abnormal return experienced a significant decrease. This indicates that the publication of financial reports during the Covid-19 pandemic had an influence on the daily abnormal returns of pharmaceutical companies listed on the Indonesia Stock Exchange (BEI).

#### **Descriptive Statistics of Average Abnormal Return**

Descriptive statistics provide a general description of the average abnormal return variable as seen from the minimum value, maximum value, average value and standard deviation both before and after the publication of financial reports. Table 5 and Table 6 present descriptive statistical results regarding the average abnormal return during the window period before the Covid-19 pandemic, namely 2019 and the window period during the Covid-19 pandemic, namely 2021.

**Table 5 Descriptive Statistical Results of Average Abnormal Returns Before the 2019 Covid-19 Pandemic**

<i>Descriptive Statistics</i>					
	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
AAR-BEFORE	40	-0.02240	0.04704	0.00227	0.01044
AAR-AFTER	40	-0.01804	0.09231	0.00203	0.01689

*Source: SPSS output, 2024*

In the period before the Covid-19 pandemic, namely in 2019, the minimum value of the average abnormal return before the publication of the financial report was -0.02240, the maximum value was 0.04704, the average value was 0.00227 with a standard deviation of 0.01044. The average abnormal return after the publication of financial reports is with a minimum value of -0.01804, a maximum value of 0.09231, an average value of 0.00203 with a standard deviation of 0.01689.

**Table 6. Descriptive Statistical Results of Average Abnormal Returns During the Covid-19 Pandemic in 2021**

<i>Descriptive Statistics</i>					
	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
AAR-BEFORE	40	-0.02100	0.01700	-0.00097	0.00667
AAR-AFTER	40	-0.01980	0.07648	0.00315	0.01427

*Source: SPSS output, 2024*

In the period during which the Covid-19 pandemic occurred, namely in 2021, the minimum value of the average abnormal return before the

publication of the financial report was -0.02100, the maximum value was 0.01700, the average value was -0.00097 with the standard deviation of 0.00667. The average abnormal return after the publication of financial reports is with a minimum value of -0.01980, a maximum value of 0.07948, an average value of 0.00315 with a standard deviation of 0.01427.

#### Average Abnormal Return Normality Test

To detect the normality of the average abnormal return data before and during the Covid-19 pandemic, use the Shapiro-Wilk statistical test. This is because the data for each observation is below 50 data. Table 7 and table 8 present the normality test for the average abnormal return before and during the Covid-19 pandemic.

**Table 7. Normality Test for Average Abnormal Returns Before the 2019 Covid-19 Pandemic**

<b>Tests of Normality</b>			
	<i>Shapiro-Wilk</i>		
	<i>Statistics</i>	<i>df</i>	<i>Sig.</i>
AAR-BEFORE	0.803	40	0,000
AAR-AFTER	0.614	40	0,000

a. Lilliefors Significance Correction

Source: SPSS output, 2024

**Table 8. Normality Test for Average Abnormal Returns During the 2021 Covid-19 Pandemic**

<b>Tests of Normality</b>			
	<i>Shapiro-Wilk</i>		
	<i>Statistics</i>	<i>df</i>	<i>Sig.</i>
AAR-BEFORE	0.961	40	0.180
AAR-AFTER	0.649	40	0,000

a. Lilliefors Significance Correction

Source: SPSS Release, 2024

The results of the normality test show that the average abnormal return both before and after the publication of financial reports in the period before and during the Covid-19 pandemic was not normally distributed due to the Asymp value. Sig. (2-tailed) both before (0.000) and after (0.000) before the Covid-19 pandemic and during the Covid-19 pandemic, namely both before (0.0180) and after (0.000) < 0.05 so it does not meet the specified criteria. Failure to fulfill the data normality criteria means that testing using a parametric test (one sample t-test) cannot be carried out. As an alternative, a non-parametric test (Wilcoxon signed rank test) is used to test the difference in average abnormal returns before and after the publication of pharmaceutical company financial reports before and during the Covid-19 pandemic.

**Wilcoxon Signed Rank Test Average Abnormal Return (Hypothesis Test)**

The Wilcoxon signed rank test was used as an alternative to the one sample t-test because the data normality criteria for the average abnormal stock return during the window period were not met. Decision making to accept or reject a hypothesis is based on the Asymp value. Sig. (2-tailed) which is compared with the predetermined  $\alpha=5\%$  criterion. The results of the Wilcoxon signed rank test on abnormal returns in the period before and during the Covid-19 pandemic are shown in Tables 9 and 10 below.

**Table 9. Wilcoxon Signed Rank Test Average Abnormal Return Test Before the 2019 Covid-19 Pandemic**

		<i>Ranks</i>	<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
AAR-AFTER - AAR-BEFORE	<i>Negative Ranks</i>		22a	21.36	470.00
	<i>Positive Ranks</i>		18b	19.44	350.00
	<i>Ties</i>		0c		
	<i>Total</i>		40		

- a. AAR-AFTER < AAR-BEFORE
- b. AAR-AFTER > AAR-BEFORE
- c. AAR-AFTER = AAR-BEFORE

<b>Test Statistics</b>	
AAR-AFTER - AAR-BEFORE	
Z	-0.806b
Asymp. Sig. (2-tailed)	0.420

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.

Source: SPSS output, 2024

In hypothesis testing for data from the period before the Covid-19 pandemic, the Asymp. Sig. (2-tailed) in the average abnormal return test shows a figure of 0.420, this value is greater than the limit set at 0.050 ( $\alpha=5\%$ ) so it does not meet the test criteria. It can be concluded that with a 95% confidence level, there is no difference in the average abnormal return before and after the publication of financial reports in the period before the Covid-19 pandemic.

**Table 10. Wilcoxon Signed Rank Test Average Abnormal Return Test During the Covid-19 Pandemic in 2021**

		<b>Ranks</b>		
		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
AAR-AFTER - AAR-BEFORE	<i>Negative Ranks</i>	15a	17.07	256.00
	<i>Positive Ranks</i>	25b	22.56	564.00
	<i>Ties</i>	0c		
	<i>Total</i>	40		

a. AAR-AFTER < AAR-BEFORE

b. AAR-AFTER > AAR-BEFORE

c. AAR-AFTER = AAR-BEFORE

<b>Test Statistics</b>	
AAR-AFTER - AAR-BEFORE	
<i>Z</i>	-2,070b
<i>Asymp. Sig. (2-tailed)</i>	0.038

a. *Wilcoxon Signed Ranks Test*

b. *Based on negative ranks.*

*Source: SPSS output, 2024 (attachment 5)*

In hypothesis testing for period data during the Covid-19 pandemic, the Asymp. Sig. (2-tailed) in the average abnormal return test shows a figure of 0.038, this value is smaller than the limit set at 0.050 ( $\alpha=5\%$ ) so it meets the test criteria. It can be concluded that with a 95% confidence level, there is a difference in the average abnormal return before and after the publication of financial reports for the period during the Covid-19 pandemic.

## Discussion of Research Results

### **Abnormal Returnson the Publication of Pharmaceutical Company Financial Reports Before the Covid-19 Pandemic.**

Hypothesis 1 (H1) in this study states that there were no abnormal returns on the publication of pharmaceutical company financial reports before the Covid-19 pandemic. Based on the results of testing hypothesis 1, the results showed that there was no difference in the average abnormal return before and after the publication of the financial reports of pharmaceutical companies listed on the Indonesia Stock Exchange before the Covid-19 pandemic, in other words before the Covid-19 pandemic the company's share price pharmaceuticals do not experience abnormal returns. This indicates that before the pandemic, investors did not react to the publication of pharmaceutical companies' financial reports on the Indonesian Stock Exchange.

This research is in line with research conductedHendro Lukman, (2021)AndPaputungan et al., (2021)which stated that there was no market

reaction to the publication of pharmaceutical company financial reports. When the financial reports were published, investors did not react because this was considered normal by investors. Thus, hypothesis 1 (H1) from this research is accepted, because testing the hypothesis using the Wilcoxon signed rank test shows that the value of Asymp. Sig. (2-tailed) in the average abnormal return test shows a figure of 0.420, this value is greater than the limit set at 0.050 ( $\alpha=5\%$ ). In accordance with the Wilcoxon test criteria, namely the hypothesis is accepted if the Asymp value. Sig  $\geq$  0.05. There is no difference in the average abnormal return before and after the publication of the financial reports.

### **Abnormal Returnson the Publication of Pharmaceutical Company Financial Reports during the Covid-19 Pandemic.**

Hypothesis 2 (H2) in the research states that there is an abnormal return on the publication of pharmaceutical company financial reports during the Covid-19 pandemic. Based on the results of hypothesis testing, the results showed that there was a difference in the average abnormal return before and after the publication of pharmaceutical company financial reports during the Covid-19 pandemic. This shows that the publication of financial reports during the Covid-19 pandemic had good information content. can change investors' decisions. In other words, investors react to the publication of financial reports of pharmaceutical companies listed on the Indonesian Stock Exchange. Previous research that is in line with the results of this research isLelengboto et al., (2021),Ngwakwe, (2020), AndBadzlina et al., (2023), stated that there were significant abnormal returns on shares of pharmaceutical companies after Covid-19.

Investors have confidence in the future performance of pharmaceutical companies during the Covid-19 pandemic which has an impact on increasing public demand for medicines and health supplements. Like research conducted byNovita & AW, (2022), WHO's announcement of the status of Covid-19 as a global emergency situation and the first Covid-19 case had a significant positive effect on the cumulative abnormal returns of shares of pharmaceutical companies. This is caused by investors' belief that pharmaceutical companies have profitable future performance. FurthermoreNgwakwe, (2020)research stated that Covid-19 caused an increase in the average share price compared to before the Covid-19 pandemic on the Chinese Stock Exchange Composite Index.

Efficient capital market theory states that the market will react quickly after receiving information and investors will evaluate it as good or bad news quickly. This is in line with testing hypothesis 2 (H2) which results in the market reacting to the publication of pharmaceutical company financial reports during the Covid-19 pandemic for the 2021 period. This is in line with research conducted byJaya, (2021)stated that the publication of financial reports during the Covid-19 pandemic was a source of information for investors in making investment decisions.

## CONCLUSION

This research aims to determine the comparison of market reactions as seen from the difference in average abnormal returns before and after the publication of pharmaceutical company financial reports, both for the period before the Covid-19 pandemic, namely 2019 and during the Covid-19 pandemic, namely 2021. Based on the results of the analysis and discussion in the previous chapter, it can be concluded that there is a comparison of market reactions as seen from the difference in average abnormal returns before and after the publication of pharmaceutical company financial reports, where before the Covid-19 pandemic, namely in 2019, there was no average difference. -average abnormal return before and after publication of pharmaceutical company financial reports. However, in contrast to the period during the Covid-19 pandemic, namely 2021, where during the Covid-19 pandemic there was a significant difference in abnormal returns before and after the publication of pharmaceutical companies' financial reports.

This shows that there is a significant comparison of market reactions to the publication of pharmaceutical company financial reports during the pandemic. It can be concluded that the efficient market was in semi-strong form at the time of publication of pharmaceutical company financial reports during the Covid-19 pandemic. This is because the publication of pharmaceutical company financial reports during the pandemic is considered important information by investors. The Covid-19 pandemic situation can improve the performance of pharmaceutical companies, this is used as information and consideration for investors in their investment decisions.

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