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# Stock Market Reaction of Pharmaceutical Sector Companies to the Announcement of the Covid 19 Endemic in Indonesia 

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#### Abstract

The transition period from the pandemic to the endemic covid 19 in Indonesia had an impact on increasing the Jakarta Composite Index on the Indonesia Stock Exchange, however, the stock prices of pharmaceutical sector companies decreased one day after the endemic announcement date. Based on this phenomenon, this study aims to analyze market reactions that cause abnormal returns in pharmaceutical sector companies listed on the Indonesia Stock Exchange. The population used in this study were pharmaceutical sector companies listed on the Indonesia Stock Exchange with a total sample size of 110. The data analysis method used was a descriptive analysis approach. The results of this study indicate that there is an increase in abnormal returns during the transition from the pandemic to the endemic Covid-19 in pharmaceutical sector companies in Indonesia.


KEYWORDS: Abnormal Returns, Investor Reaction, Market Reaction, and the Endemic of Covid 19

## I. INTRODUCTION

The capital market is a place where financial instruments are traded. The capital market in Indonesia is known as the Indonesia Stock Exchange (IDX), the presence of the stock exchange in Indonesia is expected to increase the efficiency of the capital market industry and increase investment interest. Financial instruments in the capital market consist of debt, equity, derivative, and other securities [2]. Equity securities can be in the form of shares. Stocks are one of the capital market instruments that provide high returns with a high level of risk. Therefore, capital market activities need to be observed in order to minimize an investor's risk in making an investment decision
The announcement that Indonesia will start the transition process from pandemic to endemic is an announcement event that can affect capital market activities in Indonesia because the information contained in the transition event can be a signal for investors in making investment decisions. In transitional events, the information is the implementation of a policy to eliminate the condition for a negative Covid-19 result for domestic travelers. The announcement of the abolition of the Covid-19 negative result requirement affected the increase in the Jakarta Composite Index on the Indonesia Stock Exchange (IDX).

The increase in the Jakarta Composite Index in Indonesia during the transition from the pandemic to the endemic of Covid-19 was due to the rise in the percentage of the Jakarta Composite Index after the announcement of the implementation of the policy to eliminate the negative result requirement for domestic travelers on March 8, 2022. The increase in the percentage What happened after the announcement was marked by an increase in the percentage of the Jakarta Composite Index on March 9 , 2022, from $-1.1 \%$ to $-0.3 \%$. Followed on the next day, namely March 10 and March 11, 2022, the percentage of the Jakarta Composite Index has increased from $-0.3 \%$ to $0.5 \%$, then on March 14,2022 , the rate of the Jakarta Composite Index has increased again from $0.5 \%$ to $0.9 \%$, then on March 15, 2022, the percentage of the Jakarta Composite Index had decreased, from $0.9 \%$ to $0.4 \%$, but the next day, March 16, 2022, the percentage of the Jakarta Composite Index increased from $0.4 \%$ to 1.5 \%. The percentage of the Jakarta Composite Index decreased from 17 March to 21 March 2020, namely from $1.5 \%$ to $1.0 \%$. Increase the percentage of the Jakarta Composite Index again on March 22 and March 232020 from 1.0\% to 1.6\%. This was followed by an increase in the percentage of the Jakarta Composite Index from 24 March to 30 March 2020 from 1.6\% to 2.4\%, and ended with an increase in the percentage of the JCI from $2.4 \%$ to $2.7 \%$ at the end of the March period 31st of 2022.
Upgrade to Composite Stock Price Index is a sign that the performance of issuers listed on the Indonesia Stock Exchange tends to improve along with the start of the transition process, but for issuers in the pharmaceutical sub-sector vice versa. Incident, The announcement of the abolition of the Covid-19 negative result requirement during the transitional period had a negative impact on the decline in share prices of pharmaceutical sub-sector issuers. Share price percentage Pharmaceutical sub-sector

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companies listed on the Indonesia Stock Exchange tend to experience a decline following the announcement of the implementation of a policy to eliminate the condition for negative Covid-19 results for domestic travelers during the transition process from the COVID-19 pandemic to the COVID-19 endemic in Indonesia. The announcement date is marked with a purple dotted line, namely March 8, 2022. Prior to the announcement, namely March 7, 2022, the share price of pharmaceutical subsector companies consisting of ten issuers average share price of all issuers was higher than the average percentage of share prices before the announcement, with an average rate of $-3.79 \%$. On the day after the announcement, namely March 9,2022 , it experienced a decrease with an average percentage of the share price of all issuers of $-13.13 \%$ from the previous of $-9.34 \%$, March 10 and 11, 2022 had increased to -11.36 \% then decreased periodically on March 16, 17 and 182022 with an average percentage of $-11.62 \%,-12.12 \%$ and $-14.14 \%$ respectively. From 22 to 28 March 2022 it will fall again with an average percentage of $-14.90 \%$. The decline was experienced again on March 29,2022 , which was $-15.91 \%$. Then it dropped dramatically from the previous $-15.19 \%$ to 17 , indicating that investors responded to negative sentiment toward pharmaceutical sub-sector stocks after the announcement of the transition [12].
Based on the above phenomenon, it is evident that the event regarding the announcement of the implementation of a policy to eliminate the negative result requirement for Covid-19 for domestic travelers during the transition from pandemic to endemic is an event that needs to be considered by investors in buying and disposing of their shares, especially company shares. Pharmaceutical sub-sector. Based on the phenomenon related to the impact of an event on stocks has been widely studied with the results showing that there is a significant difference between the abnormal return before and after the event[3], but there are also research results showing that there is no difference in abnormal returns before and after the event[1] and [3]. Referring to the phenomena and differences in the results of previous studies, this study aims to analyze market reactions that cause abnormal returns in pharmaceutical sector companies listed on the Indonesia Stock Exchange.

## II. LITERATURE REVIEWS

### 2.1 Stock price

The stock price can be one of the considerations for investors to buy shares of a company. The share price is the selling price offered from one investor to another. The formation of share prices through a supply and demand mechanism in the capital market [8]. The price of shares on the stock market is determined by the demand and supply that occurs for the shares in question on the capital market [7]. Stock prices are often a benchmark for company value, so a high stock price is one of the factors that makes the company value high.
Stock prices that occur in the capital market always fluctuate from time to time. Fluctuations in the share price will be determined by the forces of supply and demand. If the number of bids is greater than the number of requests, the stock price will generally fall. Conversely, if the number of requests is greater than the number of offers, the stock price tends to rise [9]. It can be concluded that if a stock experiences excess demand, the stock price tends to rise. Conversely, if there is an excess supply, the stock price tends to fall.
Not only because of the large number of requests and offers, but stock prices also fluctuate due to several factors. Factors that influence stock price movements are grouped into internal factors, namely factors that arise or are influenced by the company, and external factors, namely factors from outside the company. Internal factors include announcements of financial statements, company profitability, and proportions of debt and dividends, while external factors include public information, macroeconomic policies, social conditions, and political conditions of a country [6].

### 2.2 Abnormal returns

An abnormal return is the result of a reduction in the value of the profit that is purely obtained by the investor and the profit that is expected to be obtained from the investment. Returns can vary according to economic events that occur or because stock prices continue to fluctuate [1].
There are three models for calculating abnormal returns, the method of calculation and their characteristics vary. In this study, the authors used a market-adjusted model because the best predictor for estimating the return of a security is the return on the market index at that time [4]. This type of model provides convenience in detecting abnormal returns. The best predictor for estimating the return of a security is the market index return at that time. Using this model, it is not necessary to use an estimation period to form an estimation model because the estimated security return is the same as the market index return. If in the calculation, there is an increase in abnormal return then the event contains good news information; conversely if it decreases then the information is considered bad news [1].

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The causes of abnormal returns around the announcement of an event, for example, when mergers and acquisitions, dividend announcements, lawsuits, interest rate increases and others. The event that became the reason for the abnormal return in this study was that Indonesia made a transition from a pandemic to a COVID-19 endemic. The phenomenon of abnormal returns also often occurs when the market is on close on the Indonesia Stock Exchange, also due to a significant increase in trading activity. Security return variability and trading volume activity are the two variables that cause abnormal returns, both of which are explanations for the occurrence of abnormal returns. Company-specific factors can also explain or influence the magnitude of the abnormal returns that occur.

### 2.3 Efficient Market Hypothesis

A market is said to be efficient when the prices of all traded securities reflect all the information presented [6]. This means that the information in question is information obtained from the past, and present and information that comes from the company itself. In a competitive market, there is an equilibrium price for an asset which is determined by the available supply and aggregate demand. This balance price describes the mutual agreement between all market members regarding the value of the asset following the available information. Therefore when information enters the market related to an asset, this information will later be used to analyze the value of the asset in question, then all information received will affect the equilibrium price resulting in a shift in the equilibrium price to a new direction.
The efficient market hypothesis is a hypothesis that states that the price of a stock fully describes the information available on the stock concerned [6]. In an efficient market, all available information regarding stock prices can be known in general without any obstacles. In other words, the main key to measuring an efficient market is to measure the relationship between security prices and information.

### 2.4 Hypothesis

### 2.4.1 Abnormal Return in Transition Events

The difference between the actual return and the expected return can cause abnormal returns. Abnormal returns are used to measure market reaction to information received from an event; in this study, the transition event from a pandemic to a COVID19 endemic. If the transition event from the pandemic to the Covid-19 endemic contains information, the market will react, which will cause abnormal returns, but conversely, if there are no abnormal returns, then the transition event does not contain information, while the good or bad form of information can be measured through changes in the company's stock abnormal returns. The results of previous studies stated that there were differences in abnormal returns before and after the event [1]. Based on the results of previous studies,
Ha: There was an increase in abnormal returns during the transition from the pandemic to the endemic of Covid-19.

## III. METHODS

The population of this study is pharmaceutical sector companies listed on the Indonesia Stock Exchange with a research period of 11 days, namely before and after the transition, event starting from the announcement of the abolition of the negative co-19 result requirement on March 8 2022, and 5 days before the transition event, and 5 days after the transition event. Samples were selected using the purposive sampling method. The research sample obtained by reducing the criteria that did not fit were 10 companies so that the total sample for 11 days was 110.
The data in this study are: (1). Data included in the pharmaceutical sub-sector on the Indonesia Stock Exchange; (2). Daily stock price data at the closing price during the research observation period; and (3). Stock trading volume data during the research observation period. The length of the observation period is 11 days, which is 5 days before and 5 days after the implementation of the policy in the transition process towards endemic in 2022. The data collection technique in this study uses the documentation method, namely by collecting data and information obtained from historical data issued by the Exchange. Indonesia Effect, as well as other literature related to this research.

### 3.1 Variable Operational Definitions

The variable that influences or becomes the cause in this study is the date of the implementation of the policy to abolish the condition for a negative Covid-19 result for domestic travelers during the transition from the pandemic to becoming a COVID-19 endemic in Indonesia. The observation period is 11 days, with $h-5$ before the event up to $h+5$ after the event. The reason this period was chosen in this study is that it is expected to avoid the occurrence of a confounding effect on stock prices and trading volume of company shares during the observation period. The confounding effect here is when the company issues other policies that can affect stock prices during the observation period [11]. Because it is more difficult to anticipate the confounding

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effect with a long observation period, the observation period is kept as short as possible [11]. The event date (h0) used in this study is March 8, 2022 for the implementation of a policy to eliminate the condition for negative Covid-19 results for domestic travelers during the transition from the pandemic to endemic Covid-19 in Indonesia. The abnormal return variable in this study uses the following formula:
Abnormal Returnsit=Realized Return ${ }_{\text {it }}$ - Expected Return it

### 3.2 Data analysis method

This research is a descriptive quantitative research. Descriptive quantitative research is research that collects data to answer questions about the status of research subjects. The most common type of descriptive research involves assessing the attitudes or opinions of certain individuals, organizations, circumstances, or procedures [5]. The purpose of this descriptive research is to make systematic descriptions and descriptions that are factual and accurate regarding the facts, characteristics, and relationships regarding the phenomena studied.
Descriptive research is a research method that seeks to describe and interpret objects according to what they are. This research is also often called non-experimental because in this study the research did not control and manipulate research variables. In addition, descriptive research is also research that collects data to test research questions or hypotheses related to circumstances and events that are happening [4].

## IV. RESEARCH RESULTS

Based on the results of hypothesis testing, on average, the abnormal return of sample companies has increased during the observation period. On the average abnormal return of sample companies on $h-5$ to $h-1$ there is no change, namely -0.0012 , the change in abnormal return occurs on h0 from -0.0012 to 0.0019 so that the change is $163.128 \%$, but there is a decrease in abnormal return on $h+1$ to $h+5$ of -0.0001 with a decline rate of $2,869.391 \%$. It can be concluded that pharmaceutical sector companies during the observation period experienced a slight increase in abnormal returns. The increase in abnormal company returns during the transition from the pandemic to the Covid-19 endemic can be seen in Graph 1. Based on Graph 1, the trend line equation shows $y=0.0002 x-0.0014$ with an $r$-square value of 0.2895 .

Table 1. Abnormal Return of Sample Companies in the Observation Period

| Kode Saham | H-5 | H-4 | H-3 | H-2 | H-1 | H0 | $\mathrm{H}+\mathrm{I}$ | $\mathrm{H}+2$ | H+3 | $\mathrm{H}+4$ | H+5 | Chart |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 NAF |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0015 | -0.0015 | -0.0015 | -0.0015 | -0.0015 | -0.0048 | -0.0010 | -0.0010 | -0.0010 | -0.0010 | -0.0010 |  |
|  | 0.000\% |  | 0.000\% |  | 68.237\% |  | 0.000\% |  | 0.000\% |  |  |  |
| DVLA |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0033 | -0.0033 | -0.0033 | -0.0033 | -0.0033 | 0.0057 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | - |
|  | 0.000\% |  | 0.000\% |  | 158.129\% |  | 0.000\% |  | 0.000\% |  |  |  |
| KAEF |  | 0.000\% |  | 0.000\% |  | 50.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0039 | -0.0039 | -0.0039 | -0.0039 | -0.0039 | -0.0025 | -0.0050 | -0.0050 | -0.0050 | -0.0050 | -0.0050 |  |
|  | 0.000\% |  | 0.000\% |  | -57.076\% |  | 0.000\% |  | 0.000\% |  |  |  |
| KLBF |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0006 | -0.0006 | -0.0006 | -0.0006 | -0.0006 | 0.0038 | 0.0008 | 0.0008 | 0.0008 | 0.0008 | 0.0008 |  |
|  | 0.000\% |  | 0.000\% |  | 114.843\% |  | 0.000\% |  | 0.000\% |  |  |  |
| MRK |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0007 | -0.0007 | -0.0007 | -0.0007 | -0.0007 | 0.0016 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | - |
|  | 0.000\% |  | 0.000\% |  | 145.825\% |  | 0.000\% |  | 0.000\% |  |  |  |
| PEHA |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0011 | -0.0011 | -0.0011 | -0.0011 | -0.0011 | -0.0045 | -0.0009 | -0.0009 | -0.0009 | -0.0009 | -0.0009 | $\checkmark$ |
|  | 0.000\% |  | 0.000\% |  | 75.821\% |  | 0.000\% |  | 0.000\% |  |  |  |
| PYFA |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0002 | -0.0002 | -0.0002 | -0.0002 | -0.0002 | 0.0040 | 0.0008 | 0.0008 | 0.0008 | 0.0008 | 0.0008 | - |
|  | 0.000\% |  | 0.000\% |  | 104.770\% |  | 0.000\% |  | 0.000\% |  |  |  |
| SIDO |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0165 | 0.0033 | 0.0033 | 0.0033 | 0.0033 | 0.0033 | - |
|  | 0.000\% |  | 0.000\% |  | 97.405\% |  | 0.000\% |  | 0.000\% |  |  |  |
| SOHO |  | 0.000\% |  | 0.000\% |  | -400.000\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0006 | -0.0006 | $-0.0006$ | -0.0006 | -0.0006 | 0.0003 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | - |
|  | 0.000\% |  | 0.000\% |  | 306.989\% |  | 0.000\% |  | 0.000\% |  |  |  |
| TSPC |  | 0.000\% |  | 0.000\% |  | -181.178\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0008 | -0.0008 | -0.0008 | -0.0008 | -0.0008 | -0.0006 | -0.0002 | -0.0002 | -0.0002 | -0.0002 | -0.0002 | - |
|  | 0.000\% |  | 0.000\% |  | -25.150\% |  | 0.000\% |  | 0.000\% |  |  |  |
| AVERAGE |  | 0.000\% |  | 0.000\% |  | 2869.391\% |  | 0.000\% |  | 0.000\% |  |  |
|  | -0.0012 | -0.0012 | -0.0012 | -0.0012 | -0.0012 0.0019 <br> $163.128 \%$  |  | -0.0001 | -0.0001 | -0.0001 | -0.0001 | -0.0001 | $\sim$ |
|  | 0.000\% |  | 0.000\% |  |  |  | 0.00 |  | 0.00 |  |  |  |

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Graph 1. Increase in Abnormal Return of Sample Companies During the Pandemic Transition Period Towards Endemic Covid 19


## V. DISCUSSION

Based on the calculation results, it is known that the abnormal return of pharmaceutical sector companies in the observation period has increased. Thus Ha is accepted. This proves that the information contained in the transition event is strong enough so that it can cause differences in abnormal returns, meaning that there is a response from investors when the transition event occurs. Abnormal returns on transition events have positive results, so this proves that investors respond positively to pharmaceutical sub-sector stocks so that the demand for pharmaceutical sub-sector shares increases when transition events occur, even though after the transition event has decreased, but the decline is still above the abnormal return before the transition period. Transition, this shows a market reaction, and investors still believe in the company's future performance.

## VI. CONCLUSION

Based on the data analysis that has been done, it shows that there was an increase in abnormal returns during the transition from pandemic to endemic Covid-19 for pharmaceutical sector companies in Indonesia. This shows that the information contained in the transition event has an influence on investors in responding to the pharmaceutical sub-sector stock before and after the transition event occurs.

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