

## Stock Price Analysis Before and During The Covid-19 Pandemic (Case Study on Pharmaceutical Sub-Sector, IDX)

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### Abstract

*This study aims to analyze the stock prices of the pharmaceutical sub-sector listed in the Indonesia Stock Exchange before and during the Covid-19 pandemic stock price. The background of this research because of the negative effect of the spread of the Covid-19 virus on stock prices. In this study, the data used are the stock prices of 10 pharmaceutical companies on the Stock Exchange Indonesia quarter II (April-June) The data used is secondary data that can be accessed through yahoo finance and idx stock exchange then the data is processed using the SPSS version 25. The results of processing dataon significant differences in stock prices before and during the COVID-19 pandemic.*

## INTRODUCTION

The development of stock prices is always an interesting object to predict and analyzed. Success and accuracy in predicting price developments stock is something that is desired by capital market participants, especially investors who invest their funds in the capital market. According to Tandelilin (2010:7) The stock price is the price that occurs in the stock market which is very meaningful to company because the stock price determines how much the value of a company and can show the success achieved by the company in carrying out management. If the company achieves good performance, then the company's stock This will be in great demand by investors.

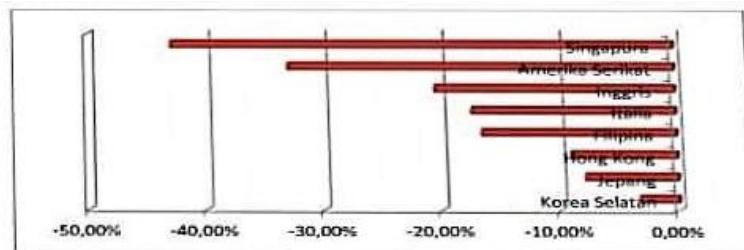
Stock prices have an important value and become one of the indicators success for the company, because when the stock price of a company is high then the company has the opportunity to get additional investment from investors for the increase in the price of their shares. Investors will conclude that The company has a good performance. However, if the stock price decreased, then this indicates that the performance of a the company has not been maximized as a result investors do not trust to invest capital and can reduce investor interest in investing (Risman, 2017, 2021).

At the end of December 2019, the public was shocked by the emergence of the virus world-shaking new. Corona virus or Covid-19 is a new virus originating from Wuhan, China which infected millions of people. The spread of the corona virus that has spread to various parts

of the world have an impact on the Indonesian economy and even the world economy. As shown in Figure 1, the economic recession that has occurred generally experienced by developed countries in the world. The turmoil of the Covid -19 pandemic has hit the global economy, Indonesia is no exception. The Central Statistics Agency (BPS) has released Indonesia's economic growth figures in second quarter 2020. Indonesian economy contracted by -5.32% (year on year) (See picture 2). Economic growth in the first and second quarters in 2018-2019 was around 5% figure. Meanwhile, in 2020 there was a significant decline due to a pandemic outbreak. The pandemic also affects the capital market Indonesia. Judging from the sectoral stock index, there are several sectors that are still positive growth in the midst of a pandemic. The consumption industry sector did not experience a significant decrease of 11.55% because consumption needs are basic needs of the community in any situation (See figure 3).

The introduction is the main part of the article, it should start with an introductory section that provides further details on (1) the phenomenon or research problem; (2) problem-solving insights and plans; (3) the formulation of research objectives on the manuscript; (3) motivation; (4) State of the Art, and Research Gap. The introduction should be relatively nontechnical, yet clear enough for an insightful reader to understand the text's contribution.

**Figure 1. Global Economic Growth Second Quarter 2020**



Source: kompas.com (Data Processed, 2020)

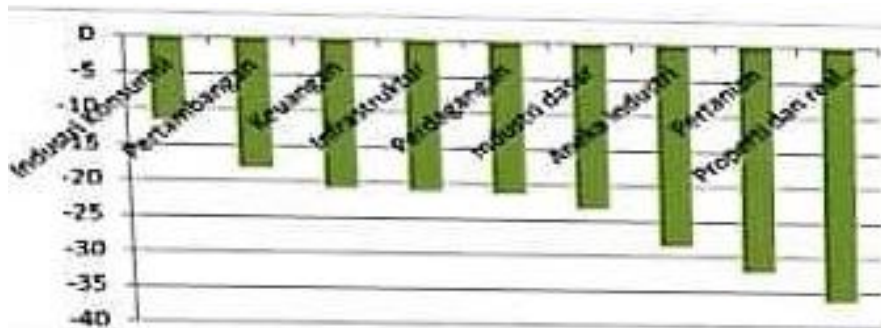
**Figure 2. Indonesia's Quarter I and II Economic Changes 2018 -2020**



Source: BPS

The pharmaceutical industry is one of the industries included in the pharmaceutical sector consumption and is a priority in the Indonesian economy. During pandemic, demand for pharmaceutical products or drugs that can increase body resistance tends to increase, especially for types of herbal multivitamins. In the midst of the strengthening of the JCI, the stocks of pharmaceutical issuers continued to since the early cases of Covid-19 were found in Indonesia.

*Figure 3. Development of the 2020 Sectoral Index*



Source: *Financial Services Authority*

## LITERATURE REVIEW

### Capital Market

The capital market can be regarded as one of the indicators and supports economic development in a country. The capital market plays an important role in economic growth. Provisions of Capital Market Law Number 8 Year 1995, article 1 explains, the capital market is an activity related to public offerings and securities transactions, public companies related to securities issued, and institutions and professions related to securities valuable. Indonesia's capital market can be said to be very developed, this can be seen more and more enthusiasts with increasing age (Financial Services Authority, 2020). Public enthusiasm and the increasing number of companies listed on the IDX are the progress of the Indonesian Capital Market. Even though there are so many challenges faced by the capital market in Indonesia in the last ten years.

Various things coloring the ups and downs of the journey of the capital market in Indonesia. Social, political, health or the nation's economy greatly affects the condition of the capital market in Indonesia. This study focuses on companies engaged in the sub-sector pharmaceuticals listed on the Indonesia Stock Exchange. The capital market has an important role in the economy, especially in allocation of public funds. The capital market is a means for companies to increase long-term needs by selling shares or issuing bond. The capital market also functions as a means of allocating funds productive to move funds from lenders to borrowers. Allocation This happens when individuals who have excess funds can lend them to other productive individuals who need funds. BAPEPAM divides the roles and benefits of the capital market as follows: a. The capital market is a vehicle for efficient allocation of funds. b. It is possible for investors to have a healthy company and good prospects. c. Implementation of company management in a professional and transparent manner. d. Increase in national economic assets.

## Stock

According to Kasmir (2014), what is meant by shares are securities that are ownership. Investors who buy shares have ownership rights to company that sells its shares. The bigger the shares he owns, the the greater the power gained over the stock selling company. according to Joshi (2017) the profits obtained from the share ownership are the results of the company's profits distributed to shareholders in addition to Set aside retained earnings for other company needs. company that growing rapidly often pays little or nothing, because in part Most of the income is kept in the company. On the other hand, a company that are already established or have a long history of profit possibly pays relatively high returns to its shareholders.” The types of shares according to Jogiyanto (2010) are:

1. Preferred stock Preferred stock is stock that has a pre-emptive right to receive profits and have cumulative profit rights. Cumulative rights are things get undistributed profit in the year that suffers a loss but will be paid in the year experiencing profits, so the stock the preference will receive 2 times the profit.
2. Common Stock (Common Stock) Common stock is a type of stock that will receive profit after profit preferred share is paid. If the company goes bankrupt, then the shareholders usually suffer first because of the calculation of the stock price index based on common stock.
3. Treasury Stocks Treasury shares are shares owned by companies that have issued and circulated which is then purchased again by the company for kept as treasury which can later be resold.

## Stock Price

The principle of wealth creation in finance is largely based on the idea of paying dividends and increasing stock prices (Majanga, 2015). Price Stocks affect investment interest because the value of the company is reflected in the price share. An increase in stock prices will have an impact on increasing investor interest in investment. An increase in the number of investors is possible to encourage mining companies carry out exploration. Public investment will encourage economic growth of a country so that the government does not need to increase debt country if public investment awareness is high. There are several factors that affect stock prices such as:

1. Projected earnings per share
2. Time of receipt of profit
3. Business risk level
4. Use of debt
5. Dividend policy
6. Other external factors

There are several factors that cause stock prices to fluctuate, among others

- Micro and macro economic conditions.
- Company policy in deciding to expand (business expansion), such as opening branch offices (brand offices) and sub-branches (sub-brand office), both domestically and abroad.
- Change of directors suddenly.
- There are directors or commissioners of companies involved in criminal acts and the case has gone to court.
- Systematic risk, which is a form of risk that occurs as a whole and has contributed to the

company's involvement.

### **Efficient Market Hypothesis (EMH)**

Efficient market theory Markowitz (1952) shows the relationship between investor confidence and choice in the context of selecting a portfolio that has the expectation or expectation of a smaller or minimum risk. Efficient market is market that provides investors with perfect stock price information. From this explanation, it can be concluded that an efficient capital market explains the phenomenon of the COVID-19 pandemic, where stock returns are positively correlated with systematic risk. This means that less information is provided company to investors related to their stock returns, investors will less interested in investing in the company. Existence This COVID-19 pandemic has further strengthened the existence of systematic risk, so that investors will be risk averse.

Price changes in a competitive market are determined by the size of the low supply and demand. When a new information enters the market related to an asset, this information will be used to analyze and interpret the value of the assets concerned. Price is a reflection of the information obtained by market participants comprehensive, so that if the price contains information, it can It is said that the price formed fully reflects the information system.

### **Event Study**

Robert G. Bowman in his article entitled Understanding And Conduction Event Study (1983) defines event study as a which examines the behavior of security prices in a market reaction of announcements or events. The event or announcement contains information that can affect the value of the company and its impact on all companies in the capital market both systemically and non-systemically. events or announcements such as dividend announcement events, presidential elections, issuance of convertible bonds, Bali bombings, merger announcements, acquisition announcement, stock split announcement, profit announcement, announcement new products andso on. (Anggraini, 2021)

The steps of research analysis using event study techniques, namely:

- Determine the event to be studied.
- Conducting literature study by collecting supporting theories and literature and previous studies in order to obtain a sound basis needed in theoretical studies as an alternative to solving problems that discussion in this research.
- Doing documentation through [finance.yahoo.co.id](http://finance.yahoo.co.id) and [www.idx.co.id](http://www.idx.co.id) to use collect secondary data.
- Determine the criteria for the company to be researched so that it is obtained issuer sample.

Event study theory can be used in testing the capacity of an information (information content)of announcements, and can be used to test efficiency the market is in semi-strong form, if an announcement has content information, then the market is expected to react when the market receives the announcement (Azisanabely, 2018).

## **METHOD**

### **Time and Place of Research**

The time of the study was carried out in November 2021. This study took location on the Indonesia Stock Exchange (IDX) as a company information center that Go Public in Indonesia, while data collection is obtained from the official website of the Stock Exchange Indonesian Securities, namely <http://www.idx.co.id/> and Yahoo Finance <https://finance.yahoo.com/>.  
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Observations were made on sub-sector companies Pharmacies listed on the Indonesia Stock Exchange (IDX) in the second quarter of 2019 and Second Quarter 2020.

**Population and Research Sample**

The population in this study is a pharmaceutical sub-sector company registered in Indonesia Stock Exchange (IDX) in the second quarter of 2019 and the second quarter of 2020. The following is a list of sample company names:

| No | Kode | Comapany                                  | IPO Date    |
|----|------|---|-------------|
| 1  | DVLA | PT. Darya-Varia Laboratoria Tbk           | 11-Nov-1994 |
| 2  | INAF | PT. Indofarma Tbk                         | 17-Apr-2001 |
| 3  | KAEF | PT. Kimia Farma Tbk                       | 04-Jul-2001 |
| 4  | KLBF | PT. Kalbe Farma Tbk                       | 30-Jul-1991 |
| 5  | MERK | PT. Merck Tbk                             | 23-Jul-1981 |
| 6  | PEHA | PT. Phapros Tbk                           | 26-Dec-2018 |
| 7  | PYFA | PT. Pyridam Farma Tbk                     | 16-Okt-2001 |
| 8  | SIDO | PT. Industri Jamu dan Farmasi Sido Muncul | 18-Dec-2013 |
| 9  | TSPC | PT. Tempo Scan Pacific Tbk                | 17-Jan-1994 |
| 10 | SDPC | PT. Millenium Pharmacon Internasional Tbk | 07-Mei-1990 |

**A. Data Analysis Method**

The data analysis method used is determined based on the type of research being conducted chosen. The following are some of the data analysis methods used in this study:

1. Descriptive Statistic

Descriptive Statistics provide an overview or description of the data seen of the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis and skewness (Ghozali, 2013:19) Descriptive research provides an overview or descriptive of the data seen of the mean (mean), standard deviation, and variance with the procedure as following:

- Determine the average (mean), standard deviation and variance of performance indicators company finances from financial ratios before and after the merger and acquisitions are reviewed from the performance of companies listed on the IDX.
- Determine the difference in the mean (up/down) of the company's financial indicators between before and after mergers and acquisitions.

2. Normality Test

According to Ghozali (2013: 29) the normality test aims to test whether in regression model, the dependent variable and the independent variable both have a normal distribution or not. In Ghozali (2013:32) testing the normality of the data using Kolmogorov-smirnov test. The basis of decision making in this study is based on significant level with a probability value

of = 5% provided that:

- If the probability > 0.05, then the data is normal.
- If probability < 0.05, then the data is not normally distributed the test significance is smaller than the specified significance (< 0.05) then H0 rejected and the data is declared to be not normally distributed.

**RESULTS AND DISCUSSION**

**Tabel 1. Share Prices**

|           | <b>Before The Pandemic</b> | <b>During The Pandemic</b> |
|-----------|----------------------------|----------------------------|
| Mean      | 5603.900                   | 3512.000                   |
| Median    | 5450.000                   | 3455.000                   |
| Maximum   | 12100.00                   | 7020.000                   |
| Minimum   | 320.0000                   | 295.0000                   |
| Std. Dev. | 4082.480                   | 2123.303                   |
| Skewness  | 0.115226                   | 0.272691                   |
| Kurtosis  | 1.810532                   | 2.282207                   |

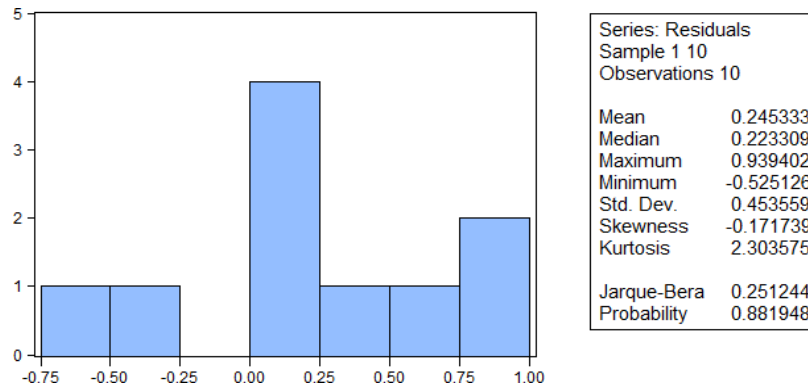
Based on table 1, the results of the descriptive statistical test of stock prices show the value of the average (mean) stock price before the COVID-19 pandemic in the pharmaceutical sub-sector amounting to Rp. 18,679 with a standard deviation of 13,349. Then during the COVID-19 pandemic the average share price is Rp11,706 with a standard deviation of 694.48. Maximum value before the COVID-19 pandemic was IDR 4,160 while during the COVID-19 pandemic amounting to IDR 2,750. Then for the minimum value before the COVID-19 pandemic is IDR 105 while during the COVID-19 pandemic IDR 93. It can be seen that there is the decline in stock prices due to the COVID-19 pandemic.

**Tabel 1. Descriptive Statistics**

|                    | N         | Minimum   | Maximum   | Sum       | Mean      | Std. Deviation |
|--------------------|-----------|-----------|-----------|-----------|-----------|----------------|
|                    | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic      |
| Sebelum_pandemi    | 30        | 105.00    | 4160.00   | 56039.00  | 1867.9667 | 1334.94687     |
| Saat_Pandemi       | 30        | 93.00     | 2750.00   | 35120.00  | 1170.6667 | 694.48420      |
| Valid N (listwise) | 30        |           |           |           |           |                |

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**Table 3. Stock Price Normality Test**



**Table 3. Tests of Normality**

|                 | Kolmogorov-Smirnov <sup>a</sup> |        |      | Shapiro-Wilk |    |      |
|-----------------|---------------------------------|--------|------|--------------|----|------|
|                 | Statistic                       | d<br>f | Sig. | Statistic    | df | Sig. |
| Sebelum_pandemi | .146                            | 30     | .101 | .920         | 30 | .026 |
| Sesudah_Pendemi | .138                            | 30     | .147 | .949         | 30 | .159 |

a. Lilliefors Significance Correction

For Normality Test shows that Sig. before the pandemic and when the COVID-19 pandemic is 0.101 and 0.147 > 0.05 which means Ho is accepted, then it can be said that the results of this test are normally distributed research data.

**Discussion**

Based on the results of the study there are significant differences in stock prices pharmaceutical sub-sector before and during the COVID-19 pandemic. In detail, the decrease the average stock price of the pharmaceutical sub-sector during the COVID-19 pandemic in Indonesia was Rp11,706 from Rp18,679 in the second quarter before COVID-19. Based on the data normality test, the significance value (sig.) of COVID-19 in Indonesia are 0.101 and 0.147 > 0.05. This means that there is a price difference significant stocks before and during the pandemic where the average stock price the pharmaceutical sub-sector experienced a significant decline during the COVID-19 pandemic in Indonesia when compared to before the announcement of the COVID-19 case.

The results of this study are in line with research conducted by Mangindaan and Manossoh (2020) with research results showing that there are a significant decrease in the share price of PT. Garuda Indonesia in the 30 period days after the announcement of the first case of COVID-19 in Indonesia compared to the 30 day period prior to the announcement. Study on department stores (shopping industry) represented by a study from Nurmasari (2020) also stated that there was a significant decline in share prices at PT. Ramayanan Lestarin Sentosa, Tbk due to the Covid-19 case that occurred in Indonesia. Rafsyanjani and Wuryani (2021) also said that there was a significant difference on stock prices before and after the pandemic.

The Covid-19 pandemic has not only had a negative impact on stock prices, but 2020



also has the effect of a decline in the total shares traded. This matter Due to the Covid-19 pandemic forcing people to limit their activities in outside the house. The imposition of social restrictions in big cities forced some community so that as much as possible not to do activities outside the home that cause people to need health services. This also makes investors become worried and more selective in transacting shares in the company thus making stock trading sluggish and ultimately pushing the total the shares traded decreased. The Covid-19 pandemic has also made income or funds that exist in the community and investors are decreasing because most of the companies were closed. This encourages investors to reduce stock transactions which ultimately make the total shares traded decreased from before the Covid-19 case.

## **CONCLUSION**

### **Conclusion**

The situation that is happening in almost all of the world, including Indonesia today The COVID-19 pandemic has had a huge impact. Condition what is happening currently paralyzes activities and activities, ranging from business, economic, education, and many others. No exception to the impact that occurred on company's financial performance. Almost all sectors of the company are affected This pandemic has caused financial performance to weaken. However, some companies in the health sector, especially pharmaceuticals, actually experienced a surge. Several pharmaceutical companies listed on the IDX recorded profit growth positive in 2020 when compared to 2019. This study aims to empirically test the difference between accrual earnings management before and after the COVID-19 pandemic in sub-company pharmaceutical sector in Indonesia. The global COVID-19 pandemic has make companies more careful in managing their companies, including earnings management practices. If the company achieves good performance, then the company will be in great demand by investors (Indrawati and Brahmayanti, 2021). During 2020, pharmaceutical sub-sector companies remain perform accrual earnings management, even tends to decrease when compared to year 2019.

The results of this study prove that there is no difference in management accrued earnings before the COVID-19 pandemic and after the COVID19 pandemic, so that it can be concluded that there is no effect of the COVID19 pandemic on practice accrual earnings management in pharmaceutical sub-sector companies in Indonesia. Sector pharmaceuticals that have been in the spotlight of investors during this COVID-19 pandemic encourage managers not to engage in aggressive earnings management activities and make an inaccurate representation of the economic phenomena of the company that affected by this pandemic.

### **Suggestion**

Suggestions that can be obtained and used for now and in the future coming from this research are as follows: 1. For companies, it can increase the value of ratios in measuring performance in order to increase the attractiveness of investors. 2. For investors, before deciding to invest in a company pharmaceutical sub-sector on the Indonesia Stock Exchange. investors can pay attention to financial performance variables and macroeconomic factors that have an influence significant to stock prices. 3. For further research, you can add financial performance factors and other macroeconomics. In addition, further researchers can also use different research sectors so that the objects of research are more diverse and also can add research period.

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