COVID-19: ACCRUAL EARNINGS MANAGEMENT PRACTICES IN PHARMACEUTICAL COMPANIES IN INDONESIA

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ABSTRACT

The COVID-19 pandemic has disrupted the supply chain of domestic pharmaceutical raw materials, where 95% of the fulfillment of raw materials relies on imports. Amid difficulties in meeting raw materials, the pharmaceutical subsector companies have become one of the sectors of choice for investors throughout 2020, in line with the sentiment of the COVID-19 pandemic. As one of the prima donnas' sectors during pandemic, financial reports presented by pharmaceutical sector should report the actual condition of the company. This study aims to empirically examine the differences in accrual earnings management before and after the COVID-19 pandemic in pharmaceutical sub-sector companies in Indonesia. To evaluate changes in accrual earnings management in the period before the COVID-19 pandemic, namely in 2019 and after the COVID-19 pandemic, namely in 2020, the Paired Sample T-test was used. The findings of this study show that there is no average difference between accrual earnings management before COVID-19 (Pre-test) and after COVID-19 (Post-test), indicating that COVID-19 has no impact on earnings management practices in the pharmaceutical sub-sector companies in Indonesia. The deteriorating global economic conditions caused by the COVID-19 pandemic do not necessarily encourage managers to carry out aggressive earnings management. The pharmaceutical sub-sector companies that have become the center of attention of investors during this pandemic, as a result the company's performance shown in the financial statements does not make managers aggressively try to manipulate their financial statements.

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INTRODUCTION

The World Health Organization designated Corona Virus Disease 2019 (COVID-19) as a global pandemic on Wednesday, March 11, 2020. The Coronavirus outbreak, which began in Wuhan, China at the end of December 2019, has stunned the world until today. The COVID-19 pandemic is caused by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). The virus spreads quickly, primarily through respiratory droplets from coughs or sneezes, infecting humans or animals and cause death (Ren et al., 2020). The quick spread of this virus has been attributed to the mobilization of the world's population, which has high connectivity. As a result, the whole world has been affected by the transmission of this Coronavirus.

At the end of 2020, a number of countries reported new cases of mutations from the Coronavirus. The new mutation of the Coronavirus is allegedly more dangerous than the old virus. Coronavirus belongs to the group of RNA viruses. RNA is a type of nucleic acid that characterizes viruses as living things. RNA viruses are easy to mutate. When the Coronavirus

infects a host body, its RNA replicates or reproduces (Maulana, 2021).

COVID-19 in Indonesia itself has undergone a mutation. Three new variants of the Coronavirus have been detected in Indonesia, namely B.1.1.7 (variant from England), B.1.617 (multiple mutations from India), and B.1.351 (variant from South Africa). The government has started a vaccination program to break the chain of the spread of the Coronavirus infection and suppress the number of COVID-19 cases, which is still increasing.

A total of 73.9 million doses of COVID-19 vaccine have entered Indonesia from various world vaccine manufacturers. The three vaccines include the Sinovac vaccine, AstraZeneca which has been used in the COVID-19 vaccination, and the newly arrived from Sinopharm. Sumartiningtyas (2021) explained that the first stage of the COVID-19 vaccine that came was produced by Sinovac, China, which sent 1.2 million doses of vaccine on December 6, 2020, followed by 1.8 million doses by the end of 2020, all of which are readymade vaccines.

Although the COVID-19 vaccination program has been running, the public must still be disciplined in implementing health protocols to prevent transmission of the Coronavirus. The use of masks outside the home is an obligation amid a pandemic like today. Another health protocol that needs to be adhered to is social distancing. Washing hands regularly is one of the most effective health routines for preventing COVID-19 transmission. Wash your hands for at least 20 seconds for the optimum benefits.

As of Sunday, March 23, 2021, data from Worldometers (2021) shows that the total number of confirmed COVID-19 cases worldwide is 167,028,316. The five countries with the highest order with the highest number of COVID-19 cases are the United States, India, Brazil, France, Turkey. Indonesia itself is ranked 19th.

The spread of the Coronavirus has resulted in a global health crisis and impacts the global economy. In 2020, the Indonesian economy grew by 2.07% less than in 2019 (Badan Pusat Statistik, 2021). China holds the most extensive export activity in the world (Yang & Ren, 2020). The focus and the central production of world goods concentrate in China. China is one of Indonesia's largest trading partners. The emergence of COVID-19 that infects China has brought China's trade activities in a negative direction. It impacts the flow and the world trade system so that it also has an impact on Indonesia.

One of the industrial sub-sectors that has been most affected by the COVID-19 pandemic is pharmaceuticals. The dependence of the Indonesian pharmaceutical industry on imported raw materials becomes apparent when it is realized that the majority of the raw materials used in the pharmaceutical industry are imported materials. Minister of Industry, Agus Gumiwang Kartasasmita said 95% of raw materials for medicine are still imported. Of course, COVID-19 has seriously disrupted the supply of raw materials from China. The total value reaches USD 2.5 billion to USD 2.7 billion per year. The largest is raw material imports from China, which account for 60% of total imports (Hamdani, 2020).

The pandemic has disrupted the supply chain of pharmaceutical raw materials because two countries providing pharmaceutical raw materials, namely China and India, are conducting regional quarantines. Therefore, transportation and logistics will be hampered due to road access restrictions. In addition, during the regional quarantine, many industries were not operating. For companies, the COVID-19 that hit the world could impact the scarcity of raw materials due to delayed deliveries.

Another contagion effect is a decrease in revenue and an increase in industrial costs. Restrictions on raw materials produced by China have caused world prices for the same goods to potentially soar. The high price of raw materials sourced from imports has delayed many business actors importing raw materials.

The pharmaceutical sub-sector stock has become one of the sectors of choice for investors throughout 2020 in line with the sentiment of the COVID-19 pandemic (Ulfah,

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2020). This happened because most pharmaceutical sub-sector companies managed to record an increasing net profit, as shown in Table 1. PT Merck Tbk was able to score a brilliant performance in the first semester of 2020. Merck's annual net profit surge reached 424.78%, from Rp6.12 billion in June 2019 to Rp32.12 billion in June 2020. PT Pyridam Farma Tbk posted a second-place increase in net profit after Merck Indonesia, which was 223% from Rp1.76 billion in June 2019 to Rp5.69 billion in June 2020. The third is PT Industri Jamu dan Farmasi Sido Muncul Tbk, which has a mainstay product "tolak angin". PT Industri Jamu dan Farmasi Sido Muncul Tbk was able to get a blessing amid the health crisis due to the COVID-19 pandemic. During the first semester of 2020, its net profit grew positively by 10.6%, from Rp374.1 billion in 2019 to Rp413.8 billion in 2020.

Table 1. Profit Growth of Several Pharmaceutical Sub-Sector Companies

Company Name	Semester 1 of 2019	Semester 1 of 2020
PT Merck Tbk	Rp6,12 billion	Rp32,12 billion
PT Pyridam Farma Tbk	Rp1,76 billion	Rp5,69 billion
PT Industri Jamu dan Farmasi Sido Muncul	Rp374,1 billion	Rp413,8 billion

Source: www.idx.co.id (2021)

Achieving profit is the primary goal of a company. Investors are attracted to invest in companies that generate profits continuously. Profit is a measure of the company's operating performance and success in achieving the goals set. If management's predetermined profit target is not successfully achieved, they will be motivated to disguise profits in the financial statements to make it look good (Azizah, 2017a).

Manipulating financial statements so that company profits are high is a way for management to attract investors. Earnings management is used by businesses to avoid declaring losses or to respond to prevailing economic conditions. Earnings management is defined as efforts performed by companies to maintain their positions and profits by manipulating financial data presented to third parties (Wang & Campbell, 2012).

Orazalin (2019), in his research, states that earnings management is a practice that aims to use accounting wisdom to achieve the level of accounting profit that you want to report. In addition, managers who cannot work well feel that their reputation is at stake so that the achievement of positive performance from other companies encourages managers to carry out earnings management. This is based on human nature, which is generally selfish and has limited thinking power regarding the perception of the future (bounded rationality).

The many obstacles faced by companies during the COVID-19 pandemic became a strong trigger for management to show their best performance because the performance quality of the company will impact their market value and affect the interest of investors to invest or withdraw their investment (Azizah, 2021), (Azizah et al., 2021).

Financial statements are used as an instrument of manager accountability to company owners to use resources and quantitative information for investment decision-making. The agency theory perspective explains that principals use financial tools to monitor their agents. Information asymmetry can be interpreted as a condition that indicates an imbalance in access to information between management and outsiders (Scott, 2015). This information asymmetry causes management to take advantage of information misalignment to benefit itself while also causing losses to other parties, such as biasing information relevant to investors. Azizah (2017a) proves that managers tend to act opportunistically, meaning that managers are more concerned with their own personal interests than increasing their company's value. Suppose incentives and rewards are only dependent on short-term financial performance as reported in financial statements; in that case, they are likely to encourage managers to engage in deviant behavior such as earnings management (Azizah, 2017b). A company's bonus scheme can incentivize managers to manipulate the company's net income

in order to maximize profits (Panjaitan & Muslih, 2019).

Earnings management practice is happening in Indonesia. Research by Romantis et al.(2020), Azizah, Bantasyam, et al.(2020), Majid et al.(2020), Azizah, Zoebaedi, et al.(2020), Azizah et al.(2019), Prasetyo et al.(2021), prove that managers in Indonesia tend to do earnings management. And it is interesting to study the pharmaceutical sector because the pharmaceutical sector shares have become one of the sectors of choice for investors throughout 2020, in line with the sentiment of the COVID-19 pandemic (Ulfah, 2020). Based on this explanation, the researcher is interested in conducting a study entitled "COVID-19: Accrual Earnings Management Practices in Pharmaceutical Companies in Indonesia". This study aims to empirically examine the differences in accrual earnings management before and after the COVID-19 pandemic in pharmaceutical sub-sector companies in Indonesia.

RESEARCH METHODS

All pharmaceutical sub-sector companies registered on the Indonesia Stock Exchange make up the study's population. Purposive sampling is used to conduct the selection. The following are the sample criteria:

- 1. The company belongs to the pharmaceutical sub-sector.
- 2. The company was consecutively listed on the Indonesia Stock Exchange in 2020, 2019, and 2018.
- 3. The company issued audited financial reports in 2020, 2019, and 2018.
- 4. Research data is presented in published financial reports.

The explanation of the variables and measurements used in this study are as follows:

1. COVID-19

COVID-19 has become an important concern in the medical field because of its rapid spread and potential to cause health system collapse and the variety of clinical manifestations in patients (Vollono et al., 2020). The period before COVID-19 and the period after COVID-19 will be the differentiating variables in this study. The period before COVID-19 (Pre-test) is 2019, while after COVID-19 (Post-test) is 2020. The COVID-19 pandemic issued by WHO is dated March 11, 2020 (WHO, 2020) and is used as the basis for the period after COVID-19, which is in 2020. And 2019 is the period before COVID-19.

2. Earnings Management

In this research, earnings management is accrual earnings management. This study utilizes discretionary accruals to proxy earnings management using the Modified Jones model (Dechow et al., 1995). The value of discretionary accruals in this study will be absolute because this study's concern is the amount of accrual earnings management. The formula of discretionary accrual is:

$$TACC_{it} = EBXI_{it} - CFO_{it} \dots \dots \dots \dots (1)$$

$$\frac{TACC_{it}}{TA_{i,t-1}} = \alpha_1 \left(\frac{1}{TA_{i,t-1}}\right) + \alpha_2 \left(\frac{\Delta REV_{it}}{TA_{i,t-1}}\right) + \alpha_3 \left(\frac{PPE_{it}}{TA_{i,t-1}}\right) + e \dots \dots \dots (2)$$

Then coefficient estimates from equation (2) are used to estimate the *non-discretionary accruals* (NDACC)

$$NDACC_{it} = \alpha_1 \left(\frac{1}{TA_{i,t-1}}\right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i,t-1}}\right) + \alpha_3 \left(\frac{PPE_{it}}{TA_{i,t-1}}\right) \dots \dots \dots (3)$$

Finally, discretionary accrual (DACC) can be calculated as follows:

$$DACC_{it} = \left(\frac{TACC_{it}}{TA_{i,t-1}}\right) - NDACC_{it} \dots \dots \dots (4)$$

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Notes:

EBXI = Earnings before extraordinary items and discontinued operations
CFO = Operating cash flows (from continuing operations) taken from the

statement

TA = Total assets REV = Revenues

REC = Accounts receivable

PPE = Gross value of property, plant, and equipment

Hypothesis testing method in this study is if the residuals were normally distributed, a Paired Sample T-test was employed to evaluate changes in accrual earnings management before the COVID-19 pandemic and after the COVID-19 pandemic, using the following criteria, first, determine the level of significance (α) which is 5%. Second, determine the criteria for acceptance/rejection of H₀, by looking at the significant values, if significant < 5%, then Ho is rejected or Ha is accepted. If significant > 5%, then Ho is accepted or Ha is rejected.

However, if it does not pass the normality test, then to test differences in accrual earnings management in the period before the COVID-19 pandemic and after the COVID-19 pandemic, the Wilcoxon Test is used by using the following criteria, first, determine the level of significance (α) which is 5%. Second, determine the criteria for acceptance/rejection of H₀, by looking at the significant values, if significant < 5%, then Ho is rejected or Ha is accepted. If significant > 5%, then Ho is accepted or Ha is rejected.

RESULTS AND DISCUSSION

All pharmaceutical sub-sector companies registered on the Indonesian stock exchange (IDX) are sampled in this study. Until 2020, there are eleven (11) pharmaceutical sub-sector companies

Table 2. Pharmaceutical Sub-Sector Companies Listed on IDX Until 2020

No.	Stock Code	Company Name	IPO Date
1	DVLA	Darya-Varia Laboratoria Tbk.	11-Nov-1994
2	INAF	Indofarma Tbk.	17-Apr-2001
3	KAEF	Kimia Farma Tbk.	04-Jul-2001
4	KLBF	Kalbe Farma Tbk.	30-Jul-1991
5	MERK	Merck Tbk.	23-Jul-1981
6	PEHA	Phapros Tbk.	01-Jan-2011
7	PYFA	Pyridam Farma Tbk	16-Oct-2001
8	SCPI	Merck Sharp Dohme Pharma Tbk.	08-Jun-1990
9	SIDO	Industri Jamu dan Farmasi Sido	18-Dec-2013
10	SOHO	Soho Global Health Tbk.	08-Sep-2020
11	TSPC	Tempo Scan Pacific Tbk.	17-Jun-1994

Source: www.idx.co.id (2021)

Based on the predefined sample selection criteria, there are ten companies in the pharmaceutical sub-sector registered in a row for three years. The Soho Global Health Tbk company was only listed on the Indonesia Stock Exchange on September 8, 2020, so the company was excluded from the sample of this study. The sample selection criteria are shown

Table 3. Sample Selection Criteria

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Description	Number of Companies		
Pharmaceutical sub-sector companies listed in a row in	10		
2020, 2019, 2018			
Incomplete data	-		
Sample companies	10		

Source: www.idx.co.id (2021)

Normality testing in this study is done using the Shapiro Wilk test. The Shapiro Wilk test is generally used for small samples. In Table 4, the results of the Shapiro Wilk test are presented using a significance level of 0.05:

Table 4. Normality Test Results

Earnings Management	Shapiro-Wilk		
	Statistic	df	Sig.
Pre Test	0,964	10	0,827
Post Test	0,919	10	0,350

The normally distributed residuals are achieved in the Shapiro Wilk test if the value of Sig. is greater than 0.05. In Table 4 above, it is known that the value of Sig. for the period group before COVID-19 (Pre Test) is 0.827 and the value of Sig. for the post-COVID-19 period group (Post Test) is 0.350. It can be concluded that the residuals for the Pre Test group and the Post Test group are normally distributed.

Based on the normality test, the result is that the residuals are normally distributed so that the Paired Sample T-test can be done. The Paired Sample T-test is used to see if there is a difference in the average of two paired or related samples (groups) (Ghozali, 2015). The Paired Sample T-test results are shown in Table 5 below:

> Table 5. Hypothesis Testing Results Post Test-Pre Test

Conclusion Sig. (2-tailed) 0,364 Ha rejected

Based on the Paired Sample T-test output table above, it is known that the value of Sig. (2-tailed) is 0.364 > 0.05, so that Ha is rejected, and Ho is accepted. So, it can be concluded that there is no difference in average between accrual earnings management before the COVID-19 period (Pre Test) and the period after COVID-19 (Pos Test), which means that there is no effect of COVID-19 on earnings management practices carried out in the pharmaceutical subsector companies.

In 2019, before the COVID-19 pandemic, a number of analysts assessed that the pharmaceutical sector had good potential in that year. This is because the policy direction is to increase human resources, and the 2019 APBN health budget is added 10.8% or a total of Rp. 123.1 trillion for health allocation (Rahayu and Dewi, 2019). With the addition of the budget, the community will have access to health services, the direct impact of which is the need for drugs will also increase.

Table 6. Net Profit Growth of the Current Year of Pharmaceutical Sub-Sector Companies

No	Stock	Company Name	Net Profit of 2019	Net Profit of 2020
	Code	1 3		
1.	DVLA	Darya-Varia Laboratoria	Rp221.783.249.000	Rp162.072.984.000
		Tbk.		
2.	INAF	Indofarma Tbk.	Rp7.961.966.026.000	Rp30.020.709.000
3.	KAEF	Kimia Farma Tbk.	Rp15.890.439.000	Rp20.425.756.000
4.	KLBF	Kalbe Farma Tbk.	Rp2.537.601.823.645	Rp2.799.622.515.814
5.	MERK	Merck Tbk.	Rp78.256.797.000	Rp71.902.263.000
6.	PEHA	Phapros Tbk.	Rp102.310.124.000	Rp48.665.149.000
7.	PYFA	Pyridam Farma Tbk.	Rp9.342.718.039	Rp22.104.364.267
8.	SCPI	Merck Sharp Dohme	Rp112.652.526.000	Rp218.362.874.000
		Pharma Tbk.		
9.	SIDO	Industri Jamu dan Farmasi	Rp807.689.000.000	Rp934.016.000.000
		Sido Tbk.		
10.	TSPC	Tempo Scan Pacific Tbk.	Rp595.154.912.874	Rp834.369.751.682

Source: www.idx.co.id (2021)

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When the COVID-19 pandemic hit Indonesia in 2020, Minister of Finance Sri Mulyani said that many industrial sectors were considered to be losing money. Still, some industries could benefit from this Covid-19 pandemic, namely pharmaceuticals (Wiguna and Fardaniah, 2020). The pharmaceutical sector is one of the lucky sectors because it has received positive sentiment. After all, the pharmaceutical industry is considered to be able to support primary needs during the handling of the Covid-19 Pandemic (Nurfitriyani, 2020).

Profit growth in pharmaceutical sub-sector companies in 2019 and 2020 can be seen in Table 6. In 2020, it appeared that six companies experienced an increase in profits when compared to 2019. Based on Table 6 above, six (6) companies recorded positive profit growth in 2020. The economic crisis conditions caused by the COVID-19 pandemic did not necessarily encourage managers who did not achieve positive profit growth to carry out earnings management. The average value of accrual earnings management also did not change significantly in 2020. It can be seen in Table 7, on average in 2019, the value of earnings management carried out by the pharmaceutical sub-sector companies that were sampled in this study (in absolute terms) was 0.07177. In 2020, when the COVID-19 pandemic occurred, the average accrual earnings management value (in absolute terms) was 0.05730.

Table 7. The Average Value of Accrual Earnings Management (in absolute terms) in Pharmaceutical Sub-Sector Companies

Earnings Management	Year 2019	Year 2020
Mean	0,07177	0,05730

Pharmaceutical companies are essential to the community and will continue to develop product research to fulfill the mission to nourish the Indonesian people. This will undoubtedly encourage investors to invest their shares in these pharmaceutical companies. The fact that the pharmaceutical sub-sector companies have become the center of attention of investors during these pandemic forces manager to be careful in managing their companies. Besides, managers' awareness of quality accounting information plays a vital role in facilitating efficient investments (Linhares et al., 2018). As a result, the company's performance shown in the financial statements does not make managers aggressively try to manipulate their financial statements. In addition, earnings management cases that have been revealed in several pharmaceutical sub-sector companies, such as what happened in 2001 at PT Kimia Farma Tbk, have resulted in an inflated net income in the financial statements of December 31, 2001. The former director of PT Kimia Farma Tbk. for 1998-2002 was sentenced to pay a fine of Rp 1 billion to be deposited into the state treasury. Bapepam's findings at that time had become an important whip for company managers not to lose their dignity and maintain investors' confidence to return to investing in pharmaceutical sub-sector companies.

CONCLUSIONS AND SUGGESTION

The pandemic of the Covid-19 virus situation in almost all over the world, including Indonesia today, has a tremendous impact. The current conditions paralyze various activities, ranging from business, economics, education, and many others. The effect on the company's financial performance is no exception. Almost all corporate sectors have been affected by this pandemic, which has caused financial performance to weaken. However, several companies in the health sector, especially pharmaceuticals, experienced a surge. Several pharmaceutical companies listed on the IDX recorded positive profit growth in 2020 compared to 2019.

Despite the fact that the pharmaceutical industry gets 60% of its raw materials from China, 30% from India, and 10% from other countries, the supply chain for pharmaceutical raw materials has been disrupted, resulting in scarcity of raw materials due to delayed

deliveries and soaring raw material prices on a global scale, putting pressure on the industry. However, this can be offset by increasing public needs and demand for health products, especially medicines, body supplements, and health equipment which are the products of these pharmaceutical companies.

In addition, the government has encouraged pharmaceutical companies to develop domestic raw materials. The Ministry of Industry continues to promote local resources as raw materials for the domestic pharmaceutical industry. Apart from the fact that Indonesia is rich in biodiversity, this step will also spur import substitution and realize the independence of the national drug raw material industry. The COVID-19 pandemic, which began in early 2020, increased the demand for vitamins, supplements, and herbal medications to boost endurance in general, resulting in significant growth for the pharmaceutical industry involved in this sector.

The global COVID-19 pandemic has made 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 & Brahmayanti, 2021). In 2020, the pharmaceutical sub-sector companies continued to carry out accrual earnings management and even decreased compared to 2019.

The results of this study prove that there is no difference in accrual earnings management before the COVID-19 pandemic and after the COVID-19 pandemic, so it can be concluded that there is no effect from the COVID-19 pandemic on accrual earnings management practices in pharmaceutical sub-sector companies in Indonesia. The pharmaceutical sector, which has been in the spotlight of investors during the COVID-19 pandemic, has encouraged managers not to engage in aggressive earnings management activities and make inappropriate representations of the economic phenomena of companies affected by this pandemic.

This research cannot be separated from its limitations, one of which is that it primarily focuses on research on the pharmaceutical sub-sector companies. Moreover, it only focuses on accrual earnings management practices.

This study's findings show no differences in accrual earnings management practices in pharmaceutical sub-sector companies. However, it is worth looking into the underlying perspective of managers doing earnings management in pharmaceutical sub-sector companies, given the high level of attention from investors and the public in general in this sector during the COVID-19 pandemic.

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