

## EARNINGS MANAGEMENT PRACTICES IN INDONESIA: BEFORE AND DURING COVID-19

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**Abstract:** The purpose of this study is to compare earning management practices in manufacturing company before and during COVID-19 pandemic. The study use 495 manufacturing companies listed on the Indonesian Stock Exchange from 2017 to 2022 as sample. Earning management are compared between 2017-2019 (prepandemic year) and 2020-2022 (pandemic year). Wilcoxon Signed Ranks Test are performed to compared between prepandemic year and pandemic year. The finding show that earnings management before COVID-19 is different from earning managements during COVID-19. There was a significant increasing discretionary accruals from 2017 to 2022, suggesting the firms engaged in more income increasing strategy to reported earnings at the pandemic year. The existence of the COVID-19 pandemic motivate management to do the earnings management. This study explores the consequences of the pandemic to earning management activity also enriches accounting research on economic crisis.

**Keywords:** Indonesia, Earning Management, Prepandemic, and Pandemic COVID-19.

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### INTRODUCTION

Earnings management is a specific behavior undertaken by management during the financial reporting process to gain personal benefit. According to Setiawati & Na'im (2000), one factor that can be caused a financial statements less credible is earnings management. Earnings management distort financial statements, undermining users' trust as the number in the financial reports are manipulated. Earnings management can be viewed from two perspectives: financial reporting and contractual perspectives (Scott, 2015). In a financial reporting perspective, managers may engage in earnings management to avoid losses in financial statements or to meet analysts' earnings forecasting. The purpose of earnings management is to avoid reputational damage and strong negative stock price reactions by meeting investor expectations. Additionally, companies may overstate impairments or emphasize profit constructs other than net income, such as "pro-forma" earnings (Scott, 2015).

Kazemi (2022) elaborates on several aspects of the definition of earnings management that need discussion. First, there are many ways for managers to make judgments about the residual value of long-lived assets, pension obligations, other post-retirement benefits, deferred taxes, bad debt write-offs, and asset impairments. Managers must also choose acceptable accounting methods for reporting the same financial transactions, such as the straight-line or depreciation method or valuation methods like LIFO, FIFO, or weighted average. The selection of accounting methods is essential, for instance, in estimating various future economic events, such as the useful life and residual value of assets (Kazemi, 2022).

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The second point, Kazemi (2022) highlights the purpose of earnings management as an effort to mislead certain stakeholder groups regarding the company's economic performance. This may occur if managers have access to unavailable information for external stakeholders, making earnings management less transparent to external stakeholders. Finally, Kazemi (2022) emphasizes that management's use of discretion in financial reporting involves both costs and benefits. The cost come from misallocation potential resource due to earnings management, while the benefits include the improvements in credible communication by management of private information to external stakeholders, enhancing resource allocation decisions. In practice, earnings management phenomenon has been conducted by several companies even before the COVID-19 pandemic.

Some companies in Indonesia suspected of engaging in earnings management include PT Kimia Farma, PT Ancora Mining Service (AMS), PT Bumi Resources Tbk (BUMI), and PT Garuda Indonesia Tbk. PT Kimia Farma reported high net income from inflated sales and inventory in 2001. Earnings management was also practiced by PT Ancora Mining Service (AMS) in 2011. PT Bumi Resources Tbk (BUMI) was suspected of earnings management in the financial reports, causing losses to the state amounting to US\$ 620.49 million. Earnings management was also practiced by PT Garuda Indonesia Tbk, which in 2018 reported a net profit of US\$ 809.85 thousand, contrasting with the US\$ 216.58 million loss in 2017. External factors, such as the pandemic, may also influence companies to engage in earnings management.

The economic conditions due to the pandemic made the quality of accounting information and unreliable accounting method choices more appealing to companies for seeking the benefits immediately (Ryu & Chae, 2022). Previous studies have tested whether companies managed earnings differently in the year before and during the pandemic. On one hand, companies may face declining earnings pressure caused by the pandemic, motivating them to engage in earnings management. This is consistent with Aljughaiman et al. (2020), who found that companies were more likely to manage earnings during the pandemic period. On the other hand, companies might use the pandemic as an opportunity for a "big bath", this can be meaning as they could report significant losses during the pandemic year to boost earnings in subsequent years (Liu & Sun, 2022). Therefore, it remains unclear how companies will manage earnings during the pandemic.

According to data from the Ministry of Industry (2021), the manufacturing industry contributed the most to the increase in Indonesia's economic growth, which reached 7.07% in the second quarter of 2021, recording the highest source of growth. The manufacturing sector recorded 6.91% growth, despite facing pressures from the COVID-19 pandemic. Minister of Industry, Agus Gumiwang (2021), stated that despite the pandemic pressures since its arrival in Indonesia on 2020, the manufacturing sector contributed the largest to the national Gross Domestic Product (GDP) in the second quarter of 2021, amounting to 17.34%. The top five GDP contributors in this period were the food and beverage industry at 6.66%, the chemical, pharmaceutical, and traditional medicine industry at 1.96%, the metal goods, computers, electronics, optics, and electrical equipment industry at 1.57%, the transportation equipment industry at 1.46%, and the textile and apparel industry at 1.05%.

The purposes of this research is to determine whether there are differences in earnings management before and during the COVID-19 pandemic in manufacturing

companies. This study contributes by providing insight into managerial behavior in reporting business activities before and after the COVID-19 pandemic. Several studies on earnings management have been conducted, including the studies by Dong et al. (2020), Guggenmos & Van der Stede (2020), Kałdoński et al. (2020), Chen & Hung (2021), Griffin et al. (2021), Hoitash & Mkrtychyan (2022), and Fang et al. (2022). Earnings management research related to the COVID-19 pandemic includes studies by Ryu & Chae (2022), who investigated distribution and service companies in Korea to maintain reliable accounting quality and information despite economic changes after the COVID-19 pandemic. Ryu & Chae (2022) also discussed earnings management before and during the COVID-19 pandemic but focused only on the distribution and service sectors in Korea. Research by Ulfah et al. (2022) focused on the influence of the board of directors on earnings management before and during the COVID-19 pandemic with an observation period of 2019-2020. Sekaranti & Juliarto (2022) tested the manufacturing industry with a research period of 2019-2020. Ramdani et al. (2022) observed the manufacturing industry in the tourism, hotel, restaurant, and retail subsectors for the period of 2019-2020. However, these previous studies have not discussed changes in earnings management before and during the COVID-19 pandemic from 2017 to 2022 in Indonesian manufacturing companies and the strategic patterns taken by companies to implement earnings management, so this is dedicated to fill this gap.

This study differs from previous research as it uses data from all manufacturing companies in Indonesia and a longer research period, covering the pre-pandemic years (2017-2019) and the pandemic years (2020-2022). Extending the research period is expected to provide a more accurate depiction of actual conditions and illustrate the patterns of earnings management before and during the COVID-19 pandemic. The periods are based on Presidential Decree No. 12 of 2020 and Presidential Decree No. 17 of 2022, with the pre-COVID-19 period determined as 2017-2019 and the COVID-19 period as 2020-2022. The sample includes all manufacturing companies due to the sector's 6.91% growth despite the pandemic pressures (Ministry of Industry, 2021).

Agency theory is a theory that explains the relationship between shareholders and company management (Jensen & Meckling, 1976). Principal as the shareholders appoints the agents to do the task, operational, and transfer the decision making authority. Agents are identified as representative of principals in the company. If the principals and agent have a different interest, the conflict can be raising and if both parties maximize utility, there is a reason that the agents does not always behave in accordance with the interests of the principals. In addition, agents have more information about the condition of the company than principal and it can make asymmetric information. The asymmetric information allow agents to manipulate reporting to maximize profits. The principals can make an incentives for the agent to act as the principal wants or a monitoring cost to measure the agent performances.

Earning management is a specific behavior of managers by choosing accounting policies that applied to achieve certain goals. The strategy of earnings management carried out depends on the condition of the company, it can be increasing profits or by decreasing profits. Scott (2015) explain that the patterns and strategies used by managers in earning management can be divided as taking a bath, income minimization, income maximization, and income smoothing. The taking a bath pattern usually appears when a company is experiencing pressure, challenges, or restructuring. Income minimization is a pattern that is carried out by eliminating assets and intangible

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assets and charging costs to R&D. While the income maximization strategy is usually carried out by increasing profits in the financial statements. Income smoothing from a contract theory perspective, managers who are more risk averse prefer less varied bonuses when other things are equal.

In the concept of agency theory, earnings management is explained by the existence of opportunistic behavior of managers. Managers who have the desire to carry out moral hazard use the power they have to carry out earnings management on the financial position report during a pandemic or natural disaster (Garfatta, 2023). The manager's strategy for managing financial statements is to serve their own interests, not to serve the interests of the principal (Garfatta, 2023). According to Garfatta (2023), previous research on earnings management during a crisis shows three different perspectives. The first perspective argues that companies manage their earnings upwards during a crisis. Managers are under high financial pressure because of their company's low profitability (Garfatta, 2023). The second perspective is that companies lower their profits during a crisis so that they can renegotiate better conditions for debt restructuring (Asquith et al., 1994 in Garfatta, 2023). The third perspective is that when compared to the expansion period, the recession period is considered less favorable for earnings management practices (Garfatta, 2023).

The World Health Organization (WHO) officially declared the COVID-19 epidemic became a worldwide pandemic on March 11, 2020 (Cucinotta & Vanelli, 2020). COVID-19 is an unprecedented event that has caused an economic crisis for decades. Companies face new challenges in dealing with risks due to the COVID-19 pandemic. COVID-19 has a significant impact on earnings management practices in various companies because companies tend to engage in earnings management more during the pandemic compared to the pre-pandemic period (Aljughaiman et al., 2020). Companies face downward pressure on profits due to the pandemic, which motivates them to engage in earnings management that increases revenue (Liu & Sun, 2022). On the other hand, companies use the pandemic as an opportunity to report large losses during the pandemic to increase profits in the coming year.

Agency theory explains the relationship between principal and agent where the principal hires an agent to manage the company on their behalf. In an agency relationship, the agent has more information about the company's operations than the principal, increasing the opportunity for the agent to use this information to manage earnings. One strategy used by managers to obtain high profits is to change the accounting method, commonly known as earnings management, so that their performance is viewed positively in optimizing the company's income (Angelina & Lindrawati, 2022). According to Liu & Sun (2022), earnings management can be viewed by an activity that increases or decreases income. During the COVID-19 period, companies tend to experience a decrease in profits, therefore management uses accounting policies to avoid this decrease in profits, resulting in higher earnings management than before the COVID-19 pandemic (Liu & Sun, 2022).

On the other hand, management can take advantage of the pandemic year by doing more earnings management by lowering revenues to gain big profits in the coming year. Ryu & Chae's (2022) research shows that distribution and service companies engage in more earnings management during the post-COVID-19 period compared to the pre-COVID-19 period. Ulfah et al.'s (2022) research found that board size was less effective in normal periods without the COVID-19 pandemic. Sekaranti & Juliarto (2022)

found that the COVID-19 pandemic did not make any difference in earnings management practices but reduced the usefulness of the information value of the relevance of earnings value.

Based on previous literature reviews, it can be assumed that there are differences in earnings management before and during the COVID-19 pandemic. Therefore, the following hypothesis can be formulated by:

H1: There are differences in earnings management before and during COVID-19

## METHODS

This research is quantitative study that focuses on earnings management. It involves collecting data, interpreting the data, and drawing conclusions based on the results. This study used secondary data sources were taken from Indonesia Stock Exchange (IDX) on manufacturing sector from 2017-2022. The research year taken from 2017-2019 for the year before the covid-19 pandemic and 2020-2022 for the year during the covid-19 pandemic.

**Table 1. Operazonalization Variables**

Variable	Measurement	Scale	Source
Earning Management	$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$	Ratio	Dechow et al. (1995)

The data collection technique used is the documentation technique because collecting data from the company's financial reports that have been officially recorded or published, in Annual Report. The population of this research is manufacturing sector taken from IDX. While the sampling technique used in this study is purposive sampling, in which the sample is determined based on the following criteria:

1. Manufacturing companies listed on the IDX during the 2017-2022 period.
2. Manufacturing companies that have published complete financial statements for the 2017-2022 period.

From the purposive sampling methods, there are 495 manufacturing companies listed on the Indonesian Stock Exchange from 2017 to 2022 as sample.

The analysis technique for this research consists of descriptive statistical tests, normality test, Wilcoxon signed rank test for the hypothesis testing. In this research, data analysis was supported ny the SPSS 26 program. Descriptive statistics were employed to gain a general understanding of the data, while the normality test was demonstrate the distribution of data. Meanwhile the data is not normally distributed, further testing was conducted using the Wilcoxon signed rank test to test the hypothesis.

The earnings management variable in this study is measured using the Modified Jones model through discretionary accruals (DA). The Modified Jones model is an enhancement of the Jones (1991) model, designed by Dechow et al. (1995) to reduce the likelihood of bias in testing, especially in calculating total accruals by separating non-discretionary accruals and discretionary accruals. The Modified Jones model is a time series model and statistically superior to other models, with good accuracy in detecting earnings management (Abdurahim, 2015). DA is measured as follows:

1. Calculating the company's total accruals:

$$TA_{it} = N_{it} - CFO_{it}$$

2. Estimating total accruals using the ordinary least squares (OLS) or multiple linear regression equation:

$$\frac{TA_{it}}{A_{it-1}} = \beta_1 \left( \frac{1}{A_{it-1}} \right) + \beta_2 \left( \frac{\Delta REV_{it}}{A_{it-1}} \right) + \beta_3 \left( \frac{PPE_{it}}{A_{it-1}} \right) + \varepsilon$$

3. Calculating nondiscretionary accrual  $NDA_{it}$

$$NDA_{it} = \beta_1 \left( \frac{1}{A_{it-1}} \right) + \beta_2 \left( \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} \right) + \beta_3 \left( \frac{PPE_{it}}{A_{it-1}} \right)$$

4. Calculating discretionary accrual ( $DA_{it}$ )

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$$

Explanation:

Ta it	: Total accruals of company i in year t
Nit	: Net income after tax of company i in year t
CFO it	: Total cash flow from operating activities of company i in year t
A it-1	: Total assets of company i in year t-1
$\Delta REV_{it}$	: Revenue change of company i from year t-1 to year t
PPE it	: Gross Property, Plant, and Equipment of company i in year t
NDA it	: Non-discretionary accruals of company i in year t
$\Delta REC_{it}$	: Accounts receivable change of company i from year t-1 to year t
$\beta_{1,2,3}$	: Regression coefficients
$\varepsilon$	: error

## RESULTS AND DISCUSSION

The population in this study consists of manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2017-2022 period. Based on the purposive sampling technique, a sample of 495 companies was obtained.

**Table 2. Descriptive Statistics Results**

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
EM (before)	495	-0,69721	2,03022	0,00645	0,13847
EM (during)	495	-71,9412	69415,83786	138,20318	3120,10578

Source: SPSS output processed (2024)

Table 2 shows that the average EM before the pandemic was 0.00645, while the average EM during the pandemic was 138.20318. Therefore, it can be concluded that earnings management by companies increased by 138.19673 during the COVID-19 pandemic.

**Table 3. Normality Test**

Variable	Sig	Decision
EM (before)	0,00000	Data not normally distributed
EM (during)	0,00000	Data not normally distributed

Source: SPSS output processed (2024)

Table 3 explains that the EM data before and during COVID-19 were not normally distributed, as they have a significance level below 0.05. Since the data is not normally distributed, further testing was conducted using the Wilcoxon signed rank test.

**Table 4. Wilcoxon Signed Rank Test**

		N	Mean Rank	Sum of Ranks
Before – During COVID-19	Negative Ranks	182 <sup>a</sup>	171.35	31186.00
	Positive Ranks	313 <sup>b</sup>	292.57	91574.00
	Ties	0 <sup>c</sup>		
	Total	495		

Source: SPSS output processed (2024)

Table 4 shows that 182 samples indicate that earnings management during the COVID-19 pandemic was lower than earnings management before the pandemic. The occurrence of earnings management practices can be determined by observing the value of Discretionary Accruals (DA). A positive DA value indicates that earnings management is occurring with an income-increasing pattern. Conversely, a negative DA value means that earnings management is occurring with an income-decreasing pattern.

On the other hand, 313 samples indicate that earnings management during the COVID-19 pandemic was higher than before. Based on these results, it can be seen that more samples experienced an increase in earnings management during the COVID-19 pandemic than before the pandemic. This indicates that the level of earnings management during the pandemic was significantly higher than before the COVID-19 pandemic.

**Table 5. Wilcoxon Signed Rank Test: Test Statistics**

Description	Sig. (2-tailed)	Significance	Conclusion
EM (Before)- EM (during)	0,000	Significant	Different

Source: SPSS output processed (2024)

Table 5 shows that the significance level of EM is 0.000, which is below 0.05, providing evidence of a significant difference between earnings management before and during COVID-19.

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## Discussion

Based on hypothesis testing, there is a difference in earnings management before and during COVID-19 among manufacturing companies listed on the IDX during 2017-2022. Therefore, the hypothesis explaining that there is a difference in earnings management before and during COVID-19 is accepted. From the descriptive statistical test results, it can be concluded that earnings management before COVID-19 had an average value close to zero, indicating that earnings management practices before COVID-19 were not very significant or were stable. Additionally, the standard deviation of earnings management before COVID-19 shows that the variation in earnings management between companies was not significant during this period. Meanwhile, earnings management during COVID-19 had a much higher average value of 138.20318, indicating a significant increase in earnings management practices during the pandemic. The standard deviation of earnings management during COVID-19 was also large, indicating high variation among companies during the COVID-19 pandemic period. This suggests that COVID-19 had a significant impact on the variation in earnings management practices during the pandemic. The Wilcoxon signed rank test also shows that earnings management during COVID-19 was significantly higher than before COVID-19, with 313 company samples having positive earnings management values.

Earnings management conducted during COVID-19 followed an income-increasing pattern, as indicated by the higher average discretionary accruals (DA) compared to earnings management before COVID-19. This finding is supported by Lassoued & Khanchel (2021), who found in their study of 2,031 companies listed on the European Stock Exchange that companies were more likely to engage in earnings management during the COVID-19 pandemic than before the pandemic. The COVID-19 pandemic motivated managers to engage in income-increasing practices to alleviate the impact of the pandemic in the perspective of investors and other stakeholders. Additionally, this finding is supported by research from Angelina & Lindrawati (2022), which showed an increase in earnings management during COVID-19 as companies sought to demonstrate good performance despite the pandemic and economic instability in Indonesia. Earnings management was carried out to conceal the actual condition of the company so that it would be perceived as performing well by investors.

## CONCLUSION

This study is to compare earning management practices in manufacturing company before and during COVID-19 pandemic. The research results demonstrate that there was a different practical in earnings management before and during COVID-19, with earnings management during the pandemic being higher than before. COVID-19 caused economic losses and business environment challenges in the manufacturing industry, leading to uncertainty about the sustainability of companies, prompting them to engage in earnings management to maintain their performance in the perspective of investors. Future research is expected to include other variables that may influence earnings management and expand the scope to other industry sectors to provide a broader picture of the impact of the COVID-19 pandemic on other corporate sectors in Indonesia. Additionally, future research could use post-pandemic data to assess how earnings management behavior patterns were affected after COVID-19.

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