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Analysis of Financial Performance Before and After the Covid Pandemic (Case Study on the Oil Palm Plantation Industry Listed on the Indonesia Stock Exchange)

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ABSTRACT

This research aims to examine trends and differences in the financial performance of palm oil companies listed on the Indonesia Stock Exchange, using Current Ratio, Quick Ratio, Debt to Asset Ratio, Debt to Equity Ratio, Net Profit Margin, Gross Profit Margin, Operating Profit Margin, Return on Assets, Return on Equity, Total Asset Turnover, and EBITDA Margin before, during, and after the COVID-19 pandemic. The research employs a descriptive analysis with a quantitative approach. The sample selection utilized a purposive sampling method, and the analytical methods include financial ratio analysis, trend analysis, and mean difference analysis (Paired Sample t-test). The findings reveal significant differences in financial performance before and after the pandemic, particularly in CR, QR, NPM, GPM, OPM, ROA, and ROE ratios based on formula calculations. However, statistical testing using IBM SPSS 26 indicated no significant differences across all financial ratio indicators.

Introduction

The wealth and glory of plantations in the archipelago has been known for a long time and has a long history in the development of the Indonesian nation. As the world's largest palm oil producer, the palm oil industry has created jobs for 16 million people, either directly or indirectly (Limanseto, 2021). In 2019, the area of oil palm plantations in Indonesia is estimated to reach 14.46 million hectares, which is almost 50 times more than in previous years (Directorate General of Plantations, 2019). The following is attached figure 1. the development of the area and production of Indonesian oil palm plantations in the 2019-2022 period.

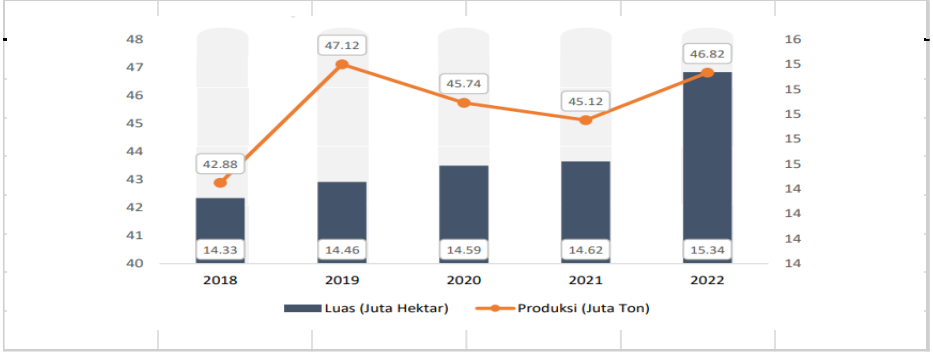


Figure 1. Development of Area and Production of Indonesian Oil Palm Plantations 2018 - 2022
Source: Central Statistics Agency, 2022

In figure 1. also explained the trend of palm oil production from 2018-2019 of 42.88 MT to 47.12 MT respectively. In 2020-2021, it decreased to 45.74 and 45.12, respectively, and increased again in 2022 to reach 46.82 million. In line with the development of the area of palm oil land, which has increased significantly, the palm oil industry has a role in Indonesia's economic development, especially in export activities (InfoSawit, 2023). According to an article from Dewi (2023), Indonesia produces 59% of the world's total palm oil production with an average of 45.5 million/MT per year. Reporting from the Central Statistics Agency (2023), in 2022 Indonesia exported CPO and its derivative products as much as 95.38 percent of Indonesia's total CPO exports, of which the main export destinations of Indonesian palm oil are India, Italy, Malaysia, Kenya, and the Netherlands attached to Figure 2. Indonesia's CPO export volume in the 2018-2022 period according to the Central Statistics Agency (2023).

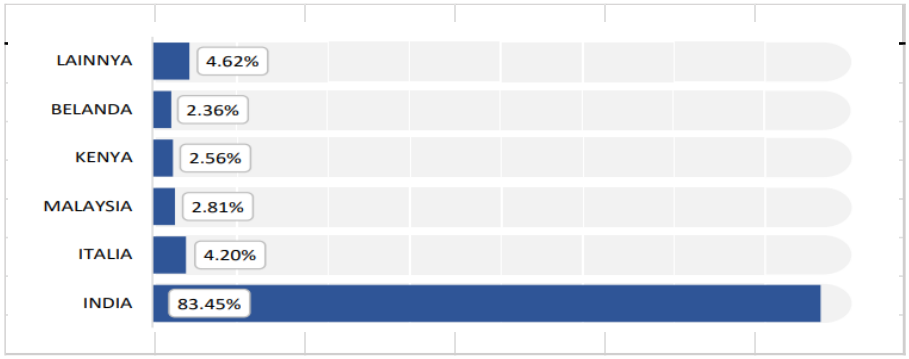


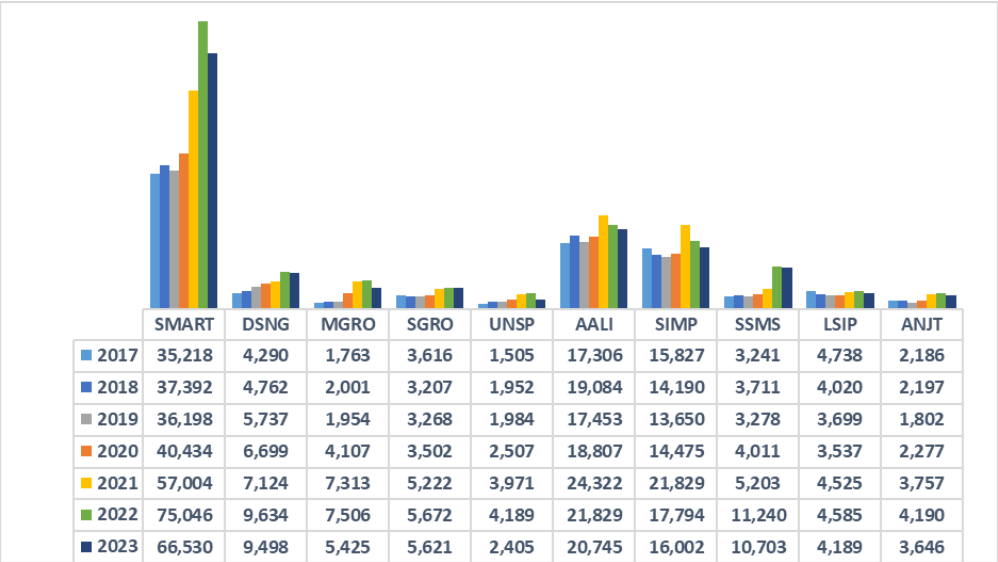
Figure 2. Indonesian CPO Export Volume for the Period 2018 - 2022
Source: Central Statistics Agency, 2022

In recent years, palm oil has become a hot topic for the world community (Indonesia, 2023). Palm oil is very beneficial for the food industry to the chemical industry (Winston, 2024). Quoted from a book entitled Indonesian Palm Oil Facts (2010), fresh fruit bunches or often abbreviated as FFB can produce raw materials to make food products, cosmetics, medicines similar to biodiesel fuel. The diversity of benefits makes oil palm have an important role in daily life, especially during the Covid-19 pandemic (BPDPKS, 2020).

On March 2, 2020, the findings of Covid-19 cases were submitted directly by President Joko Widodo (Nuraini, 2020). Research by Salim et al. (2022) said that the Covid-19 pandemic had an impact on stock investment due to declining financial performance. The Covid-19 pandemic has demanded many changes in the industrial sector, including the plantation industry, especially palm oil because it is forced to be more effective and efficient to meet the tight competitiveness (Suryana et al., 2020). The palm oil industry must be able to face increasingly competitive market conditions (Gapki, 2023). In line with increasingly competitive market conditions, the palm oil industry is required to minimize production costs but not forget the quality of production so that it can still compete in the national market or global market (BPDPKS, 2020).

According to research conducted (Nussy et al., 2022) explained the positive impact of income and output during the Covid-19 pandemic, one of which is the palm oil industry

which can be used for the production of medicines. Initial data obtained by the researcher from the results of observation that there are several palm oil companies listed on the Indonesia Stock Exchange (IDX, 2024) palm oil industry that has revenue with an increasing trend category during the Covid-19 pandemic, the researcher presents in Figure 3. as follows:



	SMART	DSNG	MGRO	SGRO	UNSP	AALI	SIMP	SSMS	LSIP	ANJT
2017	35,218	4,290	1,763	3,616	1,505	17,306	15,827	3,241	4,738	2,186
2018	37,392	4,762	2,001	3,207	1,952	19,084	14,190	3,711	4,020	2,197
2019	36,198	5,737	1,954	3,268	1,984	17,453	13,650	3,278	3,699	1,802
2020	40,434	6,699	4,107	3,502	2,507	18,807	14,475	4,011	3,537	2,277
2021	57,004	7,124	7,313	5,222	3,971	24,322	21,829	5,203	4,525	3,757
2022	75,046	9,634	7,506	5,672	4,189	21,829	17,794	11,240	4,585	4,190
2023	66,530	9,498	5,425	5,621	2,405	20,745	16,002	10,703	4,189	3,646

Figure 3. Top Ten Revenues of the Palm Oil Industry
Source: Indonesia Stock Exchange, 2017-2023

Based on figure 3. explained that 10 (ten) companies during the 2020-2022 Covid-19 pandemic were consistent with an increase in revenue. Research conducted by Sari (2022) stated that CPO prices increased in the April 2020-2022 period during the Covid-19 period. The increase in CPO prices in 2022 is not only due to the Covid-19 pandemic, but also influenced by other things, namely the war between Ukraine and Russia, which are the two largest producers of sunflower oil in the world (Pahlevi, 2022). In 2023, all palm oil industries will return to their original income, namely during the Covid-19 pandemic, which is no longer a barrier to the world economy. However, the palm oil industry has its own challenges to maintain the company's financial performance in managing the costs incurred for the production process.

Financial performance is the ability of a company to manage and control the company's resources (Faruq, 2021). Good company performance can increase company growth (Tyas, 2020). Referring to PSAK No. 1 (2020) the process to generate financial performance values, companies need to analyze the financial statements issued by the company itself. The Financial Statement Analysis Book written by Sukamulja (2022) financial performance analysis has an important role for management and investors to make decisions. The performance of financial statements can be measured using financial ratios (Lithfiyah et al., 2019). Referring to the research Rahadian et al. (2017) there are 16 (sixteen) ideal financial ratios used in measuring financial performance in the Basic and Chemical Industry, namely Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS), Return on Investment (ROI), Net Profit Margin (NPM), Operating Cash Flow (OCF), Earning Per Share (EPS), Operating Profit Growth (OPG), Sales Growth (SG), Return on Capital Employed (ROCE), Cash Stocks (CSA), Total Assets Turnover Ratio (TATO), Labor Productivity (LP), Profit per Employee (PPE),

Gross Profit Margin (GPM) and EBITDA Margin. Research conducted by (PANGESTIKA, 2019) financial ratios are a way to compare company financial data to be useful. Financial ratios and the Company's financial performance have a close relationship in building company efficiency (Desriyunia et al., 2023). Based on the above explanation, this study uses financial ratios as a tool to measure financial performance in this research sample.

Previous research in analyzing financial performance used the Debt to Assets Ratio (DAR), Current Ratio (CR), Debt to Equity Ratio (DER), Total Assets Turnover Ratio (TATO), Return on Assets (ROA) and Return on Equity (ROE) (Putri & Yunita, 2023). Analyzing the Financial Performance of Palm Oil in the Palm Oil Industry listed on the Indonesia Stock Exchange (IDX) in the capital market in the face of Covid-19 in the period from 2017 to 2023, so that the purpose of this study can be known the ability of the palm oil industry to find out the difference in performance before and after the Covid-19 pandemic in the Palm Oil Industry listed on the Indonesia Stock Exchange.

Method

This study analyzes the performance of financial statements in the palm oil industry during the 2017-2023 period, especially during the Covid-19 pandemic. This study uses a quantitative method. According to Sugiyono (2019), quantitative research is a deductive method that focuses on testing hypotheses through the collection and analysis of numerical data objectively, using valid and reliable instruments.

Population and Sample

According to Rohsyada (2021), A population is a collection of people, animals, plants, or other objects that have certain characteristics that can be studied. The population in this study is companies listed on the Indonesia Stock Exchange (IDX) in the oil palm plantation sector, with a total of 26 companies. This population is a generalization of the object of research.

According to Sugiyono (2019), The sample is part of the number and characteristics of the population. Samples are used when the population is too large to be fully analyzed, so researchers only use samples for analysis. In this study, the sampling technique used is nonprobability sampling with a purposive sampling approach. Purposive sampling is a method of selecting data sources based on certain criteria and characteristics that are relevant to the research objectives, with the aim of ensuring that the data collected accurately reflects the phenomenon being studied, thereby increasing the validity and reliability of research results (Yunita & Silalahi, 2024). In this method, the researcher deliberately selects subjects that are believed to provide the most useful or representative information for the study conducted. Purposive sampling is often used when researchers want to gain in-depth insights into a phenomenon or when the population to be studied is relatively small or difficult to access.

In this study, the criteria used in sampling are:

1. Oil palm plantation subsector companies listed on the Indonesia Stock Exchange during the 2017-2023 period.
2. Oil palm plantation subsector companies that publish annual reports in a rowdy during the 2017-2023 period.

Data Collection and Sources

According to Sahir (2022) In his book Quantitative and Qualitative Research, data is an important process in research that requires further processing to be meaningful for recipients. The data collection methods in this study are:

1. Documentation: Collecting documents as a data collection method by collecting various documents related to research problems (Maulida, 2020). The documentation carried out includes financial statements from oil palm plantation industry companies listed on the IDX along with other objects related to this research topic.
2. Literature Study: A data collection method to obtain secondary data that supports the research topic, which can be obtained from books, journals, the internet, other agencies, and other reliable sources (Salmaa, 2022).

The type of data used in this study is secondary data. Secondary data, such as documentation, is data published or used by an organization (Gunawan, 2019). Secondary data in this study were obtained from other agencies, books, and other references relevant to the research topic, including annual financial statements from plantation companies listed on the IDX and other references as additional information in explaining the company's financial performance.

Data Analysis Techniques

Normality Test

According to Ghozali (2018), The normality test is a test conducted to check whether the research data comes from a normally distributed population. The normality test in this study used the One-Sample Kolmogorov-Smirnov Test, which was used for parametric data to see if the distributed data was normal (Suyadi, 2019). Parametric data is statistical data with a sample of more than 50 and is homogeneous and linear (Sugiyono, 2018). The analysis was carried out using SPSS (Statistical Package for the Social Sciences) which produced more accurate data.

Paired Sample t-Test and Wilcoxon Test

The Paired Sample t-Test is an analytical tool used to determine the ratio of differences between paired samples (Sugiyono, 2019). This test aims to compare the mean of the two groups tested significantly or insignificantly. The Paired Sample t-Test is included in the parametric statistical test, so the residual data must be normally distributed. If the residual data is not normally distributed, then the test will be carried out by a non-parametric statistical test using the Wilcoxon test. The Wilcoxon test is a non-parametric test method used to analyze paired data or in the case of a single sample that is not normally distributed (Isynuwardhana & Putri, 2021).

The Paired Sample t-Test and Wilcoxon in this study were used to determine significant differences in the value of financial ratios of certain companies in the period before, during, and after the Covid-19 pandemic. The hypothesis used is a comparative hypothesis. The hypothesis model in this study is:

H0: $\mu 1 = \mu 2$

H1: $\mu 1 \neq \mu 2$

In the above hypothetical model, H0 shows that there is no difference in the company's financial performance between the period before and after the Covid-19 pandemic. $\mu 1$ is the value of the financial ratio before the Covid-19 pandemic, namely in 2017-2019. $\mu 2$ is the value of the financial ratio after the Covid-19 pandemic, namely in 2020-2023. The decision was taken by comparing the value of Sig. (2-tailed) or p-value with α (0.05). p-value is the value of the probability of the difference test of two samples. If the p-value is $< \alpha$, then H0 is rejected.

Results and Discussion

Normality Test

This study conducted a normality test which aims to determine whether the residual data is normally distributed or not, in line with that to carry out a different test stage using parametric or non-parametric tests, the researcher must know the distribution of the data being studied (Kasih & Sutoyo, 2023). The normality test used the Kolmogorov-smirnov test with IBM SPSS Statistics 26 software. The normality test using the Kolmogorov-smirnov test was carried out on data of more than 50 (fifty) data samples (Andi Quraisy, 2020). The statistical test was carried out on an average score of 11 (eleven ratios) each of each period. The results of this normality test are a prerequisite in the application of statistical tests, where the data analyzed in parametric statistics must have a normal distribution (Sugiyono, 2019). The results of the normality test and the use of statistical tests of financial ratio data in this study can be seen in the appendix. Here is table 1. The results of the financial ratio normality test from all samples in this study.

Table 1. Normality Test Results

No	Financial Ratio	Normality Test Results	Statistical Test
1	Current Ratio	Normally Distributed	Paired Samples t test
2	Quick Ratio	Normally Distributed	Paired Samples t test
3	Debt to Asset Ratio	Normally Distributed	Paired Samples t test
4	Debt to Equity Ratio	Normally Distributed	Paired Samples t test
5	Return on Asset Ratio	Normally Distributed	Paired Samples t test
6	Return on Equity Ratio	Normally Distributed	Paired Samples t test
7	Net Profit Margin	Normally Distributed	Paired Samples t test
8	Gross Profit Margin	Normally Distributed	Paired Samples t test
9	Operating Profit Margin	Normally Distributed	Paired Samples t test
10	Total Asset Turnover Ratio	Normally Distributed	Paired Samples t test
11	EBITDA Margin	Normally Distributed	Paired Samples t test

Source: Authors' elaboration

Based on table 1., it can be seen that of the 11 financial ratios that are indicators of financial performance, they are all normally distributed. So that for statistical tests, different tests use Paired samples t test.

Test the Difference

The test of the difference in the company's financial performance in the period before the Covid-19 pandemic in 2017-2019 and after the Covid-19 pandemic in 2020-2023 was analyzed using the Paired Sample t-test statistical test. Paired Sample t-test is an analysis base used to find out the average of samples that are paired with each other, but the processed data must be distributed normally (Sugiyono, 2017). In line with that, when the data is found to be abnormally distributed, it will be carried out with the Wilcoxon test. The Wilcoxon test is a statistical test tool used to determine the average value of a related but non-parametric sample.

The basis for the hypothesis in this study is that H0 is rejected if the value of Sig. (2-tailed) or p-value is less than α (0.05). The rejection of H0 shows a significant difference in the average value of financial ratios between the period before and during

the Covid-19 Pandemic. The results of the analysis of the difference in financial ratios in the palm oil industry, which is a sample of this study for the period before and during the Covid-19 Pandemic, can be seen in the appendix.

Table 2. Results of the Average Difference Test of Financial Ratios

No	Financial Ratio	p-value	Statistical Test
1	Current Ratio	0.827	H0 accepted (equal)
2	Quick Ratio	0.588	H0 accepted (equal)
3	Debt to Asset Ratio	0.563	H0 accepted (equal)
4	Debt to Equity Ratio	0.308	H0 accepted (equal)
5	Return on Asset Ratio	0.848	H0 accepted (equal)
6	Return on Equity Ratio	0.204	H0 accepted (equal)
7	Net Profit Margin	0.686	H0 accepted (equal)
8	Gross Profit Margin	0.195	H0 accepted (equal)
9	Operating Profit Margin	0.942	H0 accepted (equal)
10	Total Asset Turnover Ratio	0.085	H0 accepted (equal)
11	EBITDA Margin	0.126	H0 accepted (equal)

Source: Authors' elaboration

Based on the statistical test in the table above, it can be seen that there is no significant change in the financial performance of palm oil industry companies in terms of average value using financial ratio indicators in the period before and after Covid-19. This can be proven through the p-value of Current Ratio, Quick Ratio, Debt to Asset Ratio. Debt to Equity Ratio, Net Profit Margin, Gross Profit Margin, Operating Profit Margin, Return on Asset, Return on Equity Ratio, Total Asset Turnover Ratio and EBITDA Margin have a value (sig 2-tailed) greater than 0.05 meaning that the null hypothesis (H0) is accepted for all financial ratio indicators. Thus, it can be concluded that there is no significant difference in the financial ratios of palm oil companies during the period.

Conclusion

This study has a dependent variable in the form of financial performance with independent variables from 11 financial ratios, namely Current Ratio, Quick Ratio, Debt to Asset, Debt to Equity, Net Profit Margin, Gross Profit Margin, Operating Profit Margin, Return on Asset, Return on Equity, Total Assets Turnover, and EBITDA Margin. This study aims to determine financial performance before and after the Covid-19 pandemic, with the object of research in the palm oil processing industry listed on the Indonesia Stock Exchange (IDX) which reports financial statements and annual reports for the period 2017 to 2023. The results showed that there was no significant difference in the financial performance of palm oil companies before and after the pandemic. This shows the resilience of the palm oil sector to the impact of the Covid-19 pandemic.

The results of this study provide insights for practitioners and policy makers in formulating strategies to improve financial performance in the palm oil sector. For example, companies may consider improving operational efficiency and reducing production costs to maintain profitability in a competitive market situation. In addition, policymakers can use these findings to design policies that support the sustainability and competitiveness of the palm oil industry.

For future research, it is recommended that researchers explore external factors that may affect financial performance, such as government policies or global market

conditions. In addition, future studies could involve a more in-depth analysis of specific financial ratios and their impact on company performance in a broader context. Best practices adopted by companies that succeeded during the pandemic can also be analyzed to provide guidance for other companies in facing similar challenges in the future.

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