Comparative Analysis of the Financial Performance of the Food and Beverage Industry before and during the Pandemic Period

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ABSTRACT

This study seeks to analyze the decline in financial performance in the form of profitability, namely the ratio of return on assets (ROA), return on equity (ROE), gross profit margin (GPM), operating profit margin (OPM), and net profit margin (NPM) in the Covid-19 period against the period before Covid-19 in food and beverage industry companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021.

Methodology/approach – The population of this study is in the form of financial reports of food and beverage industry companies listed on the Indonesia Stock Exchange (IDX) in 2019-2021. The sampling technique used purposive sampling method and obtained a total sample of 24 companies. This study uses Paired T test analysis (SPSS version 24 program) for its data analysis method. This study conclude that the return on assets (ROA) ratio, and return on equity (ROE) ratio experienced a significant decrease, while the gross profit margin (GPM) ratio, operating profit margin (OPM) ratio, and net profit margin (NPM) ratio did not experience a significant decrease in the Covid-19 period against the period before Covid-19.

INTRODUCTION

The impact of Covid-19 causes poverty in various parts of the world, this is evidenced by a statement from Antonio Gutерres (Secretary General of the United Nations) stating that "microscopic viruses are causing millions of people to fall into hunger and poverty, which has a devastating impact on the economy in the next few years" (pikiran-rakyat.com, April 2022). This is evidenced by the results of the Barenbang Naker study respondents (Manpower Planning and Development Agency) which stated that 40.6% experienced very adverse financial performance conditions, 47.4% of respondents experienced adverse financial performance conditions and 0.9% were profitable during the Covid-19 pandemic. Meanwhile, the Ministry of Manpower stated from the survey results that during the pandemic 88 percent of companies were affected by performance losses in the last six months. So it can be concluded that companies in Indonesia that are directly affected by the Covid-19 pandemic are 9 out of 10 companies (Kemnaker.go.id, July 2022).
The results of a survey conducted by INDEF (Institute for Development of Economics and Finance) in collaboration with the Ministry of Manpower, stated that the decline in production, demand, and profits generally occurred in Micro, Small and Medium Enterprises, with results above 90%. Companies that have had a major impact, namely the provision of food & beverage accommodation, property, and construction, (Liputan6.com, July 2022). This has led to the phenomenon that food and beverage industry companies have experienced a decline in performance during the Covid-19 Pandemic period. This is proven by the research of Telukdarie (2020), Hassen (2021), Widyawati & Ningtyas (2022); Setiawan (2022); Devi (2020), El-Ebiary (2021), Yussof (2021), Prakoso (2020), Farida (2020), Sutrisni (2020), and Mouldudj (2020) that Covid-19 affects food and beverage companies. Meanwhile, studies that do not prove that Covid-19 does not cause a decrease in performance during the Covid-19 Pandemic period are research by Irmayani (2021), Lim (2022); Saputro & Hapsari (2022). This study aims to determine whether the existence of Covid-19 affects a significant decrease in financial performance of the food and beverage industry listed on the Indonesia Stock Exchange using profitability ratios with variables ROA, ROE, GPM, OPM, and NPM.

Research that proves that Covid-19 affects a significant decrease in ROA, namely, research by Herdiaya (2021), Junaidi & Salim (2021), Kumala (2021), Nabawiyah & Jaeni (2022), and Rahmani (2020). Meanwhile, studies that prove that Covid-19 does not significantly affect the decline in ROA are Lim (2022), and Saputro & Hapsari (2022). Research that proves that Covid-19 affects a significant decrease in ROE, namely, research by Edinisgh (2022), Esomar & Chritianty (2021), Kumala (2021); Wahyudi & Pawestri (2021). Meanwhile, studies that prove that Covid-19 does not significantly affect the decline in ROE are Lim (2022); and Saputro & Hapsari (2022). Research that proves that Covid-19 does not affect a significant decrease in GPM is Lim's research (2022). Research that proves that Covid-19 affects a significant decrease in GPM is Rahmani's research (2020). Meanwhile, studies that prove that Covid-19 does not affect a significant decrease in OPM is Lim's research (2022); and Saputro & Hapsari (2022). Research that proves that Covid-19 affects a significant decrease in OPM is Rahmani's research (2020). Meanwhile, studies that prove that Covid-19 does not affect a significant decrease in NPM, namely, research by Desire (2021), Rahmani (2020); Wahyudi & Pawestri (2021). Meanwhile, studies that prove that Covid-19 does not significantly affect the decline are Lim (2022); and Saputro & Hapsari (2022).

Based on the previous phenomenon of studies and surveys conducted by the Ministry of Manpower in collaboration with INDEF (Institute for Development of Economics and Finance), the food and beverage industry experienced a decline in performance during the Covid-19 pandemic. As well as the inconsistency of other studies stating that Covid-19 affects a significant decrease in performance and stating otherwise. Therefore, researchers aim to conduct further research on the Comparative Financial Performance of the Food and Beverage Industry on the Indonesia Stock Exchange in the Covid-19 period against the period before Covid-19 (2019-2022) using ROA, ROE, GPM, OPM, and NPM.

Framework:
METHOD

Population and Sampling
The population of this study is in the form of financial reports of food & beverage industry companies listed on the Indonesia Stock Exchange (BEI/IDX) for the 2019-2021 period. The sampling technique was carried out using purposive sampling method (selection of non-random / representative sample members whose information was obtained using predetermined criteria).

Table 2. Sampling Technique

<table>
<thead>
<tr>
<th>Sampling Technique</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Food &amp; Beverage Industry companies listed on the Indonesia Stock Exchange for the 2019-2021 Period</td>
<td>63</td>
</tr>
<tr>
<td>Total Food &amp; Beverage Industry companies with incomplete financial statements from the period 2019-2021</td>
<td>39</td>
</tr>
<tr>
<td>Total companies studied in this study (Complete financial statements from the period 2019 - 2021)</td>
<td>24</td>
</tr>
</tbody>
</table>

Source: www.idx.co.id

2. Data Sources and Data Collection Techniques
The data in this study are secondary data (data collected from other sources that have been available before the research was conducted) in the form of financial reports of food and beverage industry companies (2019-2021) listed on the Indonesia Stock Exchange (BEI/IDX). The data collection technique is documentation
RESULT AND DISCUSSION
Descriptive Statistics of Research Variables
Descriptive statistics aim to provide a description or description of the research data. Descriptive statistical presentation in the form of minimum value, maximum value, average value (mean) and standard deviation. The research was conducted using financial statement data of 24 food and beverage companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2021 period. This study conducted a different test between financial performance in the Covid-19 period and the period before Covid-19 in the form of ROA, ROE, GPM, OPM, and NPM.

Table 3. Descriptive Statistics Test Results

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA (Before)</td>
<td>24</td>
<td>-0.014</td>
<td>0.218</td>
<td>0.074</td>
<td>0.078</td>
</tr>
<tr>
<td>ROA (During)</td>
<td>24</td>
<td>-0.013</td>
<td>0.187</td>
<td>0.053</td>
<td>0.087</td>
</tr>
<tr>
<td>ROE (Before)</td>
<td>24</td>
<td>-0.016</td>
<td>0.257</td>
<td>0.110</td>
<td>0.110</td>
</tr>
<tr>
<td>ROE (During)</td>
<td>24</td>
<td>-0.965</td>
<td>0.266</td>
<td>0.041</td>
<td>0.252</td>
</tr>
<tr>
<td>GPM (Before)</td>
<td>24</td>
<td>0.031</td>
<td>0.721</td>
<td>0.291</td>
<td>0.170</td>
</tr>
<tr>
<td>GPM (During)</td>
<td>24</td>
<td>-0.965</td>
<td>0.685</td>
<td>0.271</td>
<td>0.192</td>
</tr>
<tr>
<td>OPM (Before)</td>
<td>24</td>
<td>-0.162</td>
<td>0.498</td>
<td>0.089</td>
<td>0.125</td>
</tr>
<tr>
<td>OPM (During)</td>
<td>24</td>
<td>-0.770</td>
<td>0.327</td>
<td>0.048</td>
<td>0.214</td>
</tr>
<tr>
<td>NPM (Before)</td>
<td>24</td>
<td>-0.183</td>
<td>0.377</td>
<td>0.062</td>
<td>0.106</td>
</tr>
<tr>
<td>NPM (During)</td>
<td>24</td>
<td>-0.579</td>
<td>0.248</td>
<td>0.038</td>
<td>0.167</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS output, 2022

Based on the results of descriptive statistical testing in Table 2.02, this study can be described as follows:

Return on Assets (ROA)
The result of the mean value of the ROA variable before Covid-19 is 0.074, which is greater than the ROA during Covid-19 of 0.053. So it can be concluded that ROA decreased during the Covid-19 virus pandemic.

Return on Equity (ROE)
The result of the mean value of the ROE variable before Covid-19 is 0.110, which is greater than the ROE during Covid-19 of 0.041. So it can be concluded that ROE decreased during the Covid-19 virus pandemic.

Gross profit margin (GPM)
The result of the mean value of the GPM variable before Covid-19 is 0.291, which is greater than the GPM during Covid-19 of 0.271. So it can be concluded that GPM decreased during the Covid-19 virus pandemic.

Operating profit margin (OPM)
The result of the mean value of the OPM variable before Covid-19 is 0.089, which is greater than the OPM during Covid-19 of 0.048. So it can be concluded that OPM decreased during the Covid-19 virus pandemic.

Net profit margin (NPM)
The result of the mean value on the NPM variable before Covid-19 is 0.062, which is greater than the NPM during Covid-19 of 0.038. So it can be concluded that NPM decreased during the Covid-19 virus pandemic.

**Normality Test (Classical Assumption Testing Results)**

Normality test serves to test whether the dependent variable and the independent variable have a normal distribution or not. In this study, the normality test used was the Kolmogorov-Smirnov Test. If the probability > 0.05 then the data is normally distributed, otherwise, if the probability < 0.05 then the data is not normally distributed.

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA 2019</td>
<td>0.970</td>
<td>24</td>
<td>0.658</td>
</tr>
<tr>
<td>ROE 2019</td>
<td>0.930</td>
<td>24</td>
<td>0.097</td>
</tr>
<tr>
<td>GPM 2019</td>
<td>0.955</td>
<td>24</td>
<td>0.338</td>
</tr>
<tr>
<td>OPM 2019</td>
<td>0.948</td>
<td>24</td>
<td>0.248</td>
</tr>
<tr>
<td>NPM 2019</td>
<td>0.965</td>
<td>24</td>
<td>0.541</td>
</tr>
</tbody>
</table>

Based on the results of the data normality test, it was found that the research data for all categories had a significant value > 0.05, which means that they were normally distributed, thus the paired sample t test requirements were met. The next step is to conduct a homogeneity test.

**Homogeneity Test (Classical Assumption Testing Results)**

The Homogeneity Test serves to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. How to detect the presence or absence of Homogeneity symptoms can be done with the Glejser Test, which is to detect the presence or absence of Homogeneity symptoms by regressing the absolute value of the residuals on the independent variables. The decision regarding Homogeneity is if the significance value is more than 0.05, it can be concluded that the regression model is free from Homogeneity symptoms.

<table>
<thead>
<tr>
<th>Tests of Homogeneity of Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistic</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>ROA</td>
</tr>
<tr>
<td>Based on Median</td>
</tr>
<tr>
<td>Based on trimmed mean</td>
</tr>
</tbody>
</table>
Based on the results of the data homogeneity test, it was found that the research data:

The significant value Based on Mean for the ROA variable is 0.543. Because the significant value of 0.543 > 0.05, it is concluded that the variance of ROA data in 2019 and 2020-2021 is homogeneous.

The significant value Based on Mean for the ROE variable is 0.137. Because the significant value is 0.137 > 0.05, it is concluded that the variance of ROE data in 2019 and 2020-2021 is homogeneous.

The significant value Based on Mean for the GPM variable is 0.727. Because the significant value is 0.727 > 0.05, it is concluded that the variance of GPM data in 2019 and 2020-2021 is homogeneous.

The significant value Based on Mean for the OPM variable is 0.172. Because the significant value is 0.172 > 0.05, it is concluded that the variance of OPM data in 2019 and 2020-2021 is homogeneous.

The significant value Based on Mean for the NPM variable is 0.191. Because the significant value is 0.191 > 0.05, it is concluded that the variance of NPM data in 2019 and 2020-2021 is homogeneous.

Hypothesis Testing Results (Paired Sample Test)

Paired T-Test is a parametric test that can be used on two paired data. The purpose of this test is to see if there is an average difference between two samples that are paired or related.

Table 6. Paired Sample Test Results

| Source: SPSS output, 2022 |
Based on the results of the data Paired Sample Test Results, it was found that the research data:

- Differences in financial performance as measured by return on assets (ROA). Based on the results of the Paired Sample test on the ROA variable, the significance value of 0.029 (One-Sided p) is smaller than 0.05, meaning that there is a significant difference.

- Differences in financial performance as measured by return on equity (ROE). Based on the results of the Paired Sample test on the ROE variable, the significance value is 0.036 (One-Sided p) smaller than 0.05, meaning that there is a significant difference.

- Differences in financial performance as measured by gross profit margin (GPM). Based on the results of the Paired Sample test on the GPM variable, the significance value is 0.056 (One-Sided p) greater than 0.05, meaning that there is no significant difference.

- Differences in financial performance as measured by operating profit margin (OPM). Based on the results of the Paired Sample test on the OPM variable, the significance value is 0.085 (One-Sided p) greater than 0.05, meaning that there is no significant difference.

- Differences in financial performance as measured by net profit margin (NPM). Based on the results of the Paired Sample test on the NPM variable, the significance value is 0.134 (One-Sided p) greater than 0.05 meaning, there is no significant difference.

**Discussion**

**Analysis of Differences in Return on Assets (ROA) Ratio in the Covid-19 period against the period before Covid-19**

The results showed that there was a significant negative difference from the ratio of return on assets (ROA) in the Covid-19 period to the period before Covid-19, where the Paired Sample Test result of 0.029 was smaller than 0.05; and based on empirical results data there was a decrease of 0.021, meaning that there was a significant difference.

The results of this study are the same as research conducted by Herdiaya (2021), Junaidi & Salim (2021), Kumala (2021), Nabawiyah & Jaeni (2022), Rahmani (2020) which prove that there is a significant negative effect on the ratio of return on assets (ROA) in the Covid-19 period against the period before Covid-19. The results of this study are not the same as the results of Lim's research (2022); Saputro & Hapsari (2022) which state that the ratio of return on assets has no significant negative effect.

**Analysis of Differences in Return on Equity (ROE) Ratio in the Covid-19 period against the period before Covid-19**

The results showed that there was a significant negative difference in the ratio of return on equity/return on equity (ROE) in the Covid-19 period to the period before Covid-19, where the Paired Sample Test result of 0.036 was smaller than 0.05; and based on empirical results data there was a decrease of 0.069, meaning that there was a significant difference.

The results of this study are the same as research conducted by Edinigsih (2022), Esomar & Chritianty (2021), Kumala (2021); Wahyudi & Pawestri (2021) which proves that there is a significant negative effect on the return on equity (ROE) ratio in the Covid-19 period against the period before Covid-19. The results of this study are not the same as the results of Lim's research (2022); Saputro & Hapsari (2022) which state that the return on equity ratio has no significant negative effect.

**Analysis of Differences in Gross Profit Margin (GPM) Ratio in the Covid-19 period against the period before Covid-19**
The results showed that there was no significant negative difference from the gross profit margin (GPM) ratio in the Covid-19 period to the period before Covid-19, where the Paired Sample Test result of 0.056 was greater than 0.05; based on empirical result data there is a decrease of 0.02, meaning that, although there is a difference from the empirical result data, the difference is not significant.

The results of this study are the same as research conducted by Lim (2022) which proves that there is no significant effect on the gross profit margin (GPM) ratio in the Covid-19 period against the period before Covid-19.

### Analysis of Differences in Operating Profit Margin Ratio/Operating Profit Margin (OPM) in the Covid-19 period against the period before Covid-19

The results showed that there was no significant negative difference from the operating profit margin (OPM) ratio in the Covid-19 period to the period before Covid-19, where the Paired Sample Test result of 0.85 was greater than 0.05; based on empirical result data there is a decrease of 0.041, meaning that, although there is a difference from the empirical result data, the difference is not significant.

The results of this study are the same as research conducted by Lim (2022); Saputro & Hapsari (2022) which proves that there is no significant effect on the operating profit margin (OPM) ratio in the Covid-19 period against the period before Covid-19. The results of this study are not the same as the results of Rahmani's (2020) research which states that the operating profit margin ratio has a significant negative effect.

### Analysis of Differences in Net Profit Margin Ratio (NPM) in the Covid-19 period against the period before Covid-19

The results showed that there was no significant negative difference from the net profit margin (NPM) ratio in the Covid-19 period to the period before Covid-19, where the Paired Sample Test result of 0.134 was greater than 0.05; based on empirical result data there is a decrease of 0.024, meaning that, although there is a difference from the empirical result data, the difference is not significant.

The results of this study are the same as research conducted by Lim (2022); Saputro & Hapsari (2022) which proves that there is no significant effect on the net profit margin (NPM) ratio in the Covid-19 period against the period before Covid-19. The results of this study are not the same as the results of research by Desire (2021), Rahmani (2020); Wahyudi & Pawestri (2021) which state that the net profit margin ratio has a significant negative effect.

### CONCLUSIONS

Based on the results of the discussion, the following conclusions are obtained:

ROA and ROE have a significant negative effect. This means that there is a significant downward impact of ROA and ROE in the Covid-19 period on the period before Covid-19. GPM, OPM, and NPM have no significant negative effect. This means that there is no significant downward impact of GPM, OPM, and NPM in the Covid-19 period on the period before Covid-19. Investors do not need to worry about investing in food and beverage companies because the impact of Covid-19 has no significant negative effect on the performance of food and beverage companies when viewed from GPM, OPM, and NPM. But it needs to be considered again for changes in ROA and ROE because it can have a significant negative effect.

For the Indonesia Stock Exchange (IDX), it is necessary to pay attention again to which companies whose ROA and ROE have decreased significantly. For other ratios, it is necessary to pay attention to companies whose performance has decreased because partially the conditions before the Covid-19 Pandemic were considered better. For company management, it is necessary to pay attention to ROA and ROE which have decreased significantly. So that it needs an increase in company performance both due to a decrease in ROA, ROE, GPM, OPM, and NPM because partially the conditions before the Covid-19 Pandemic were considered better.
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Supporter: Dito Muhammad Sabirin, S.Sos.

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