World of Science: Journal on Modern Research Methodologies

Volume 1 Issue 2, Year 2022
ISSN: 2835-3072
https://univerpubl.com/index.php/woscience

Analysis of Differences in Financial Performance before and During the Covid-19 Pandemic in Manufacturing Companies Registered Food and Beverage Sector on the Indonesian Stock Exchange

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Article Information

Received: October 23, 2022
Accepted: November 22, 2022
Published: December 24, 2022

Keywords: *financial performance, profitability ratios, liquidity ratios, activity ratios, solvency ratios, market value ratios.*

ABSTRACT

Food and beverage products are considered to be able to survive even in unfavorable or even bad economic conditions because they are products that are needed by all Indonesian people. This study aims to determine differences in financial performance before and during the covid-19 pandemic on the IDX using liquidity ratios, solvency ratios, activity ratios, profitability ratios and market value ratios. This research is a quantitative study of 18 food and beverage sector companies listed on the IDX in 2018-2021. The normality test using the Kolmogorov-Smirnov concluded that the data was not normally distributed, so the Wilcoxon signed rank test was used. The results of the study showed differences in the profitability ratio and liquidity ratio, while there was no significant difference in the solvency ratio and activity ratio before and during the Covid-19 pandemic. The market value ratio as assessed from the Price Earning Ratio (PER) shows that the company's financial performance is not significantly different, while the Price Book Value (PBV) variable shows that the company's financial performance was significantly different before and during the Covid-19 pandemic.

1. Introduction

The company's financial performance is the company's activities which are interpreted in the form of numbers. Financial performance is used to find out the opportunity or impact of the company in depth by looking at financial reports to analyzing financial reports. Financial performance can be seen in the financial statements by comparing the accounts in the financial statements in financial ratios. According to Frihatni (2021), an assessment of financial performance can inform the financial condition of a company whether it is in good condition or not. The company's financial performance can be measured by analyzing and evaluating financial reports. Information on financial position and financial performance is used as a basis for predicting future financial position and performance (Riswan and Kusuma, 2014).

The Covid-19 pandemic at the beginning of 2020 greatly affected the financial performance of the economic sector in Indonesia. This pandemic hampered economic growth nationally and globally. Various industrial sectors in the country have been affected by this pandemic, one of which is the manufacturing sector in the food and beverage sector. The food and beverage sector

has an extraordinary impact on economic growth in Indonesia because this sector is a driving force for all sectors so that it can encourage other sectors as a driving force for the people's economy. This sector is considered as one of the industries that remains resilient in dealing with the co-19 pandemic. People are encouraged to stay at home and work from home.

The existence of this policy has caused panic buying by the public, so this research assumes that there has been an increase in sales in the food and beverage sector, however, in reality there are several companies whose net profits have experienced a decrease in sales in 2020 compared to the year before the outbreak of Covid-19. However, based on financial data, the COVID-19 pandemic has caused people's buying interest to decline, causing the company's performance to fluctuate, which of course will have an impact on the company's financial performance. The following is data on net profit and sales of food and beverage manufacturing companies listed on the IDX.

Table 1. Manufacturing Company Sales and Net Profit Data

The Food and Beverage Sector Listed on the IDX

	Before the Covid 19 Pandemic		**During the Covid 19 Pandemic**	
	2018	2019	2018	2019
Sales (IDR)	9,663,255,987,209	10,492,055,628,506	8,282,108,973,788	11,453,606,865,580
Net Profit (IDR)	826,476,091,972	1,620,867,975,101	1,022,366,944,508	1,315,598,861,515

Source: 2022 processed data

From the results of the analysis above, it appears that there have been some changes in the financial ratios of food and beverage sector companies listed on the Indonesia Stock Exchange (IDX) before Covid-19 and during Covid-19. Competitive competition in this field causes every company to continue to strive to maximize its financial performance. The company provides financial performance information through financial reports that are presented in a rational, transparent and easy to understand manner. There are 25 food and beverage sector companies listed on the IDX.

The sector companies were chosen in this study becauseThe food and beverage sector is considered to be resilient, this sector is the most resistant to monetary or economic crises, compared to other sectors. Food and Beverages products or food and beverages are considered to be able to survive even in unfavorable or even bad economic conditions and are also products that are needed by all Indonesian people (Fadhilah, 2017).

To find out information about the level of health and performance of companies in the food and beverage sector, research is interested in analyzing the financial performance of manufacturing companies in the food and beverage sector which were listed on the Indonesia Stock Exchange before the Covid-19 pandemic and compared to financial performance due to the Covid-19 pandemic. 19. By analyzing financial reports, the findings of this study can be seen whether there are differences in the financial performance of the food and beverage sector before and during the Covid-19 pandemic.

1.1.Research purposes

Based on the formulation of the problem, the purpose of this study is to analyze the differences:

1. financial performance before and during the covid-19 pandemic on the IDX using the liquidity ratio as measured by the current ratio and quick ratio.
2. financial performance before and during the covid-19 pandemic on the IDX using solvency ratios as measured by debt to asset ratio and debt to equity

3. financial performance before and during the covid-19 pandemic on the IDX using the activity ratio as measured by the total asset turnover ratio and the fixed asset turnover ratio.
4. financial performance before and during the covid-19 pandemic on the IDX using profitability ratios as measured by return on assets and return on equity
5. financial performance before and during the covid-19 pandemic on the IDX using the market value ratio as measured by the price earnings ratio and price book value.

2. Literature review

2.1.Financial management

According to Mustafa (2017: 3) Financial management is an explanation of decisions that must be made, in the form of investment decisions, funding decisions or decisions to fulfill funding needs, and dividend policy decisions. According to Sartono (2015: 50), the term financial management can be interpreted as management of funds associated with allocating funds in various forms of investment effectively as well as efforts to collect funds for financing investments or spending efficiently. The executor of financial management is the financial manager.

According to Darsono (2011: 101), financial management is related to 3 activities, namely:

1. Activities using funds, namely activities to invest funds in various assets.
2. Fundraising activities, namely activities to obtain sources of funds, both from internal funding sources and external funding sources of the company.
3. Asset management activities, namely after the funds are obtained and allocated in the form of assets, the funds must be managed as efficiently as possible.

2.2.Financial Performance Analysis

Financial performance analysis is an analysis carried out to see the extent to which a company has carried out using the rules of financial implementation properly and correctly (Irham, 2014: 2). Financial performance can also be meaningful as a result of a decision-making process by company management carried out in the areas of investment, operations and funding in achieving goals in financial terms. According to Munawir (2012: 31-32) the purpose of performance measurement is to determine the level of liquidity, namely the company's ability to fulfill its financial obligations which must be fulfilled immediately at maturity and to know the level of solvency, namely the company's ability to fulfill its financial obligations if the company is liquidated, both short term and long term finance.

2.3.Financial Statement Analysis

Financial report analysis is a process carried out to analyze financial reports and also examine the elements of financial statements with the aim of being able to obtain a proper understanding (Sari, 2020: 20). The financial statements that have been prepared based on relevant data, with proper accounting and valuation procedures, can show the actual financial condition of the company. The financial condition in question is the amount of assets (wealth), liabilities (debt), and capital (equity) in the balance sheet owned by the company.

The financial statements presented must be easy to understand, understand and know the financial position. Therefore, financial statement analysis must be carried out using appropriate analytical methods and techniques so that the correct results can then be analyzed and interpreted to determine the actual financial position.

2.4.Financial Ratio Analysis

According to Kasmir (2008: 104), Financial Ratios are activities of comparing the numbers in

the financial statements by dividing a number by another number. Comparisons can be made between one component and components in one financial report or between components that exist between financial statements. Then the numbers being compared can be numbers in one period or several periods. In practice, the analysis of a company's financial ratios can be classified as follows:

1. Balance sheet ratio, namely comparing figures that only come from the balance sheet.
2. Income statement ratio, namely comparing figures that only come from the income statement.
3. The ratio between reports, namely comparing figures from two sources (mixed data), both those on the balance sheet and the income statement

2.5.Financial Ratios

Financial ratios are designed to help evaluate financial statements or help us identify some of the company's financial strengths and weaknesses. Financial ratios are also a tool for comparing company positions with competitors, for future company financial policies (Hidayat, 2018: 51). The types of financial ratios are (Kasmir, 2019: 128):

1. Liquidity Ratio. The ability of a company to meet its short term obligations appropriately. The liquidity ratio indicates the relative ease with which an asset can be converted into cash with little or no impairment and the degree of certainty about the amount of cash that can be obtained. Cash is the most liquid asset. Among others:

1. The Current Ratio is used to measure a company's ability to meet short-term obligations using current assets (Kasmir, 2019: 134).

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}}$$

2. Cash Ratio is a ratio to measure how much cash is available to be used to pay short-term liabilities / current debt without using receivables and inventories (Kasmir, 2019: 138).

$$\text{Current Ratio} = \frac{\text{Cash and Cash Equivalents}}{\text{Current liabilities}}$$

3. The Quick Ratio measures a company's ability to pay current debt without taking into account the value of inventory. So inventory is ignored by subtracting the amount of current assets (Kasmir, 2019:137)

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current liabilities}}$$

2. Solvency / Leverage Ratio. According to Kasmir (2019: 153), solvency is the ratio used to measure the extent to which a company's assets are financed by debt. The various solvency ratios are:

1. Debt to Asset Ratio / Debt Ratio. A ratio that looks at a company's debt comparison. Debt to Asset Ratio is the ratio used to measure what percentage of a company's assets are financed by debt. If the ratio results are high, it will be more difficult for the company to obtain additional loans because it is feared that the company will not be able to cover debts, likewise the lower the ratio, the smaller the company is financed with debt (Kasmir, 2019: 156). The Debt to Asset Ratio formula, namely:

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

2. Debt to Equity Ratio. The ratio used in analyzing financial statements to show the amount of guarantee available to creditors. a ratio that indicates the extent to which equity guarantees all debts. This ratio can also be read as a ratio that measures the ratio between total debt (total debt or total liabilities) and total equity. For companies, the greater the ratio, the better and conversely, with a low ratio, the higher the level of funding provided by the owner and the greater the security limit for the borrower in the event of a loss or depreciation of the asset value (Kasmir, 2019: 157). Debt to Equity Ratio Formula:

Debt to Equity Ratio = Total Debt

Owner's equity

3. The ratio of debt to gross profit (Debt-to-EBITDA Ratio) is to determine the probability of default risk of a company's debt. A higher ratio of net debt to EBITDA indicates that the company may face difficulties in paying off its financial obligations, the formula is:

Debt to EBITDA Ratio = Total Debt

EBITDA/Gross Profit

3. Activity ratio is the ratio that measures the activity and operational efficiency of the company's management in managing its business. The measurement results with this ratio will show whether the company is more efficient or vice versa in managing the assets owned by the company. According to Kasmir (2019: 174) the Activity Ratio group consists of:

1. Total Asset Turnover Ratio (TATO). This ratio measures the rupiah of sales generated for each rupiah, meaning that the greater the results of this ratio, the better because it is a sign that company management can utilize every rupiah of assets to generate sales (Kasmir, 2019: 187). Total Asset Turnover Formula:

Total Asset Turnover Ratio = Total Debt

Total Assets

2. Fixed Asset Turnover Ratio (FATO) is the ratio used to measure how many times the funds invested in fixed assets rotate in one period. To measure whether the company has fully used its fixed asset capacity or not. A higher fixed asset turnover ratio is better because it shows the company is using its fixed assets more efficiently. Conversely, a low ratio may indicate operating inefficiencies. The formula (Kasmir, 2019: 184). The formula:

Total Asset Turnover Ratio = Sales

Total Fixed Assets

3. Working Capital Turnover(WCT) is a ratio that measures or assesses the effectiveness of a company's working capital during a certain period or how much working capital rotates in one period. The working capital turnover ratio is most often used to determine a company's financial performance and analyze its operations as a whole. It can also be used to see if a company will be able to pay off debt within a certain time frame and avoid running out of cash as a result of increased production needs. Companies with higher working capital turnover ratios are more efficient in running operations and generating sales. Lower working capital turnover is an indicator that operations are not running effectively, (Kasmir, 2019: 182). The formula:

Cash Turnover Ratio = Sales

Working capital

4. Profitability ratios. Profitability ratio is a ratio that shows an overview of the level of effectiveness of company management in generating profits. This ratio is a measure of whether the owner or shareholder can obtain an appropriate rate of return on their investment. The ratio used (Kasmir, 2019: 198). Generally includes the following ratios:

1. Return on Assets (ROA) is a ratio that measures how many percent of net profit is generated for each rupiah of Total Assets (Assets) or shows the level of business return from all investments that have been made by the company. The lower this ratio, the less good, and vice versa. This means that this ratio is used to measure the effectiveness of the company's overall operations (Sudana, 2015: 25). Return on Total Assets Formula:

Return on Equity Ratio = Net Income

Total Assets

2. Return on Equity (ROE) is a ratio that measures the percentage of net profit generated for each rupiah of equity capital. The higher this ratio, the better the company. This means that the position of the company owner is getting stronger, and vice versa (Sudana, 2015: 25). Return on Equity Formula:

Return on Equity Ratio = Net Income

Total Equity

4. Gross Profit Margin (GPM) is a ratio that shows what percentage of profit is earned from product sales. Under normal conditions, the Gross profit margin should be positive because it shows whether the company can sell goods above the cost price. However, if the result is negative, it means that the company is unable to sell goods above the cost price or suffers a loss (Sudana, 2015: 25). Gross Profit Margin Formula:

Gross profit margin Ratio = gross profit

Sale

5. Market Value Ratio. The Market Value Ratio is used as an indicator to measure how expensive a stock is. The point of view of this ratio is based a lot on the point of view of investors (or potential investors), to look for stocks that have the potential for large dividend gains before investing in stocks, even though management also has an interest in these ratios. Market Value, according to Brigham and Houston (2009: 110): A set of ratios that relate the price of a company's shares to profits, cash flow, and book value per share. This ratio measures how the company's current and future value is compared to the company's value in the past. From an investor's point of view, if a company has high values at this ratio, the prospects will be better.

1. Price Earnings Ratio, according to Tandelin (2010: 301) For investors, the higher the PER, the expected profit growth will also increase. PER describes the comparison between stock prices to stock earnings. This approach also provides information on how much rupiah must be paid by investors to get every Rp. 1 of the company's profit. According to Dewi and Sudiartha in Mujati and Dzulqodah (2016), the Price Earning Ratio shows profit growth from the company, and investors will be interested in the profit growth so that in the end it will have an effect on stock price movements. A good PER standard is if the value is between 10-15 for the size of the Indonesian Stock Exchange, while for exchanges with a larger capitalization value it is usually 15-20. The higher the PER, the higher the value of the company. The formula is as follows:

Price Earning Ratio = Share price per share

EPS

To find EPS (Earning Per share) use the following formula:

$$\text{Price Earning Ratio (EPS)} = \frac{\text{net profit (net profit)}}{\text{Number of shares outstanding}}$$

2. Price to Book Value (PBV) is a value that can be used to compare whether a stock is more expensive or cheaper than other shares. To compare, the two companies must be from the same business group that has the same nature of business. Price to Book Value (PBV) describes the financial market value of the management and organization of an ongoing company (going concern). A company that runs well with a strong management staff and a functioning organization is less than the book value of its physical assets (Sihombing, 2008:95). The formula used is:

$$\text{Price to Book Value} = \frac{\text{Share price per share}}{\text{Book value per share (BVPS)}}$$

To find BVPS, use the following formula:

$$\text{Book value per share (BVPS)} = \frac{\text{total equity (assets-liabilities)}}{\text{Number of shares outstanding}}$$

2.6.Relations Between Concepts / Variables

1. The relationship between the liquidity ratio as measured by the company's Current Ratio and Quick Ratio and financial performance before and during the Covid-19 pandemic. The liquidity ratio measures a company's ability to meet its short-term obligations such as short-term debt and trade payables. The higher the result of the liquidity ratio indicates that the more liquid or smooth it is in paying its current liabilities or debts. Based on financial data, there are differences in the liquidity ratio before Covid and during Covid due to a decrease in public buying interest so that profits result in higher company assets.
2. The relationship between the solvency ratio is measured by the company's DER (Debt to Equity Ratio) and DAR (Debt to Asset Ratio) with financial performance before and during the Covid-19 pandemic. The Solvency Ratio is used to measure the extent to which a company's assets are financed by debt. If the higher this ratio means that the greater the amount of debt used in company activities which results in greater business risks faced by companies amid the co-19 pandemic. Based on financial data, there is no difference in the solvency ratio before covid and during covid-19, because even though sales have decreased the company is still able to pay its debts, for more detailed data can be seen in the research results.
3. The relationship between the activity ratio as measured by the company's TATO (Total Asset Turnover Ratio) and FATO (Fixed Asset Turnover Ratio) with financial performance before and during the Covid-19 pandemic. The activity ratio is used to measure the activity and operational efficiency of the company's management in managing its business. The higher the measurement results of this ratio, the more efficient the company is in managing its assets. Based on financial data, there is no difference in the activity ratio before covid and during covid because the products sold are products that are needed by the community so that sales are not affected.
4. The relationship between profitability ratios as measured by ROA (Return on Assets) and ROE (Return on Equity) of companies with financial performance before and during the Covid-19 pandemic. The profitability ratio is the ratio that shows the company's ability to generate profits. The greater the level of profit earned, the better the company's management in managing the company. Based on financial data, there are differences in the profitability

ratios before covid and during covid because during covid the profit earned decreased, for more detailed data can be seen in the research results.

5. Connectionmarket value ratio as measured by the company's PE (Price Earning Ratio) and PBV (Price Book Value) to financial performance before and during the co-19 pandemic. The Market Value Ratio is the ratio used to measure how expensive a stock is to look for stocks that have the potential for large dividend gains before investing in stocks. Based on financial data, there are differences in the market value ratio before Covid-19 and during Covid-19. For more detailed data, it can be seen in the research results.

3. Model and Research Hypothesis

3.1. Research Model

Based on the hypothesis, the relationship between the variables to be studied is stated in a research model in the figure below:

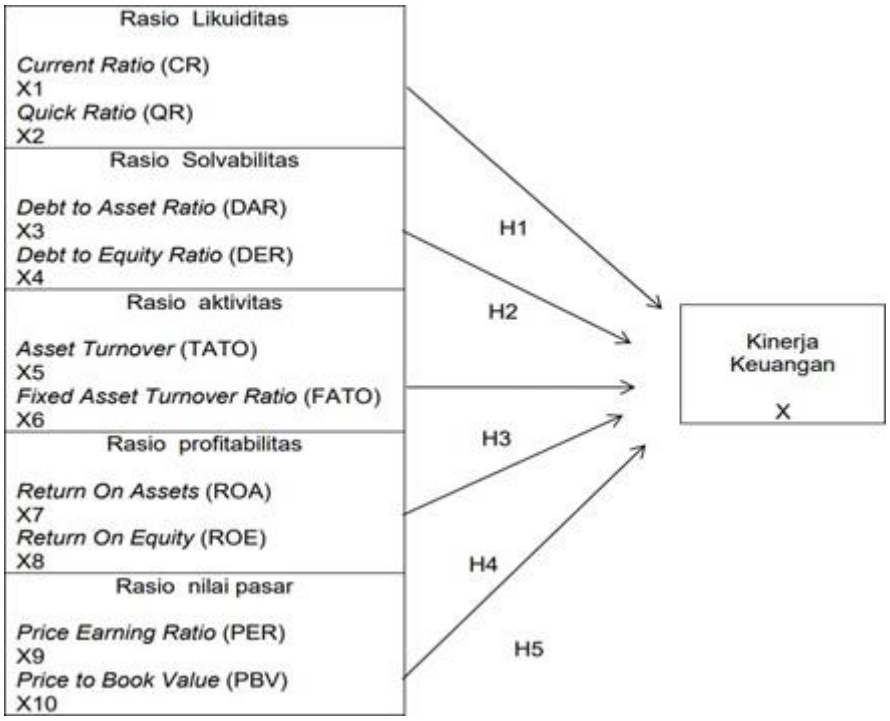

Figure 1. Research Model

3.2. Research Hypothesis

The hypothesis that can be drawn in this study, namely:

H1: It is suspected that there are differences in the company's financial performance before and during the Covid-19 pandemic on the IDX using the liquidity ratio as measured by the current ratio and quick ratio.

H2: It is suspected that there are differences in the company's financial performance before and during the Covid-19 pandemic on the IDX using the solvency ratio measured by the Debt to Equity Ratio and the Debt to Asset Ratio.

H3: It is suspected that there are differences in the company's financial performance before and during the Covid-19 pandemic on the IDX using the activity ratio as measured by the Total Asset Turnover Ratio and the Fixed Asset Turnover Ratio.

H4: It is suspected that there are differences in the company's financial performance before and during the Covid-19 pandemic on the IDX using profitability ratios as measured by Return on

Assets and Return on Equity.

H5 : It is suspected that there are differences in the company's financial performance before and during the Covid-19 pandemic on the IDX using the market value ratio as measured by the Price Earning Ratio and Price Book Value.

4. Research methodology

4.1.Types of research.

In this study the authors used a comparative research type using a quantitative research approach to case studies of food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) for 2018-2021. The selection of this type of comparative research with a quantitative approach is in accordance with the research objectives, namely to find out differences in the financial performance of manufacturing and beverage manufacturing companies between before and during the Covid-19 pandemic based on liquidity ratios, activity ratios, leverage ratios, profitability ratios and market value ratios.

4.2.Data Sources and Data used in Research

Data sources in this study were obtained from the website of PT. Indonesia Stock Exchange (IDX)www.idx.co.id. DThe data used in this study are financial reports in the form of income statements and company balance sheets related to research variables over the last four years, namely 2018-2021.

4.3.Population and Research Sample

The population in this study are all food and beverage manufacturing companies listed on the IDX in 2018-2021. Researchers limit the population so that the population in this study is homogeneous, thus minimizing the level of difficulty. The total population to be studied in this study is 25 sample companies. The following is a list of the population of telecommunications companies listed on the IDX in 2018-2021.

Table 2. List of Companies in the Food and Beverage Sector Listed on the IDX in 2018-2021.

No	Issuer Code	Issuer Name
1.	AISA	PT. FKS Food Sejahtera Tbk
2.	ALTO	PT. Tri Banyan Tirta Tbk
3.	CAMP	PT. Campina Ice Cream Industry Tbk
4.	CHECK	PT. Wilmar Cahaya Indonesia Tbk
5.	CLEO	PT. Sariguna primatirta Tbk
6	COCO	PT. Wahana Interfood Nusantara Tbk
7.	DLTA	PT. Delta Djakarta Tbk
8.	DMND	PT. Diamond Food Indonesia Tbk
9.	FOOD	PT. Sentra Food Indonesia Tbk
10.	GOOD	PT. Garuda Food Putri Jaya Tbk
11.	HOCKEY	PT. Buyung Poetra Sembada Tbk
12.	ICBP	PT. Indofood CBP Sukses Makmur Tbk
13.	FISH	PT. Era Mandiri Cemerlang Tbk
14.	INDF	PT. Indofood Sukses Makmur Tbk
15	CHEESE	PT. Mulia Boga Raya Tbk
16.	MLBI	PT. Muti Bintang Indonesia Tbk
17.	MYOR	PT. Mayora Indah Tbk

18.	PANI	PT. Pratama Adi Nusa Industri Tbk
19.	PSDN	PT. Prasidha Aneka Niaga Tbk
20.	PSGO	PT. Palma Serasih Tbk
21.	BREAD	PT. Nippon Indosari Corpindo Tbk
22.	SKBM	PT. Sekar Bumi Tbk
23.	SKLT	PT. Sekar Laut Tbk
24.	STTP	PT. Siantar Top Tbk
25.	ULTJ	PT. Ultrajaya Milk Industry Tbk

Source: Indonesia Stock Exchange, 2022

Based on the data above, the study took samples with the following criteria:

1. The companies used in this research are food and beverage manufacturing companies that have gone public and are listed on the Indonesian Stock Exchange.
2. The company has complete financial statements for the period 2018 - 2021.
3. Have a positive profit.

Based on these criteria, the companies that were sampled in this study were (Table 3):

Table 3. List of Research Sample Companies

No	Issuer Code	Issuer Name
1.	CAMP	PT. FKS Food Sejahtera Tbk
2.	CHECK	PT. Tri Banyan Tirta Tbk
3.	CLEO	PT. Campina Ice Cream Industry Tbk
4.	COCO	PT. Wilmar Cahaya Indonesia Tbk
5.	DLTA	PT. Sariguna primatirta Tbk
6.	DMND	PT. Wahana Interfood Nusantara Tbk
7.	GOOD	PT. Garuda Food Putri Jaya Tbk
8.	HOCKEY	PT. Buyung Poetra Sembada Tbk
9.	ICBP	PT. Indofood CBP Sukses Makmur Tbk
10.	INDF	PT. Indofood Sukses Makmur Tbk
11.	CHEESE	PT. Mulia Boga Raya Tbk
12.	MLBI	PT. Muti Bintang Indonesia Tbk
13.	MYOR	PT. Mayora Indah Tbk
14.	BREAD	PT. Nippon Indosari Corpindo Tbk
15.	SKBM	PT. Sekar Bumi Tbk
16.	SKLT	PT. Sekar Laut Tbk
17.	STTP	PT. Siantar Top Tbk
18.	ULTJ	PT. Ultrajaya Milk Industry Tbk

Source: Indonesia Stock Exchange, 2022

4.4.Data analysis technique

The data analysis method used in this study is data processing using SPSS software. The statistical method used in this research is the data normality test and the hypothesis test. The process of analysis in this study, as follows:

1. Collecting the data needed in this study from the website of PT. Indonesia Stock Exchange (IDX),www.idx.co.id.The data includes financial reports (profit and loss) and company balance sheets.
2. Conduct analysis related to problems that occur in the research sample by conducting

comparisons Analysis of liquidity ratios, solvency, activity, profitability and market value before and during Covid-19.

3. do processingdata using SPSS. Results The data that has been analyzed is displayed in table form and an explanation of the results of the data is described.
4. Draw conclusions on research results and provide suggestions according to the research results obtained.

4.4.1. Data Normality Test

The test is carried out if the sample used to analyze whether the data is normally distributed or close to normal. The data normality assumption test tool used is the Kolmogorov-Smirnov test. Samples are normally distributed if the asymptotic sig > 0.05, otherwise it is said to be abnormal if the asymptotic sig <0.05. If the tested data is normally distributed, then parametric statistics will be used to test the hypothesis with the T test. If the research data is not normally distributed, then the alternative Wilcoxon Signed Rank Test can be used.

4.4.2. Difference Test

1. **Paired sample T-test (paired sample T test).**The paired sample t test is used to test whether there is a mean difference for two paired independent samples. The requirements for the Paired T Test are the differences in the two groups of normally distributed data. So the normality test must be carried out first on the differences in the two groups.
2. **Wilcoxon Signed Rank Test.**The Wilcoxon Signed Rank Test is a non-parametric test to measure the significance of the difference between two groups of paired data on an ordinal or interval scale but not normally distributed. The Wilcoxon Signed Rank Test is an alternative test to the paired t test or paired t test if it does not meet the normality assumption. The Wilcoxon power of sign statistical test is a type of non-parametric statistics used when the researcher does not know the characteristics of the group of items that are the sample. Non-parametric tests are useful when the sample is small and easier to calculate than the parametric method. In non-parametric statistics, conclusions can be drawn regardless of the shape of the population distribution (distribution-independent statistics).

4.5.Variable Operational Definitions

According to Sugiyono (2017: 39) A research variable is an attribute or trait or value of a person, object, or activity that has certain variations determined by the researcher to be studied and then drawn conclusions. Variable operationalization is needed to measure the variables used in the research. The variables contained in this study are the financial performance variables of manufacturing companies in the food and beverage sector which are measured using the financial ratio analysis method, namely: financial ratios of Liquidity, Solvability, Activity, and Profitability as well as market value ratios.

5. Research Results and Discussion

5.1.Research result

Table 4 shows the processing of data from 18 research sample companies based on 5 types of financial ratios, namely liquidity ratios, solvency ratios, activity ratios, profitability ratios and market value ratios.

Table 4. Calculation of Financial Ratios

Year	CR (X1)	QR(X 2)	DAR (X3)	DER (X4)	TATT OO (X5)	FATO (X6)	ROA (X7)	ROE (X8)	PER (X9)	PBV (X10)
2018	10.602	8,022	1,546	2,469	4,147	16,579	0.621	0.639	134,689	15,699
2019	11.166	8,474	1,551	2,475	4,146	16,383	0.627	0.646	133,777	15,753

2020	11,735	8,899	1,570	2,514	4,128	16,144	0.630	0.654	133,109	15,837
2021	12,090	9,169	1,580	2,531	4.102	15,944	0.632	0.658	132,379	15,929

Source: Processed Data 2022

5.1.1. Descriptive Statistical Analysis.

The following table is the result of a descriptive statistical analysis of 18 food and beverage manufacturing companies.

Table 5. Descriptive Statistics

	N	Minimum	Maximum	Means	std. Deviation
CR Before	36	.56	12.63	2.9839	2.77277
CR After	36	.62	13.31	3.3369	2.94346
QR Before	36	.17	9.65	2.4286	2.43469
QR After	36	.22	11.43	2.3775	2.45962
DAR Before	36	.06	3.58	.4383	.56228
DAR After	36	.11	.62	.3597	.14903
DER Before	36	.07	2.24	.6442	.48104
DER Suduh	36	.12	1.66	.6300	.39113
TATTOO Before	36	.41	3.10	1.1922	.51136
TATTOO After	36	.05	2.18	.9375	.44585
FATO Before	36	.94	10:70 p.m	4.6631	4.41693
FATO After	36	.18	15.29	3.6817	3.00873
ROA Before	36	.00	.42	.1142	.09364
ROA After	36	.01	4.48	.2078	.73459
ROE Before	36	.00	1.05	.1983	.22409
ROE After	36	.01	.61	.1364	.10742
PER Before	36	4.69	169.41	32.8192	29.88663
PER After	36	4.96	153.46	36.2650	33.62303
PBV Before	36	.66	28.50	4.5919	4.97743
PBV After	36	.00	14.95	3.5583	3.26786
Valid N (listwise)	36				

Source: Data processed by SPSS 25 (2022)

Based on table 5, it can be seen that the number of data (N) is 36 data, the minimum value for ROA, ROE and PBV is 0.00, while the maximum value for PER is 169.41, the average (mean), and the standard deviation for each variable. The average value (mean) at PER 36.2650 describes the size in determining the distribution center. While the standard deviation describes the variation in the distribution of data, if the value of the distribution of data is getting smaller then the variance of the data will look more the same, and vice versa if the value of the data distribution is getting bigger then the data is more varied. Based on the table above, it can be seen that from all variables, 10 variables were obtained which had a low standard deviation value, which means that the data in this study contained a small level of deviation. While the remaining 10 variables have a high standard deviation value,

5.1.2. Paired Sample T-Test

Test*Paired Sample T-Test*all data will be processed with the classic assumption test, namely the normality test. The normality test used in this study is the Kolmogorov-Smirnov test, with the following decisions:

Table 6. One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test				
Normality test				
Variable	Period	P Value	Sig (2-tailed)	Information
Current Ratio (CR)	Before	0.000	0.05	Abnormal
	After	0.001	0.05	Abnormal
Quick Ratio (QR)	Before	0.000	0.05	Abnormal
	After	0.000	0.05	Abnormal
Debt to Asset Ratio (DAR)	Before	0.000	0.05	Abnormal
	After	0.200	0.05	Normal
Debt to Equity Ratio (DER)	Before	0.121	0.05	Normal
	After	0.041	0.05	Abnormal
Total Asset Turnover (TATO)	Before	0.200	0.05	Normal
	After	0.200	0.05	Normal
Fixed Asset Turnover Ratio (FATO)	Before	0.000	0.05	Abnormal
	After	0.001	0.05	Abnormal
Return On Assets (ROA)	Before	0.011	0.05	Abnormal
	After	0.000	0.05	Abnormal
Return On Equity (ROE)	Before	0.000	0.05	Abnormal
	After	0.063	0.05	Normal
Price Earning Ratio (PER)	Before	0.000	0.05	Abnormal
	After	0.000	0.05	Abnormal
Price to Book Value (PBV)	Before	0.000	0.05	Abnormal
	After	0.000	0.05	Abnormal

Source: Data processed by SPSS 25 (2022)

Here the researcher provides a summary of the results of the study using the Kolmogorov-Smirnov test, which is as follows:

1. If the p-value > the significant level is 0.05, the data is declared to be normally distributed.
2. If the p-value is < the significant level, which is 0.05, the data is declared to be not normally distributed.

Based on table 6 it can be seen that the Asymp. Sig. (2-tailed) on the One-Sample Kolmogorov-Smirnov Test :

1. *Current Ratio*(CR) before covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and Current Ratio (CR) after covid-19 is 0.001 where it is < 0.05 which means the data is not normally distributed.
2. *Quick Ratio*(QR) before covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and the Quick Ratio (QR) after covid-19 is 0.001 where it is < 0.05 which means the data is not normally distributed.
3. *Debt to Asset Ratio*(DAR) before Covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and the Debt to Asset Ratio (DAR) after Covid-19 is 0.200 where it is > 0.05 which means the data is normally distributed.
4. *Debt to EquityRatio*(DER) before Covid-19 was 0.121 where > 0.05 which means the data is normally distributed, and the Debt to Equity Ratio (DER) after Covid-19 is 0.041 where it is < 0.05 which means the data is not normally distributed.
5. *Total Asset Turnover*(TATO) before covid-19 was 0.200 where > 0.05 which means the data

is normally distributed, and Total Asset Turnover (TATO) after covid-19 is 0.200 where > 0.05 which means the data is normally distributed.

6. *Fixed Asset Turnover Ratio*(FATO) before Covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and the Fixed Asset Turnover Ratio (FATO) after Covid-19 is 0.001 where it is < 0.05 which means the data is not normally distributed.
7. *Return On Assets*(ROA) before Covid-19 was 0.011 where < than 0.05 which means the data is not normally distributed, and Fixed Asset Return On Assets (ROA) after Covid-19 is 0.000 where it is < 0.05 which means the data is not normally distributed.
8. *Return On Equity*(ROE) before Covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and Return On Equity (ROE) after Covid-19 is 0.063 where it is > 0.05 which means the data is normally distributed.
9. *Price Earning Ratio*(PER) before covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and the Price Earning Ratio (PER) after covid-19 is 0.001 where it is < 0.05 which means the data is not normally distributed.
10. *Price to Book Value*(PBV) before covid-19 was 0.000 where < than 0.05 which means the data is not normally distributed, and Price to Book Value (PBV) after covid-19 is 0.001 where it is < 0.05 which means the data is not normally distributed.

5.1.3. Decision Making (Wilcoxon Test)

This test is carried out because based on the data normality test there are data that are not normally distributed, the following are the results of the Wilcoxon test.

Table 7. Wilcoxon test results

Test Statistics				
Variable	Period	Asymp value. Sig. (2-tailed)	Sig (2-tailed)	Information
Current Ratio(CR)	After	0.006	0.05	Different
	Before		0.05	Significant
Quick Ratio(QR)	After	0.045	0.05	Different
	Before		0.05	Significant
Debt to Asset Ratio (DAR)	After	0.759	0.05	No Different
	Before		0.05	Significant
Debt to Equity Ratio (DER)	After	0.931	0.05	No Different
	Before		0.05	Significant
Total Asset Turnover (TATTOO)	After	0.001	0.05	Different
	Before		0.05	Significant
Fixed Asset Turnover Ratio (FATO)	After	0.010	0.05	Different
	Before		0.05	Significant
Return On Assets (ROA)	After	0.032	0.05	Different
	Before		0.05	Significant
Return On equity (ROE)	After	0.034	0.05	Different
	Before		0.05	Significant
Price Earning Ratio (PER)	After	0.850	0.05	No Different
	Before		0.05	Significant
Price to Book Value (PBV)	After	0.005	0.05	Different
	Before		0.05	Significant

Source: Data processed by SPSS 25 (2022)

Table 7shows the results after carrying out the Wilcoxon Signed Ranks Test on the data, the significance level used has the following criteria:

If Asymp. Sig. (2-tailed) < 0.05 then H0 is rejected and H1 is accepted

If Asymp. Sig. (2-tailed) > 0.05 then H0 is accepted and H1 is rejected

Wilcoxon Signed Ranks Test:

1. Results from Asymp. Sig. (2-tailed) CR After – CR Before is 0.006 where < than 0.05 which means H0 is rejected H1 is accepted, meaning that the company's financial performance at the value of Current Ratio (CR) before and during the pandemic was significantly different.
2. Results from Asymp. Sig. (2-tailed) QR After – QR Before is 0.045 where < than 0.05 which means H0 is rejected H1 is accepted, meaning that the company's financial performance in the Quick Ratio (QR) value before and during the pandemic was significantly different.
3. Results from Asymp. Sig. (2-tailed) DAR After – DAR Before is 0.759 where > 0.05 which means H0 is accepted H2 is rejected, meaning that the company's financial performance in the Debt to Asset Ratio (DAR) value before and during the pandemic was not significantly different.
4. Results from Asymp. Sig. (2-tailed) DER After – DER Before is 0.931 where > 0.05 which means H0 is accepted H2 is rejected, meaning that the company's financial performance in the Debt to Equity Ratio (DER) value before and during the pandemic was not significantly different.
5. Results from Asymp. Sig. (2-tailed) TATO After – TATO Before is 0.001 where < than 0.05 which means H0 is rejected H3 is accepted, meaning that the company's financial performance in the value of the Total Asset Turnover Ratio (TATO) before and during the pandemic was significantly different.
6. Results from Asymp. Sig. (2-tailed) FATO After – FATO Before is 0.010 where < than 0.05 which means H0 is rejected H3 is accepted, meaning that the company's financial performance in the value of the Fixed Asset Turnover Ratio (FATO) before and during the pandemic was significantly different.
7. Results from Asymp. Sig. (2-tailed) ROA After – ROA Before is 0.032 where < than 0.05 which means H0 is rejected H4 is accepted, meaning that the company's financial performance in Return On Assets (ROA) before and during the pandemic was significantly different.
8. Results from Asymp. Sig. (2-tailed) ROE After – ROE Before is 0.034 where < than 0.05 which means H0 is rejected H4 is accepted, meaning that the company's financial performance in Return On Equity (ROE) before and during the pandemic was significantly different.
9. Results from Asymp. Sig. (2-tailed) After PER – Before PER is 0.850 where > 0.05 which means H0 is accepted H5 is rejected, meaning that the company's financial performance in the value of the Price Earning Ratio (PER) before and during the pandemic was not significantly different.
10. Results from Asymp. Sig. (2-tailed) PBV After – PBV Before is 0.005 where < than 0.05 which means H0 is rejected H1 is accepted, meaning that the company's financial performance at the Price to Book Value (PBV) before and during the pandemic was significantly different.

5.2.Discussion

5.2.1. Differences in Liquidity Ratios Before and During the Covid-19 Pandemic

Based on the results of the H1 test in this study, it means that there are differences in the financial performance of food and beverage manufacturing companies in the Current Ratio (CR) and Quick Ratio (QR) values before and during Covid-19. This is in line with research conducted by Gunawan (2021), which means that there has been an increase in the liquidity ratio indicating that the company's ability to pay off short-term obligations has increased. However, during a pandemic, an increase in this ratio is not a good thing. The higher the liquidity ratio indicates the large number of current assets owned by the company which should be used efficiently to generate greater company profits.

5.2.2. Differences in Solvability Ratios Before and During the Covid-19 Pandemic

The results of the H2 test in this study were rejected, which means that there was no significant difference in the solvency ratio in the Debt to Asset Ratio (DAR) and Debt to Equity Ratio (DER) values before and during the Covid-19 pandemic. The solvency ratio is used to measure how capable a company is in paying off all of its debts. These results are in line with research from Yusnita and Astuti (2021) and Gunawan (2021). An increase in the solvency ratio can be seen from the average DAR and DER values before and during the Covid-19 pandemic, which indicates that things are not good. This is because the higher the solvency ratio means the company's ability to pay off its obligations tends to be not on time (Andini, 2020).

5.2.3. Differences in activity ratios before and during the Covid-19 pandemic

The results of the H3 test in this study were rejected, which means that there was no significant difference in the activity ratio in the Total Asset Turnover (TATO) and Fixed Asset Turnover (FATO) values before and during the Covid-19 pandemic. The activity ratio is used to measure how effective a company is in using its assets. In line with research conducted by Gunawan (2021) and Amalia, et al (2021). The lower the activity ratio, the worse it is. This is because the decrease in the activity ratio during the Covid-19 pandemic indicates that companies are working more inefficiently than before Covid-19. In addition, the company's liquidity level also decreased. However, the differences found did not differ too much, so there were no significant differences before and during the Covid-19 pandemic.

5.2.4. Differences in Profitability Ratios Before and During the Covid-19 Pandemic

The results of the H4 test in this study are accepted, which means that there is a significant difference in the profitability ratios in the value of Return on Assets (ROA) and Return on Equity (ROE) before and during the Covid-19 pandemic. In line with research conducted by Esomar (2021) and Raja (2021). The decline in several profitability ratios indicates that the profit earned during the Covid-19 pandemic has decreased compared to before Covid-19. This decrease was due to a decrease in people's buying interest during the pandemic which resulted in decreased company profits.

5.2.5. The Difference in the Market Value Ratio Before and During the Covid-19 Pandemic

The results of the H5 test on the market value ratio are Price Earning Ratio (PER) and Price Book Value (PBV). The Price Earning Ratio (PER) variable shows that the company's financial performance is not significantly different, while the Price Book Value (PBV) variable shows that the company's financial performance is significantly different. The results of this study are in line with the results of Yusnita and Astuti's research (2021). The Price Book Value (PBV) underwent significant changes before and during the pandemic because the company needed a source of funds so that it issued new shares and gave the rights to the old shareholders first. If the shares traded by the company are purchased by the old shareholder, it will benefit the old shareholder

himself because it will result in an increase in the book value (internal value) of a company compared to before the COVID-19. Meanwhile, the average PER value during the pandemic decreased which was not too significantly different, which means that there was a decrease in investor interest in investing in companies in the food and beverage sector.

6. Conclusions and recommendations

6.1.Conclusion

Based on the results of research and discussion, researchers draw the following conclusions:

1. there is a significant difference in the company's financial performance in the liquidity ratio, namely the Current Ratio (CR) and Quick Ratio (QR) before and during Covid-19.
2. there is no significant difference in the company's financial performance in the solvency ratio on the Debt to Asset Ratio (DAR) and Debt to Equity Ratio (DER) values before and during the Covid-19 pandemic.
3. there is a significant difference in the company's financial performance in the ratio of activity to the value of Total Asset Turnover (TATO) and Fixed Asset Turnover (FATO) before and during the Covid-19 pandemic.
4. there is a significant difference in the company's financial performance in terms of profitability ratios in the value of Return on Assets (ROA) and Return on Equity (ROE) before and during the Covid-19 pandemic.
5. based on the test results there is a significant difference in the company's financial performance in the market value ratio, namely Price Earning Ratio (PER) and Price Book Value (PBV). The Price Earning Ratio (PER) variable shows that the company's financial performance is not significantly different while the Price Book Value variable (PBV) shows that the company's financial performance differed significantly before and during the Covid-19 pandemic.

6.1 Suggestion

According to the discussion and results of the analysis in this study, the following are the authors' suggestions as follows:

1. This study hopes that future researchers can increase the number of samples and the study period and add variables to be studied if they want to get maximum and accurate results.
2. For investors, what can be taken from this research is to consider their funds more invested in food and beverage companies because this sector is the sector that is considered most resilient, this sector is the most resistant to monetary or economic crises, compared to other sectors.
3. Companies can improve financial performance by issuing more products according to the conditions and needs of the community so that profits can experience an increase in profits generated which are expected to be a source of working capital, business expansion and debt payments, so that it can be mutually beneficial for shareholders and investors.

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