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Analysis of Financial Ratio to Assets Financial Performance in Food and Beverage Sub Sector of Manufacturing Companies Listed on the Indonesian Stock Exchange (IDX) for the Period 2019-2022

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Abstract

The purpose of this study is to use financial ratio analysis to evaluate the company's financial performance. The food and beverage companies that are listed on the Indonesia Stock Exchange (IDX) for the 2019–2022 timeframe comprise the study's population. Secondary data from the Indonesia Stock Exchange publication is the sort of data that was used. Eight businesses served as the study's samples, which were selected using a purposive sampling technique. Multiple regression analysis is the method of data analysis that is employed. The Eight businesses are PT Tri Banyan Tirta Tbk, PT Wilmar Cahaya Indonesia Tbk, PT Garudafood Putra Putri Jaya Tbk, PT Buyung Poetra Sembada Tbk, PT Indofood CBP Sukses Makmur Tbk, PT Mayora Indah Tbk, PT Sekar Laut Tbk, and PT Ultra Jaya Milk Industry & Trading Company Tbk. The study's findings show that while liquidity has a large positive impact on financial performance, solvency has a large impact on financial performance, profitability has a significant impact on financial performance.

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INTRODUCTION

A manufacturing company is a type of company that transforms raw materials into finished goods through a series of production processes. This involves the use of machines, tools, and labor to achieve a physical product. Companies in the food and beverage sub sector often operate in a highly competitive industry, during the period 2020-2022, the industry faced various challenges, including changes in consumer trends and due to the impact of COVID-19. The food and beverage sector industry in some companies has utilized digital technology from the production process to distribution which encourages the realization of more efficient company performance. Therefore, financial ratio analysis is important to understand the extent to which the company can survive and thrive.

Table 1. Value and GDP growth of food and beverage industry (2019-2022)

Year	GDP at current prices (Rp trillion)	GDP Growth (%)
2019	744,17	7,78%
2020	755,91	1,58%
2021	775,1	2,54%
2022	813,06	4,9%

Source: BPS - Statistics Indonesia

Based on the data in Table 1, the food and beverage sector has ups and downs. The Central Statistics Agency (BPS) recorded that the gross domestic product in 2022 based on constant prices for the food and beverage industry amounted to IDR 813.06 trillion. That value increased by 4.90% compared to the previous year of IDR 775.10 trillion. In 2020, it decreased by 1.58% due to the Covid-19 pandemic in Indonesia. According to

the Ministry of Industry (Kemenperin), the growth of the food and beverage industry was driven by an increase in products and commodities. Another factor was the increase in CPO exports due to high global demand over the past year. Where food and beverages contributed 33.92% to the GDP of the manufacturing industry (Bayu, 2023). The company's ability to carry out its operations is determined by the company's efficiency in obtaining profitability, which is assessed by the company generating profits. Financial management is tasked with carrying out financial planning and control so that the process runs well. A tool is needed to measure the achievement of company value that supports company performance. In general, companies need records of company activities, this is recorded in one period in the form of financial statements (Susanto et al., 2020). A company's financial statements serve as a record of its financial data over a specific time period, providing insight into the performance of the business. You have to analyze the financial statements in order to comprehend them. Financial statements are analyzed using ratios to provide information about how the analysis addresses issues that may occur in a business (Loho et al., 2021).

LITERATURE REVIEW

The Effect of Liquidity on Company Value

The capacity of a business to meet its commitments is known as liquidity. The value of the company will increase with greater liquidity, and the value will decrease with lesser liquidity. A firm's short-term commitments will be affected by high cash capacity, which will also increase the value of the company (Rinofah et al., 2022).

The Effect of Solvency on Company Performance

The solvency ratio is the ability of a company to fulfill its obligations on time, if the company liquidate, whether it is short-term liabilities or short-term liabilities. Whereas a company's financial performance is an analysis carried out to see the extent of a company's financial performance the company has implemented it by using financial implementation rules good and right (Rinofah et al., 2022).

The Effect of Profitability on Company Performance

The amount of net profit that a business can make while operating is known as profitability. Increased demand for shares from investors can be a sign of a company with strong profits or profitability. Merely leveraging a strong rise in business profitability indicates that the company will improve going forward and will be seen favorably by investors (Rinofah et al., 2022).

RESEARCH METHODS

This research uses a descriptive type using a sample of 8 food and beverage companies listed on the Indonesia Stock Exchange, namely PT Garudafood Putri Jaya Tbk, PT Indofood CBP Sukses Makmur Tbk, PT Mayora Indah Tbk, PT Ultrajaya Milk Industry Tbk, PT Wilmar Cahaya Indonesia Tbk, PT Sekar Laut Tbk, PT Buyung Poetra Sembada Tbk and PT Tri Banyan Tirta Tbk. In determining the sample, non-probability sampling was used with a sampling technique, namely purposive sampling. The data source is secondary data using data gathering techniques, specifically documentation, and the type of data is quantitative data. Utilizing ratio analysis of liquidity, solvency, and profitability, a quantitative descriptive data analysis method is applied.

The data analysis method uses statistical techniques which include several types. This analysis is carried out to test the variables CR, DER, and NPM on financial performance projected using ROA. This study uses data feasibility tests, namely Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test at the initial stage of data analysis. The next step is to conduct multiple linear regression analysis. Operational definitions and research variables include:

Liquidity ratio in this study is measured using Current Ratio. Current Ratio calculations can be calculated using the following formula:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \; x \; 100\%$$

Solvency ratio in this study is measured using debt-to-equity ratio (DER). Debt-to-equity ratio (DER) calculations can be calculated using the following formula:

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}} \; x \; 100\%$$

Profitability ratio in this study is measured using Net Profit Margin (NPM). Net Profit Margin (NPM) calculations can be calculated using the following formula:

$$\text{NPM} = \frac{\text{Earning After Tax (EAT)/}}{\text{Net Sales}} \; x \; 100\%$$

Company performance in this study is measured using Return On Asset (ROA). Calculation of Return On Asset (ROA) can be calculated using the following formula:

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Aaset}} \; x \; 100\%$$

Table 2. Financial Ratio

Company code	Year	Liquidity Ratio	Profitability Ratio	Solvency Ratio
		Current ratio	NPM	DER
ALTO	2019	0,88	-2,15%	1,90
	2020	0,82	-3,27%	1,96
	2021	0,81	-2,43%	1,99
	2022	0,81	-3,94%	1,93
CEKA	2019	4,80	6,90%	0,23
	2020	4,66	5,00%	0,24
	2021	4,80	3,49%	0,22
	2022	9,95	3,59%	0,11
GOOD	2019	1,53	5,16%	0,83
	2020	1,77	3,18%	1,25
	2021	1,48	5,60%	1,22
	2022	1,74	4,96%	1,19
HOKI	2019	2,99	6,27%	0,32
	2020	2,24	3,24%	0,37
	2021	1,60	1,27%	0,48
	2022	3,27	0,01%	0,21
ICBP	2019	2,54	12,67%	0,45
	2020	2,26	15,91%	0,92
	2021	1,80	13,93%	1,15
	2022	3,10	8,83%	1,14
MYOR	2019	3,44	8,20%	0,92
	2020	3,61	8,57%	0,75
	2021	2,33	4,34%	0,75
	2022	2,62	6,42%	0,74
SKLT	2019	1,30	3,51%	1,08
	2020	1,50	3,39%	0,90
	2021	1,80	6,23%	0,64
	2022	1,60	4,86%	0,75
ULTJ	2019	4,44	16,65%	0,17
	2020	2,40	18,60%	0,83
	2021	3,11	19,30%	0,44
	2022	3,17	12,61%	0,27

Source: Processed IDX data

Table 3. Financial performance projected by return on assets (ROA)

Company code	Year	ROA
ALTO	2019	15,47%
	2020	11,61%
	2021	11,02%
	2022	12,84%
CEKA	2019	15,47%
	2020	11,61%
	2021	11,02%
	2022	12,84%
GOOD	2019	8,61%
	2020	3,67%
	2021	7,28%
	2022	7,12%
HOKI	2019	12,22%
	2020	4,19%
	2021	1,20%
	2022	0,01%
ICBP	2019	13,85%
	2020	7,17%
	2021	6,70%
	2022	4,96%
MYOR	2019	10,78%
	2020	10,61%
	2021	6,08%
	2022	8,84%
SKLT	2019	5,68%
	2020	5,49%
	2021	9,51%
	2022	7,25%
ULTJ	2019	15,67%
	2020	12,68%
	2021	17,24%
	2022	13,09%

Source: Processed IDX data

RESULTS AND DISCUSSION

The cash ratio is used to measure the liquidity of current assets that can be converted into cash. In several studies, as found by Bandaso et al., (2023) The cash ratio is calculated by adding up cash and short-term securities, then dividing by total current assets. The research results show that a high cash ratio shows the company's ability to manage current assets and generate cash more quickly. The solvency ratio is used to measure the extent to which a company's assets are financed with debt and to measure the company's ability to pay its obligations. In several studies, as found Suharti et al., (2017) The solvency ratio is calculated by adding up total debt and dividing it by total assets. The research results show that a low solvency ratio indicates the company's ability to manage debt and pay obligations. Profitability ratios are used to measure a company's ability to generate profits through all existing sources and capabilities. In several studies, as found Siti Chanifah & Budi, (2017) Profitability ratios are calculated by adding up gross profit and dividing it by net sales. The research results show that a high profitability ratio indicates the company's ability to generate greater profits. Some research, as found Nur Hidayati et al., (2023) shows that financial ratio analysis can be used to determine the effect of financial ratios on a company's financial performance. The research results show that financial ratios such as the current ratio, debt to total assets ratio, and debt to equity ratio can influence the company's financial performance.

Figures and Tables

Figure X_1: likuidity has a positive effect on financial performance Y
Figure X_2: profitability has a positive effect on financial performance Y
Figure X_3: solvency has a positive effect on financial performance Y

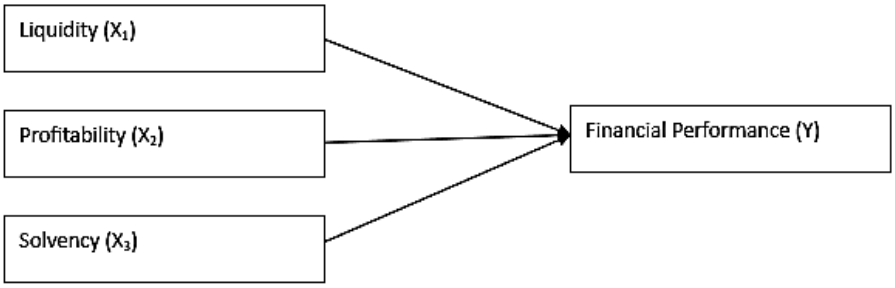


Figure 1. Research conceptual framework

Table 4. Descriptive statistics test result

Descriptive Statistics

	N Statistic	Range Statistics	Minimum Statistic	Maximum Statistics	Sum Statistics	Mean		Std. Deviation Statistics	Variancce Statistic
						Statistic	Std. Error		
LR	32	9.14	.81	9.95	85.17	2.6616	.31315	1.77143	3.138
PR	32	23.24	-3.94	19.30	200.90	6.2781	1.07417	6.07641	36.928
SR	32	1.88	.11	1.99	26.35	.8234	.09736	.55073	.303
KK	32	18.82	-1.58	17.24	246.82	246.82	.92986	5.26008	27.668
Valid N (listwise)	32								

Source: Output SPSS version 25

Based on Table 4, the results of descriptive variable analysis testing include the lowest value (minimum), highest value (maximum), average value (mean), and standard of the dependent variable and independent variable. The value of "N" indicates 32 observations consisting of 8 companies for 4 years.

Table 5. Results of testing the classic multicollinearity assumption

Coefficients[a]

Model		Unsttandardized B	Cefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Tolerance	Statistics VIF
1	(Constant)	4.381	2.019		2.170	0.039		
	Liability (X1)	.840	.347	.283	2.418	0.022	0.546	1.832
	Profitability (X2)	.501	.084	.578	5.947	0.000	0.790	1.266
	Solvancy (X3)	-2.485	1.216	-.260	-2.043	0.051	0.460	2.173

Dependent Variabel: Financial Performance (Y)

Source: Output SPSS version 25

Based on Table 5, information is obtained regarding the Tolerance and VIF values of each independent variable. (1) the Liability variable (X_1) has a Tolerance value of 0.546> 0.1 and a VIF value of 1.832 < 10.; (2) the Profitability variable (X_2) has a Tolerance value and a VIF value of 0.790> 0.1 and a VIF value of 1.266 < 10; and (2) the Solvency variable (X_3) has a Tolerance value and a VIF value of 0.460> 0.1 and a VIF value of 2.173 < 10.

Table 6. Results of classic autocorrelation assumption testing

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	0.889[a]	0.791	0.769	2.53054	1.470

Predictors: (Constant), SR, PR, LR
Dependent Variabel: KK

Source: Output SPSS version 25

The results of Table 6 can be seen that the Durbin Watson value is 1.470, meaning that there is no auto-correlation in this regression model because the Durbin Watson value is between -2 to +2. It can be seen based on table 4 that the R-Squared value is at 0.791, this shows that the influence of the independent variables, namely liquidity, profitability, and solvency on the dependent variable, namely financial performance, which is explained in this equation is 76.9%. While the remaining 23.1% is influenced by other variables that are not in this regression model.

Table 7. Multiple linear regression test results

Coefficients[a]

Model		Unsttandardized B	Cefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Tolerance	Statistics VIF
1	(Constant)	4.381	2.019		2.170	0.039		
	Liability (X1)	0.840	0.347	0.283	2.418	0.022	0.546	1.832
	Profitability (X2)	0.501	0.084	0.578	5.947	0.000	0.790	1.266
	Solvancy (X3)	-2.485	1.216	-0.260	-2.043	0.051	0.460	2.173

Dependent Variabel: Financial Performance (Y)

Source: Output SPSS version 25

Based on the Table 7, the regression equation can be arranged as follows:
$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + e$
$Y = 4{,}381 + 0{,}840\ (X_1) + 0{,}501\ (X_2) - 2{,}485\ (X_3) + \varepsilon$

The constant of the multiple linear regression equation is 4.381. This explains that if Liability, Solvency, and Profitability are zero (0), then the Financial Performance is 4.381.

The regression coefficient for the Liability variable is 0.840 and is positive, this indicates that for every one unit change in liabilities while solvency and profitability are assumed to be constant, the amount of financial performance will change, namely an increase of 0.840.

The regression coefficient for the Profitability variable is 0.501 and has a positive sign, this explains that any change of one unit in liabilities while solvency and profitability are assumed to remain, the amount of financial performance will change, namely an increase of 0.501.

The regression coefficient for the Profitability variable is -2.485 with a negative sign, this explains that every change of one unit in liabilities while solvency and profitability are assumed to remain, the amount of financial performance will change, namely a decrease of -2.485.

Tabel 8. Simultaneous test results

ANOVA[a]

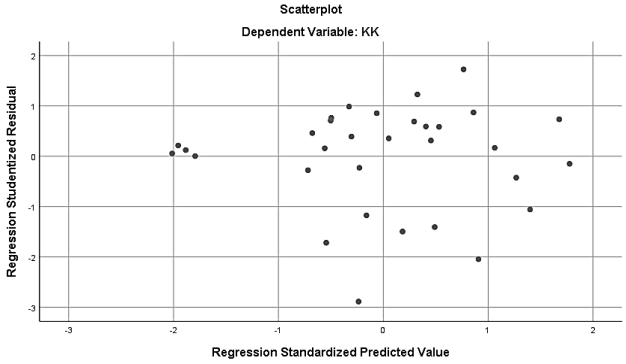
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	678.420	3	226.140	35.314	0.000[b]
	Residual	179.302	28	6.404	6.404	
	Total	857.722	31			

Dependent Variabel: Financial Performance (Y)
Predictors: (Constant), Solvancy (X3), Profitability (X2), Liability (X1)

Source: Output SPSS version 25

Based on the test results presented in the Table 8, a significant value can be obtained for the simultaneous influence of X1, X2, and X3 on Y. The probability value is 0.000 <0.05 and the calculated F value is 35.314> 2.95 Thus it can be concluded that simultaneously or together there is a significant influence between liquidity, profitability and solvency on financial performance.

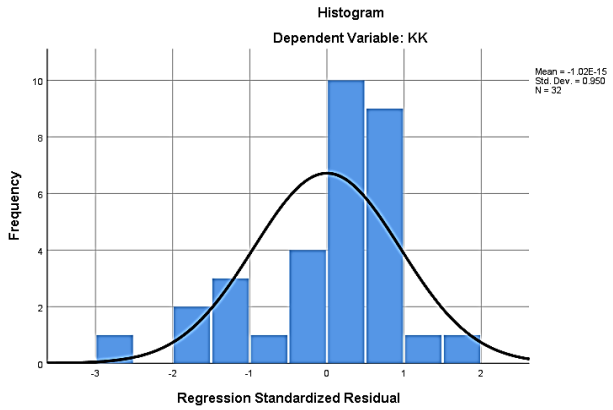
Figure 2. Heteroscedasticity test results



Source: Output SPSS version 25

It can be seen in the Figure 2 that the Scatter plot graph displayed for the heteroscedasticity test displays dots that spread and do not make a certain pattern, meaning that the data is free from heteroscedasticity.

Figure 3. Normality test results



Source: Output SPSS version 25

Based on the test results that the existing line shows consistency by looking at the left and right sides of the balance, looking at the picture above shows that the data is a normality test. Then it can be seen that the point is close to the line, meaning that the data is normally distributed.

The Effect of Liability, Solvency, and Profitability on Financial Performance

Based on the results of data processing and analysis that has been carried out, the results of hypothesis testing show the value of $F_{count} > F_{table}$ and the Sig. value is smaller than 0.05, meaning that simultaneously the independent variables, namely Current Ratio, Debt to Equity Ratio and Net Profit Margin, have a significant effect on the dependent variable, namely Return on Asset in food and beverage sub-sector manufacturing companies for the period 2019-2022. So it can be concluded that together the independent variables in this study can have a big influence on Return on Asset or the value in the Liquidity, Profitability, and Solvency variables will affect Financial Performance. The results of this study support research conducted by (Pratama et al., 2022) which provides results that Liquidity, Profitability and Solvency simultaneously have a significant effect on Financial Performance.

CONCLUSIONS

Based on the results of data analysis and discussion as described in the previous section, the conclusions of this study are as follows:

1. Profitability proxied by NPM (net profit margin) has a significant effect on firm value proxied by ROA (return on assets) in food and beverage sub manufacturing companies for the 2019-2022 period. This indicates that there is an influence between profitability on firm value.
2. Liquidity proxied by CR (current ratio) has a significant positive effect on firm value proxied by ROA (return on assets) in sub-food and beverage manufacturing companies for the 2019-2022 period. This indicates that there is an influence between liquidity on firm value.
3. Solvency proxied by DER (debt-to-equity ratio) has a significant positive effect on firm value proxied by ROA (return on assets) in sub-food and beverage manufacturing companies for the 2014-2019 period. This indicates that the greater the company's solvency, the higher the company's value will be.
4. Profitability proxied by NPM (net profit margin), liquidity proxied by CR (current ratio), and solvency proxied by DER (debt-to-equity ratio) have a significant positive effect simultaneously on firm value proxied by ROA (return on assets) in food and beverage sub manufacturing companies for the 2019-2022 period.

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