

Analysis of the Influence of Financial Ratios on Profit Changes in Food and Beverage Subsector Companies Listed on the Indonesian Stock Exchange from 2018 to 2021

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Abstract

The purpose of conducting this research is to test and analyze the effect of CR, QR, DER, DAR, TATO, ITO on changes in profits for food and beverage companies in 2018-2021. A total of 32 companies and 14 company samples were applied in this study, by applying quantitative methods and descriptive types with explanatory research in nature. Data was collected using the concept of documentation, in which the results of this study indicated that CR partially had no effect on changes in earnings with the results of multiple linear regression tests ($t_{count} -1.174 < t_{table} 2.0095$) with a significance value of $0.246 > 0.05$. QR also has no effect on changes in profit with a value ($t_{count} -0.043 < t_{table} 2.0095$) accompanied by a significance of $0.966 > 0.05$. DER has an effect on changes in profits with a value ($t_{count} 6.981 > t_{table} 2.0095$) accompanied by a significance of $0.000 < 0.05$. DAR has no effect on changes in earnings with a value ($t_{count} -1.225 < t_{table} 2.0095$) accompanied by a significance of $0.227 > 0.05$. TATO has no effect on changes in earnings with a value ($t_{count} 0.515 < t_{table} 2.0095$) accompanied by a significance of $0.609 > 0.05$. ITO has no influence on changes in profits with a value ($t_{count} -0.766 < t_{table} 2.0095$) accompanied by a significance of $0.447 > 0.05$. Simultaneously CR, QR, DER, DAR, TATO, and ITO have an effect on changes in earnings accompanied by a significance of $0.000 < 0.05$.

Keywords: CR, QR, DER, DAR, TATO, ITO and Profit Changes.

1. Introduction

A company is a legal institution created by a group of people who are responsible for running an industrial business. A healthy company is a company that can face challenging circumstances. According to Juliana and Sulardi (2003), in the process of evaluating a company's performance, financial reports must be performed regularly. Profit is a metric of performance itself. Profit is important information for both internal and external stakeholders of the company, and it is information found in financial reports. Irawati and Anugerah (2007) state that the purpose of profit information, which is part of a company's financial report, is to assess investment risk, estimate representative profit capacity over time, and evaluate management performance.

A manufacturing company is one example of the businesses we investigate. A manufacturing company is a type of business that processes raw materials into finished goods which are then sold to consumers. There are several sub-sectors of manufacturing companies. One of them is the food and beverage manufacturing sub-sector. The profit received is influenced by the increase in food and beverage consumption by the public. Therefore, the author aims to research the food and beverage manufacturing sub-business. The phenomenon of the food and beverage manufacturing business sector recorded in the Indonesia Stock Exchange from 2018 to 2021, is as follows:

Table 1. (Data Phenomenon for the period 2018 - 2021) is stated in billions.

Code	Year	Current Assets	Total Assets	Total Debt	Net Profit
AGAR	2018	102,914,443,283	122,141,758,557	81,875,362,538	1,488,483,853
	2019	149,270,222,780	196,821,504,816	87,918,946,782	424,454,571
	2020	123,787,972,495	171,126,264,401	64,580,874,623	764,674,863
	2021	132,333,523,487	179,189,557,684	70,649,164,525	1,676,533,638
FOOD	2018	43,059,035,473	126,697,833,403	71,727,921,873	1,120,208,481
	2019	39,436,012,770	118,586,648,946	44,535,029,072	1,372,317,773
	2020	30,018,199,981	113,192,236,191	56,950,719,933	15,212,260,240
	2021	28,220,720,064	106,495,352,963	62,754,664,235	12,755,174,366

From the events that occurred within the company PT. AGAR, its current assets increased in 2019 while its net profit decreased, and its current assets decreased in 2020 whereas its net profit increased. The situation in PT. FOOD saw a decrease in total assets from 2019 to 2020, however, its net profit increased. As for PT. MGRO, total debt increased from 2019 to 2020, while its net profit decreased.

2. Literature Review

Liquidity Ratio

The liquidity ratio is a type of financial ratio that evaluates an organization's capacity to fulfill its long-term or short-term obligations. Some of the implemented liquidity ratios are Current Ratio: This focuses on a business's ability to fulfill short-term obligations, such as debt, by using its current assets. Quick Ratio: This ratio measures a business's ability to pay off its short-term debts using its assets, eliminating the inventory factor from the quick ratio.

Solvency Ratio

The solvency ratio is a proportion used to determine an organization's capacity to handle its obligations. When investors decide where to put their money, this capability is a very important factor to consider. The types of solvency proportions used are Debt to Equity Ratio: This determines the amount of debt a business has compared to the owner's investment. Bankers closely monitor this indicator as a measure of the company's ability to repay its debts. Debt to Total Asset: This shows how much of the assets are funded by creditors. A high ratio may indicate financial weakness and significant reliance on debt.

Activity Ratio

There are certain assets in every business that can be used during the production process. Consequently, a company's capacity to optimize its assets to generate profit becomes the subject of activity analysis. Some of the implemented activity ratios are Total Asset Turnover Ratio: Both current and fixed assets are included in this ratio, the value of which is directly proportional to the effectiveness of the business in using assets to minimize sales conversion. Inventory Turnover: This is used to compare the quality and effectiveness of a company's inventory turnover to sales over a specific period of time. To clarify, the higher the proportion, the better the stock administration carried out by the company.

Profit Change

An increase or decrease in profit per year compared to the previous period is referred to as profit change. The assessment of profitability by financial backers depends on the monetary execution of the organization, which should be evident from the rate of profit progression from one year to another. When evaluating a company, investors will monitor the increase or decrease in profit each year (Lusiana, 2008).

Conceptual Framework

The conceptual framework explains the interrelation between theories or concepts that support the research and are used as guidelines in formulating the research hypothesis.

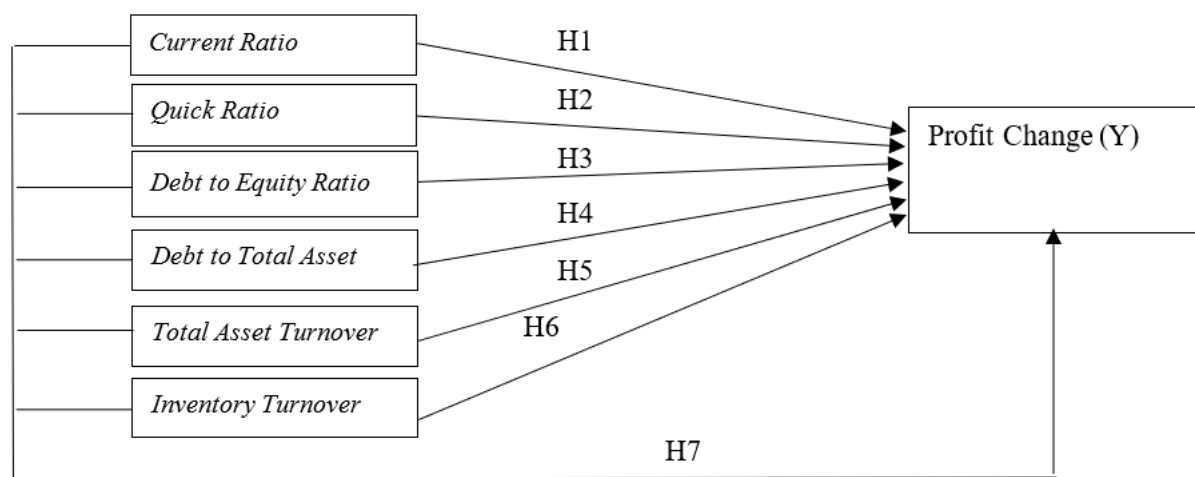


Figure 1. Conceptual Framework

Hypothesis

- H1: The Current Ratio influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.
- H2: The Quick Ratio influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.
- H3: The Debt to Equity Ratio influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.
- H4: The Debt to Total Asset Ratio influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.
- H5: The Total Asset Turnover Ratio influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.

- H6: The Inventory Turnover Ratio influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.
- H7: Every independent variable influences the profit of food and beverage subsector companies that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2021.

3. Methodology

This The data for the study will be accessed from the website of the Indonesia Stock Exchange (www.idx.co.id), focusing on the food and beverage subsector companies listed on the exchange from 2018 to 2021. The study is scheduled to be conducted from February to August 2023. The research will employ a quantitative method, meaning that conclusions will be drawn using theory, design, hypothesis, and subject selection in the analysis process. All food and beverage subsector companies listed on the Indonesia Stock Exchange will serve as the sample for this research, totaling 32 businesses. The sample will be selected using a purposive sampling technique.

In order to qualify for inclusion in the sample, businesses must meet the following criteria: They must be food and beverage subsector companies that have been listed on the Indonesia Stock Exchange from 2018 to 2021. They should not have published their financial reports consecutively during the 2018-2021 period. The companies must have made a profit consecutively during the period from 2018 to 2021. With these criteria, we can identify suitable samples for the study. The total sample will consist of 14 samples from each of the 4 years, totaling 56 observations.

Data for this study will be collected using the documentation method, which involves finding sources of research such as objects or other materials, from the Indonesia Stock Exchange website, books, and other data sources that are relevant to the research. The operational definitions of the research variables include indicators such as the Current Ratio, Quick Ratio, Debt to Equity Ratio, Debt to Total Asset Ratio, Total Asset Turnover, Inventory Turnover, and Change in Profits. Classical assumption tests will be performed to test for normality, multicollinearity, autocorrelation, and heteroskedasticity in the regression residuals. This is necessary to ensure that the assumptions underlying the use of multiple linear regression analysis are not violated.

The research model is a multiple linear regression analysis, aiming to investigate whether financial ratios influence the change in profits. The analysis will utilize the following formula: $Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + e$. In this model, Y stands for Change in Profits, a is the constant coefficient, b1 to b6 are regression coefficients, X1 to X6 are the independent variables (Current Ratio, Quick Ratio, Debt to Equity Ratio, Debt to Total Asset Ratio, Total Asset Turnover, Inventory Turnover respectively), and e is the error coefficient.

The coefficient of determination, or R², will be computed to estimate how well the model explains the dependent variable. An F statistical test will be used to test whether the dependent variable is significantly influenced by the independent variables. Hypotheses will also be tested partially using a t-test to ascertain whether each independent variable significantly influences the dependent variable.

4. Result and Discussion

Descriptive Statistics

The research will utilize a sample size of 14 companies from the food and beverage subsector that are listed on the Indonesia Stock Exchange. These companies will be observed over a four-year period from 2018 to 2021.

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CR	56	.25	4.35	1.4371	.76250
QR	56	.03	106.00	4.3679	18.34566
DER	56	.22	92.50	2.9743	12.22790
DAR	56	.04	1.25	.5221	.18932
TATO	56	.08	4.01	1.1238	.76247
ITO	56	.64	50.19	8.4627	9.96896
PROFIT CHANGE	56	-714.00	9426.00	329.9258	1718.99394

Source: Research Results, 2023 (Processed Data)

The Debt to Equity Ratio in the sample ranged from a low of 0.22 to a high of 92.50, with an average value of 2.9743, suggesting a varied reliance on debt to finance their operations. The Debt to Total Asset Ratio, a measure of a company's financial risk by determining the proportion of total assets funded by debt, ranged from 0.04 at the lowest to 1.25 at the highest, with an average of 0.5221, suggesting a moderate level of financial risk on average across the sampled companies. Total Asset Turnover, a measure of how efficiently a company uses its assets to generate sales, ranged from 0.08 at the lowest to 4.0 at the highest, with an average of 1.1238. The Inventory Turnover, a measure of how efficiently a company manages its inventory, varied between a minimum of 0.64 and a maximum of 50.19, with an average of 8.4627. Lastly, the Profit Change variable had a minimum value of -714.00 and a maximum of 9426.00, with an average of 329.9258, indicating substantial variability in profitability among these companies over the period 2018-2021.

Normality Test

It can be concluded from Figure 2 that the overall research results will be balanced, it is important to determine whether the information used in this study is truly typically disseminated and tends to argue that this information has a common mode of delivery. In addition, this is evident from the P-plot results. The graphical test appears as follows.

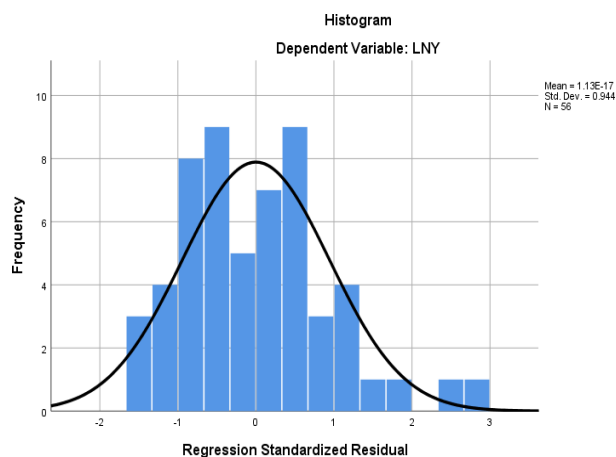


Figure 2. Normality Test Histogram

Source: Research Results, 2023 (Data Processed)

Heteroskedasticity Test

In this study, the heteroskedasticity test was employed using statistical methods and graphical methods, where the chosen statistical method used the Glejser test (Figure 3).

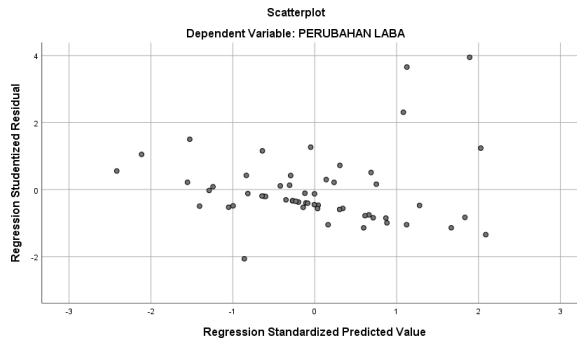


Figure 3 Heteroskedasticity Test

Source: Research Results, 2023 (Data Processed)

Since there is no heteroskedasticity, the conditions for classical hypothesis testing have been met because the plot is randomly distributed.

Multiple Linear Regression Analysis

Table 3. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1709,002	1170,980	,228	1,459	,151
CR	5,131	7,307	-,213	,702	,486
QR	-5,794	7,920	-,014	-,732	,468
DER	-,019	,204	-,183	-,094	,925
DAR	-16,634	15,109	-,325	-1,101	,276
TATO	-7,328	3,636	,325	-2,015	,049
ITO	,560	,285		1,961	,056

Source: Research Results, 2023 (Data Processed)

The results of the multiple linear regression analysis yield the following equation: $Y = 1709.002 + 5.131X_1 - 5.794X_2 - 0.019X_3 - 16.634X_4 - 7.328X_5 + 0.560X_6 + e$. The interpretation of the multiple regression equation is as follows:

1. The constant is 1709.002, which signifies that if the variables CR, QR, DER, DAR, TATO, and ITO are all zero, the change in profit would be 1709.002.
2. The coefficient of the current ratio (CR) is 5.131, indicating a positive effect on the profit change, with an increase of 1% in CR leading to a decrease in profit change of 5.131.
3. The coefficient of the quick ratio (QR) is -5.794, implying a negative impact on the profit change, whereby a 1% increase in QR results in a decrease in profit change of -5.794.
4. The coefficient of the debt to equity ratio (DER) is -0.019, demonstrating a negative influence on profit change, with a 1% rise in DER leading to a decrease in profit change of -0.019.

5. The coefficient of the debt to total asset (DAR) is -16.634, signifying a negative effect on profit change, with a 1% increase in DAR resulting in a decrease in profit change of -16.634.
6. The coefficient of the total asset turnover (TATO) is -7.328, suggesting a negative impact on profit change, whereby a 1% rise in TATO leads to a decrease in profit change of -7.328.
7. The coefficient of the inventory turnover (ITO) is 0.560, indicating a positive influence on profit change, with a 1% increase in ITO resulting in a decrease in profit change of 0.560.

Discussion

The Impact of the Current Ratio on Profit Change

With the calculated t-value of -1.174 being less than the tabled t-value of 2.0095, and with a significance of 0.246, which is greater than 0.05, it can be concluded that this variable has no impact on the profits of food and beverage subsector companies listed in the IDX for the years 2018-2021.

The Impact of the Quick Ratio on Profit Change

With the calculated t-value of -0.043 being less than the tabled t-value of 2.0095, and with a significance of 0.966, which is greater than 0.05, it can be concluded that this variable has no impact on the profits of food and beverage subsector companies listed in the IDX for the years 2018-2021.

The Impact of the Debt to Equity Ratio on Profit Change

With the calculated t-value of 6.981 being greater than the tabled t-value of 2.0095, and with a significance of 0.000, which is less than 0.05, it can be concluded that this variable does have an impact on the profits of food and beverage subsector companies listed in the IDX for the years 2018-2021.

The Impact of Debt to Total Asset on Profit Change

With the calculated t-value of -1.225 being less than the tabled t-value of 2.0095, and with a significance of 0.227, which is greater than 0.05, it can be concluded that this variable has no impact on the profits of food and beverage subsector companies listed in the IDX for the years 2018-2021.

The Impact of Total Asset Turnover on Profit Change

With the calculated t-value of 0.515 being less than the tabled t-value of 2.0095, and with a significance of 0.609, which is greater than 0.05, it can be concluded that this variable has no impact on the profits of food and beverage subsector companies listed in the IDX for the years 2018-2021.

The Impact of Inventory Turnover on Profit Change

With the calculated t-value of -0.766 being less than the tabled t-value of 2.0095, and with a significance of 0.447, which is greater than 0.05, it can be concluded that this variable has no impact on the profits of food and beverage subsector companies listed in the IDX for the years 2018-2021.

5. Conclusions

Aligned with the results of the hypothesis testing, both partially and simultaneously, the researcher has drawn several conclusions. Firstly, on a partial level, the Current Ratio (CR) does not

influence the profit of food and beverage subsector companies listed on the Indonesia Stock Exchange (IDX) from 2018-2021. Secondly, the Quick Ratio (QR) also has no effect on these companies' profits. However, the Debt to Equity Ratio (DER) does have an influence. Meanwhile, the Debt to Total Asset (DAR) and the Total Asset Turnover (TATO) do not affect the profits, similarly to the Inventory Turnover (ITO). But when evaluated simultaneously, every independent variable does affect the companies' profits. The author has several suggestions in light of these findings. Firstly, future researchers may consider expanding the sample size and providing a new focus on business sectors that are also experiencing losses. Secondly, the findings of this study need to be carefully read and studied in order to advance scientific knowledge and serve as a reference for future work.

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