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# The Effect Of Profitability, Leverage And Liquidity On Exchange Rate And Stock Price (Study Of Food And Beverage Sub-Sector Companies Listed On The Idx)

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**Abstract**

*This study aims to analyze the effect of profitability, leverage, and liquidity on stock prices through (intervening) currency exchange rates. Using the financial reports of manufacturing companies in the consumer goods sector, the food and beverage sub-sector, we retrieved profitability data (ROA), leverage data (DER), currency exchange rates (rupiah against the dollar), and stock prices (closing prices) of 26 companies that selected as a sample from 2019 to 2022. Data were analyzed using the Structural Equation Modeling (SEM) method. The results showed that: Profitability, Leverage, and Liquidity have a positive and significant effect on the stock prices of Food and Beverage Sub-Sector Companies. Profitability, leverage, and through the Rupiah Exchange Rate against the Dollar which has no effect on the stock prices of Food and Beverage Sub Sector Companies.*

## INTRODUCTION

At the moment investment can be made through various means, one of which is by investing in the capital market. The research of Hartono (2017) states that in reality investors are faced with realized returns that are different from expected returns, namely the difference between expected results and reality is a source of risk that stems from the existence of an uncertainty. In minimizing uncertainty and maximizing the expected rate of return, investors can look at the profitability, leverage and liquidity of the company. However, there are several factors that can affect the interaction of profitability, leverage, and liquidity with stock prices, including macro

factors. Macro factors are factors that are outside the company, but have an influence on the increase or decrease in company performance. One of the macroeconomic factors that can directly affect stock performance and company performance is the exchange rate.

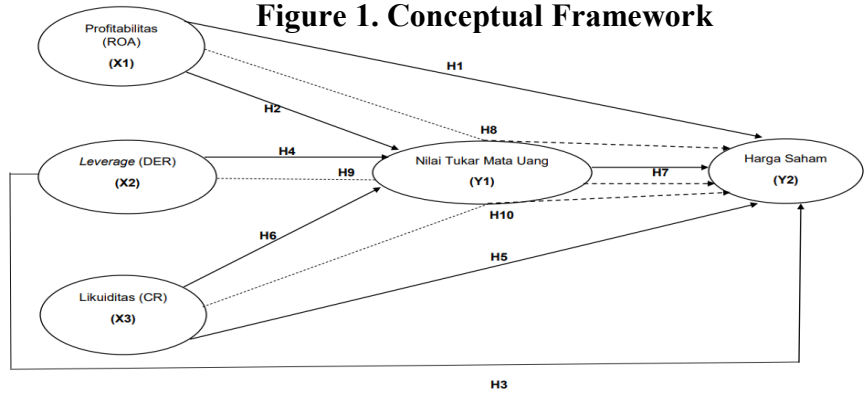
Fluctuations in currency exchange rates have an influence on every transaction made by companies in export and import activities. Exchange rate fluctuations have an impact on company value because they can affect the amount of cash inflows received from the export activities of the company or from its subsidiaries, as well as affect the amount of cash outflows used to pay import costs. Manufacturing companies in the food and beverage sub-sector have important problems related to raw materials. Most companies in the food and beverage sub-sector still depend on imported raw materials, due to the unavailability of domestic raw materials. Limited domestic supply can hamper food and beverage companies.

Food and beverage companies still depend on imported raw materials whose transactions are based on the rupiah exchange rate against the currency the company is targeting. If the rupiah exchange rate weakens against the value of the target currency, the company must issue more rupiah, this can be detrimental to the company. On the other hand, if the rupiah exchange rate strengthens against the target currency, the company issues less rupiah, this can benefit the company. Unstable fluctuations in exchange rates, as well as the NPM (Net Profit Margin) value of food and beverage companies which also fluctuates as well as movement (chart) of stock prices will reduce the level of confidence of foreign investors in the Indonesian economy. This will have a negative impact on stock trading in the capital market, foreign investors will tend to withdraw capital so that this will have an impact on declining stock prices and result in a decrease in the rate of return distributed to investors.

## METHODS

The research of Sugiyono (2022), a framework is a conceptual model of how theory relates to various factors that have been identified as important problems. The conceptual framework of this research is as follows:

**Figure 1. Conceptual Framework**




*Source: Data Processed by author (2023)*

Based on the conceptual framework and various previous studies, the research hypothesis is as follows:

H1: It is suspected that profitability has a positive and insignificant effect on stock prices.

H2: It is suspected that profitability has a negative and insignificant effect on Currency Exchange Rates.

H3: It is suspected that leverage has a negative and insignificant effect on stock prices.

H4: It is suspected that leverage has a negative and insignificant effect on currency exchange rates.

H5: It is suspected that liquidity has a negative and insignificant effect on stock prices.

H6: It is suspected that Liquidity has a positive and significant effect on Currency Exchange Rates.

H7: It is suspected that currency exchange rates have a positive and significant effect on stock prices.

H8: It is suspected that profitability has a negative and insignificant effect on stock prices through currency exchange rates.

H9: It is suspected that leverage has a negative and insignificant effect on stock prices through currency exchange rates.

H10: It is suspected that liquidity has a positive and significant effect on stock prices through currency exchange rates.

This research uses a quantitative approach because the data used in this study is in the form of numbers. Quantitative research is described as an objective research approach that consists of collecting and analyzing quantitative data and using statistical tests. This research uses explanatory research, namely research that explains

the casual relationship between variables through hypothesis testing.

The population in this study were all company shares listed on the Primary Consumer Goods Sector Index (IDXNONCYC) in the period January 2019 - December 2022. Based on this sampling technique, namely using the purposive sampling method, the sample in this study determined the number of research samples, namely 26 companies, obtained from the Food and Beverage Primary Consumer Goods Sector (IDXNONCYC) on the Indonesia Stock Exchange (IDX) consecutively for 4 years from January 2019 to December 2022.

The procedure for collecting and collecting data carried out by researchers is by accessing all financial data through online websites such as the sites of the Indonesia Stock Exchange, Bank Indonesia, yahoo finance, accurate latest news, and various other literature related to the research topic. Data analysis using the Structural Equation Model (SEM) was carried out to thoroughly explain the relationship between the variables in this study which were calculated using SmartPLS 3.0.

The stages of data analysis in this study are as follows:

**Profitability**

The research of Kasmir (2019) Return On Assets (ROA) can be calculated that is: $ROA = \frac{earning\ after\ interest\ and\ tax}{total\ assets} x100\%$

**Leverage**

The research of Fahmi (2018) the Debt to Equity Ratio (DER) formula:

$$Debt\ to\ Equity\ Ratio = \frac{Total\ Debt}{Total\ Equity} x100\%$$

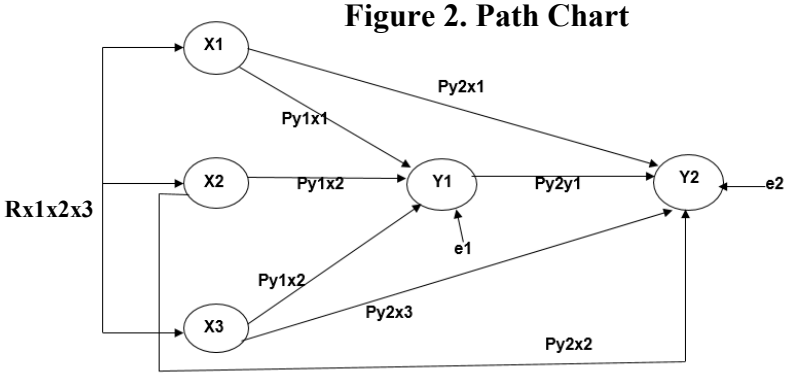
**Liquidity**

The research of Kasmir (2019) the Current Ratio can be calculated using the fthat is formula: $Curent\ Ratio = \frac{Current\ Assets}{Current\ Liabilities} x100\%$

## Path Analysis

The path analysis model in this research can be described that is:

**Figure 2. Path Chart**




*Source: Data Processed by author (2023)*

The regression and correlation equations in Figure 4.1 are written in equation form as follows:

Equation 1: Y1 = PY1X1 X1 + PY1X2 X2 + PY1X3 X3 + e1

Equation 2: Y2 = PY2X1 X1 + PY2X2 X2 + PY2X3 X3 + e2

Equation 3: Y1 = PY2Y1 + e1

## RESULTS AND DISCUSSION

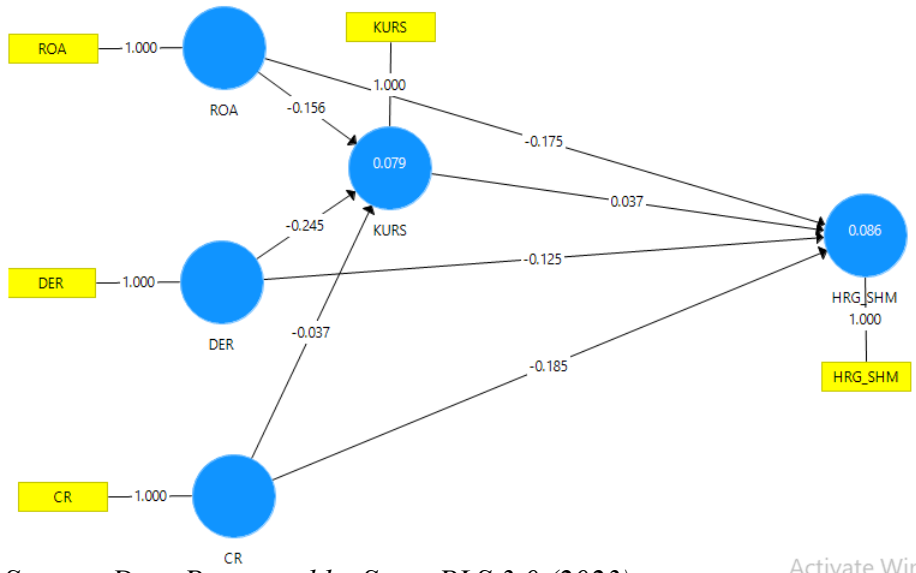
### 1. Outer Model

The research of (Susanty, 2020) the measurement method or outer model is a model that describes the relationship between latent variables (constructs) and their indicators. Natalia et al., (2017) The Outer Model defines how each indicator block relates to its latent variables. This model also defines how each reflective indicator block relates to its latent variables. Testing in the Outer Model, that is:

a. Convergent Validity

Convergent validity has the principle that a variable should have a high correlation with itself, the criteria that must be met are the AVE and Cumminality values above 0.5 and fulfill the reliability test above 0.6 (Sitio, 2021).

**Figure 3. Outer Model**




*Source: Data Processed by SmartPLS 3.0 (2023)*

The results of PLS-based indicator calculations can be seen in the loading factor table below, that is:

Table 1. Outer Model (Outer Loading)

| Variable | Outer Loading | Reliability |
|---|---|---|
| Return On Asset (ROA) | 1.000 | Reliable |
| Debt to Equity Ratio (DER) | 1.000 | Reliable |
| Current Ratio (CR) | 1.000 | Reliable |
| Exchange Rate | 1.000 | Reliable |
| Stock Price | 1.000 | Reliable |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

In table 2, all the correlation values for the stock price indicators of food and beverage companies are related to the construct is 1,000. Convergent validity has been achieved between concepts and variables, as measured by the value of the loading factor, because all these values are > 0.05.

b. Discriminant Validity

Discriminant validity testing relates to the measurement of different variables that should not have a high correlation. The discriminant validity test is assessed based on the cross loading of measurements with the construct (Sitio, 2021).

Table 2. Cross Loading

| Cross Loadings | CR | DER | Stock Price | Exchange Rate | ROA |
|---|---|---|---|---|---|
| CR | 1.000 | | | | |
| DER | 0.184 | 1.000 | | | |
| Stock Price | 0.194 | 0.087 | 1.000 | | |
| Exchange Rate | 0.020 | 0.228 | 0.094 | 1.000 | |
| ROA | 0.176 | 0.069 | 0.204 | 0.145 | 1.000 |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

It can be seen in table 2 that compared to other conceptual frameworks, this framework has a stronger correlation value with its indicators. The indicators included in the indicator block are to outperform the indicators in other blocks. This guarantees that all latent variables and constructs are highly discriminant.

c. *Average Variance Extracted* (AVE)

The *Average Variance Extracted* (AVE) measurement value must be greater than 0.5 or have an adequate discriminant model if the Average Variance Extracted construct is greater than the correlation with all other constructs (Ghozali & Latan, 2020).

Table 3. Measurement with *Average Variance Extracted* (AVE) Criteria

| Variable | ***Average Variance Extracted* (AVE)** | Validity |
|---|---|---|
| Return On Asset (ROA) | 1.000 | Valid |
| Debt to Equity Ratio (DER) | 1.000 | Valid |
| Current Ratio (CR) | 1.000 | Valid |
| Exchange Rate | 1.000 | Valid |
| Stock Price | 1.000 | Valid |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

The AVE value is definitely more than 0.5 as shown in table 3. All AVE values for latent variables in findings that are > 0.5 prove their reliability and validity.

d. Composite Realibility

The Reliability Test shows the accuracy, consistency, and accuracy of a measuring instrument in making measurements. The rule of thumb for alpha or composite reliability must be greater than 0.7 even though a value of 0.6 (Natalia et al., 2017).

Table 4. Measurements with *Composite Reliability* and *Cronbach Alpha*

| Variable | ***Cronbach Alpha*** | ***Composite Reliability*** | ***Reliability*** |
|---|---|---|---|
| Return On Asset (ROA) | 1.000 | 1.000 | *Reliable* |
| Debt to Equity Ratio (DER) | 1.000 | 1.000 | *Reliable* |
| Current Ratio (CR) | 1.000 | 1.000 | *Reliable* |
| Exchange Rate | 1.000 | 1.000 | *Reliable* |
| Stock Price | 1.000 | 1.000 | *Reliable* |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

The credibility given can be determined if the composite reliability and Cronbach's Alpha > 0.70. The table above shows that all constructs have a Cronbach

alpha value and a composite reliability value of > 0.70. There is trust in the structure because of this.

**2. Inner Model**

Structural Model or Inner Model Structural is an illustration of the relationship between latent variables based on substantive theory. The formulation of the problem or research hypothesis forms the basis for designing a structural model of the relationship between variables. This inner model is tested using the:

a. *R square* (R2)

R Square can be seen in the endogenous construct, the value of R Square is the coefficient of determination in the endogenous construct. An R Square value of 0.67 means strong, an R Square value of 0.33 means Moderate, and an R Square value of 0.19 means weak (Ghozali & Latan, 2020).

Table 5. *R Square* (R2)

| | ***R Square*** | ***R Square Adjusted*** |
|---|---|---|
| Exchange Rate | 0.079 | 0.052 |
| Stock Price | 0.086 | 0.049 |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

The corrected R square value for each equation is less than 30%, as shown in table 6 above. The squared correlation coefficient of 0.079 indicates that the independent variables (profitability/return on assets, leverage/debt to equity ratio, liquidity/current ratio) are able to explain the intervening variable of currency exchange rates by 7.9%. Because the r-squared value is 0.079, the independent variables (profitability/return on assets, leverage/debt to equity ratio, liquidity/current ratio) and the intervening variables, stock prices are the dependent variable, and stock prices are able to explain 0.086 or 8.6% from that number.

b. *F square*

Table 6. *F Square*

| ***F Square*** | **Exchange Rate** | **Stock Price** |
|---|---|---|
| Current Ratio (CR) | 0.001 | 0.035 |
| Debt to Equity Ratio (DER) | 0.063 | 0.015 |
| Stock Price | | |
| Exchange Rate | | 0.001 |
| Return On Asset (ROA) | 0.025 | 0.031 |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

Based on table 6 above, it can be concluded that:

1) X2 to Y1 has a moderate effect size
2) X1, X3, on Y2 and Y1 on Y2 have small effect sizes

c. VIF

Table 7. *F Square*

| Variable | VIF |
|---|---|
| Current Ratio (CR) | 1.000 |
| Debt to Equity Ratio (DER) | 1.000 |
| Stock Price | 1.000 |
| Exchange Rate | 1.000 |
| Return On Asset (ROA) | 1.000 |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

Based on table 7 above, it can be interpreted that there is no multicollinearity problem based on the VIF values in the table, because there are no VIF values > 5.

d. Path Coefficient (Hypothesis test)

Regression equation:

1) Currency exchange rate = -0.156 Return On Assets - 0.245 Debt to Equity Ratio – 0.037 Current Ratio

2) Stock Price = -0.175 Return on Assets - 0.125 Debt to Equity Ratio – 0.185 Current Ratio

3) Currency exchange rate = 0.037 Stock Price

Table 8. Path Coefficient Results

| Direct Effect | STDEV | T Statictics | P Value | Conclusion |
|---|---|---|---|---|
| CR → Stock Price | 0.064 | 2.905 | 0.007 | H5 is Rejected |
| CR → Exchange Rate | 0.124 | 0.303 | 0.764 | H6 is Rejected |
| DER → Stock Price | 0.049 | 2.560 | 0.017 | H3 is Rejected |
| DER → Exchange Rate | 0.148 | 1.657 | 0.109 | H4 is Accepted |
| Exchange Rate → Stock Price | 0.100 | 0.366 | 0.717 | H7 is Rejected |
| ROA → Stock Price | 0.062 | 2.824 | 0.009 | H1 is Accepted |
| ROA → Exchange Rate | 0.141 | 1.101 | 0.281 | H2 is Accepted |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

In SmartPLS statistical testing of each connection is calculated by computer modeling. The following are the findings from the SmartPLS analysis, testing the direct effect hypothesis:

H1: It is suspected that profitability has a positive and insignificant effect on stock prices. The test results show that H1 is accepted with a P-value of 0.007.

H2: Allegedly Profitability has a negative and insignificant effect on Currency Exchange Rates. The test results show that H2 is accepted with a P-value of 0.281.

H3: It is suspected that leverage has a negative and insignificant effect on stock prices. The test results show that H3 is rejected with a P-value of 0.017.

H4: It is suspected that leverage has a negative and insignificant effect on currency exchange rates. The test results show that H4 is accepted with a P-value of 0.109.
H5: It is suspected that liquidity has a negative and insignificant effect on stock prices. The test results show that H5 is rejected with a P-value of 0.007.
H6: It is suspected that Liquidity has a positive and significant effect on Currency Exchange Rates. The test results show that H6 is rejected with a P-value of 0.764.
H7: It is suspected that currency exchange rates have a positive and significant effect on stock prices. The test results show that H7 is rejected with a P-value of 0.717.

The following table displays the findings of the test using currency exchange rates as an intervening variable by analyzing the findings on certain indirect impacts.

Table 8. Path Coefficient Results

| Direct Effect | STDEV | T Statictics | P Value | Conclusion |
|---|---|---|---|---|
| CR → Exchange Rate → Stock Price | 0.013 | 0.106 | 0.916 | H8 is Accepted |
| DER → Exchange Rate → Stock Price | 0.28 | 0.324 | 0.749 | H9 is Accepted |
| ROA → Exchange Rate → Stock Price | 0.018 | 0.018 | 0.749 | H10 is Rejected |

*Source: SmartPLS 3.0 output processed by researchers (2023)*

The following are the findings from the SmartPLS analysis, testing the indirect effect hypothesis:
H8: It is suspected that profitability has a negative and insignificant effect on stock prices through currency exchange rates. The test results show that H8 is accepted with a P-value of 0.916.
H9: It is suspected that leverage has a negative and insignificant effect on stock prices through currency exchange rates. The test results show that H9 is accepted with a P-value of 0.749.
H10: It is suspected that liquidity has a positive and significant effect on stock prices through currency exchange rates. The test results show that H9 is rejected with a P-value of 0.749.

## CONCLUSION

The results of the study show that the stock prices of Food and Beverage Sub-Sector Companies listed on the Indonesia Stock Exchange for the 2019-2021 period are positively and significantly influenced by Profitability in terms of *Return On Assets*, Leverage in terms of *Debt to Equity Ratio*, and Liquidity in terms of *Current*

*Ratio*. This indicates that a high level of profitability will make stocks in demand and the high demand for these shares will make stock prices more expensive. With the high price of shares will have a direct effect on the price of shares that will be received by the company. So a high stock price will make the stock price also increase, the relationship between these two things reflects a positive relationship of profitability in influencing stock prices. Leverage itself is the ratio between total debt and total assets expressed as a percentage. Leverage refers to the use of assets and sources of funds by companies where in using these assets or funds the company has to incur fixed expenses. why is this important to be seen by investors because for companies, the greater the leverage ratio itself, the better. Conversely, with a low ratio, the higher the level of funding provided by the owner and the greater the guarantee limit for the borrower in the event of a loss or depreciation in asset value. For investors, the level of liquidity can provide an overview of the company's ability to pay short-term debts when billed, so that they can assess the security of the funds to be invested.

As for the research results which show that profitability is proxied by Return On Assets, leverage is proxied by the Debt to Equity Ratio, and Liquidity is proxied by the Current Ratio through the Exchange Rate of the Rupiah against the Dollar has no effect on stock prices, these results are in line with research conducted by Gentanandhika (2020), this is in line with the research of Samsul (2015) that there are several factors that can affect the interaction of profitability, leverage, and liquidity with stock prices, including macro factors. Macro factors are factors that are outside the company, but have an influence on the increase or decrease in company performance either directly or indirectly. Macro factors consist of macroeconomics and macro-non-economics. Macroeconomic factors that can directly affect stock performance and company performance include; General domestic interest rates, inflation rates, tax regulations, special government policies related to certain companies, foreign exchange rates, interest rates on foreign loans, international economic conditions, economic cycles, economic understanding, and money circulation. Maybe if all of these macro factors are included as variables to see the interaction of the direct effect of profitability, leverage and liquidity on stock prices will get positive and significant results

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