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Profitability, Liquidity, and Activity on Financial Perfomance with Firm Value as a Mediating Variable

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Abstract

This study aims to analyze the effect of profitability, liquidity, and activity on financial performance with firm value as a mediating variable in food and beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2021-2024 period. The research method uses panel data regression, namely the classical assumption test and the Sobel test using the Random Effect Model (REM) and Common Effect Model (CEM) approaches. The results of the study indicate that the profitability variable (ROA) has no significant effect on financial performance (DER) and firm value (PBV), while the liquidity variable (CR) has a significant negative effect on financial performance (DER), indicating that a company with high liquidity tends to use less debt in its funding structure because it has a good ability to meet short-term obligations using its current assets. However, the liquidity variable (CR) does not have a significant effect on firm value (PBV). The activity variable (TATO) has no effect on financial performance (DER), but the activity variable (TATO) has a significant positive effect on firm value (PBV). The firm value variable (PBV) has a significant positive effect on financial performance (DER). Meanwhile, the results of the Sobel test show that company value (PBV) is not able to mediate profitability, liquidity and activity towards financial performance (DER).

INTRODUCTION

Companies need to maintain stability and improve their financial performance amidst constantly changing economic conditions. Competition in today's business world demands that companies be more efficient in managing their resources. In the era of globalization and increasingly intense market competition, companies are required to maintain healthy financial conditions to survive and increase their competitiveness. The food and beverage sector in Indonesia is one of the manufacturing sub-sectors that contributes to national economic growth. Based on the report Industry, (2024)The food and beverage industry contributes 39.91% of the total Gross Domestic Product (GDP) of the non-oil and gas processing industry sector. This high contribution indicates that the sector has great potential, but also.

Based on research Setyawan et al., (2024)Financial performance refers to a company's ability to generate maximum profits, taking into account the risks faced and meeting existing financial obligations. Financial performance can be measured using the Debt to Equity Ratio (DER), a ratio used to assess debt to equity (Kasmir, 2019). If the Debt-to-Equity Ratio (DER) increases, the company's dependence on borrowed capital also increases, thus increasing the risk of default. Conversely, if the DER decreases, it indicates a company's ability to be more independent in terms of funding.

Profitability describes a company's ability to generate profits from its activities. Profitability can be measured using Return on Assets (ROA), which indicates a company's ability to generate

profits from its assets (Koapaha & Supit, 2022). In research conducted by Nurrahman et al. (2024), Jumroh et al. (2024), Yuniwati et al., (2024)which states that the ROA variable does not have a significant effect on financial performance. This is in contrast to research conducted by Triwahyuni et al., (2023), Hasidi et al., (2024)which states that ROA has a significant influence on financial performance.

Liquidity indicates a company's ability to meet its short-term obligations. Liquidity can be measured using the Current Ratio (CR) (Setyawan et al., 2024),(Desriyunia et al., 2023). In research conducted bySiregar et al., (2022), Yuniwati et al., (2024) The results of which stated that CR had no significant effect on financial performance. This is in contrast to research conducted byKrisnandi et al., (2019),Juwita and Mutawali (2022),Tasmil et al., (2019)which states that CR has a significant effect on financial performance. Research has shown that the higher the Current Ratio (CR), the better the company's ability to meet its short-term obligations.

Activities related to the extent to which a company can utilize its assets efficiently to generate income can be seen through Total Asset Turn Over (TATO), which shows that the company is able to utilize assets to generate income.(EM Dewi & Ompusunggu, 2021), especially important for fast-moving consumer goods (FMCG) companies such as food and beverages. In research conductedP. Lestari (2020), DS Dewi et al., (2019) which states that TATO has no effect on financial performance. This is inversely proportional to research Firdayani et al., (2022), Andelline & Widjaja (2018), Putri et al., (2022) which states that TATO has a significant influence on financial performance.

A company's value reflects how the market assesses a company's future prospects. Company value can be measured using Price to Book Value (PBV), which is the ratio between the stock's market value and its book value. VS Dewi & Ekadjaja (2020) Interestingly, the increase in company value is not always in line with improvements in financial performance.(Febriani, 2023), so it is important to examine the role of corporate value as a mediating variable.

These differing research findings indicate theoretical uncertainty that requires further study, particularly in the food and beverage sector, which is characterized by capital constraints and rapid changes in consumer trends. Furthermore, previous studies often overlooked the role of firm value as a mediating variable for these three primary variables.

Based on the above description, this study aims to analyze the influence of profitability, liquidity, and activity on financial performance, as well as to examine the role of firm value as a mediating variable in food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX). This study is expected to provide a deeper understanding of the relationship between these variables and serve as a consideration for management and investors in making decisions related to increasing firm value and performance.

METHODS

This research focuses on companies operating in the food and beverage manufacturing sector listed on the Indonesia Stock Exchange (IDX) from 2021 to 2024. Given that the research involves numerical data, the method used is quantitative. The purpose of this study is to explain the research object and the results obtained.

The type of data used in the research is secondary data, namely data obtained from the annual financial reports (Annual Reports) of companies listed on the Indonesia Stock Exchange (BEI) via the website www.idx.co.id and the official websites of each company. The population in this study includes all companies in the food and beverage subsector listed on the Indonesia Stock

Exchange (IDX). The sample selection used purposive sampling, a technique based on specific criteria.(Sugiyono, 2019). Namely with the following criteria: (1) Companies listed on the Indonesia Stock Exchange (IDX) in 2021-2024. (2) Companies included in the food and beverage sub-sector (3) companies that published financial reports in 2022-2024 (4) Providing complete data information used during the research period. The sample in this study consists of companies in the food and beverage sub-sector listed on the Indonesia Stock Exchange (IDX) for 2021 to 2024, where the total population includes 39 companies, while only 11 of them meet the selection criteria and are used as samples in this study.

Table 1. Company Samples

No	Company Code	Company name
1	AISA	PT FKS Food Sejahtera Tbk
2	DLTA	PT Delta Djakarta Tbk
3	ICBP	PT Indofood CBP Sukses Makmur Tbk
4	INDF	PT Indofood Sukses Makmur Tbk
5	MLBI	PT Multi Bintang Indonesia Tbk
6	MYOR	PT Mayora Indah Tbk
7	ULTJ	PT Ultrajaya Milk Industry & Trading Company Tbk
8	UNVR	PT Unilever Indonesia Tbk
9	CLEO	PT Sariguna Primatirta Tbk
10	GOOD	PT Garudafood Putra Putri Jaya Tbk
11	CMRY	PT Cisarua Mountain Dairy Tbk

Source: Processed Data, 2025

This study focuses on three main interrelated variables. The independent variables analyzed are the profitability ratio, the liquidity ratio, and the activity ratio. The dependent variable, financial performance, is measured using the Debt-to-Equity Ratio (DER), which describes the extent to which a company finances its operational activities with debt. Furthermore, the mediating variable used in the study is firm value, measured using the Price-to-Book Value (PBV) formula, which is the ratio between the market value of shares and the company's book value.

In this study, data analysis was conducted using a panel data method, a combination of time series and cross-sectional data, covering companies in the food and beverage subsector from 2021 to 2024. This method was chosen based on the use of data spanning several years and involving a number of companies. Panel data regression analysis was applied to test the influence of independent variables and the role of mediating variables on the dependent variable.

RESULTS AND DISCUSSION

Model Selection Test

This research data, to apply three panel data regression models, namely, CEM, FEM, and REM to determine which model is best to use. Two models were tested: model (1) testing the effect of ROA, CR, TATO on PBV and model (2) testing the effect of ROA, CR, TATO, PBV on DER.

The form of the multiple linear regression equation:

Model 1 :$PBV = \alpha + \beta^1(ROA) + \beta^2(CR) + \beta^3(TATO) + \varepsilon$

Model 2 :$DER = \alpha + \beta^1(ROA) + \beta^2(CR) + \beta^3(TATO) + \beta^4(PBV) + \varepsilon$

Information:

a	: Regression Constant
ROA	: Independent Variable
CR	: Independent Variable
TATTOO	: Independent Variable
β	: Regression Coefficient
DER	: Dependent Variable
PBV	: Mediating Variable
e	: Error

Chow Test

This test is used to select the best panel model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). This test compares the two models using their p-values, or rather, their probabilities. If the p-value is >0.05, then the CEM is more appropriate because the individual effects are insignificant. However, if the p-value is <0.05, then the FEM is recommended because the individual effects are significant and should be taken into account.

Table 2. Chow Test

Chow Test Model 1			
Effects Test	Statistics	df	Prob.
Cross-section F	2.355107	(10.29)	0.0351
Cross-section Chi-square	25.563055	10	0.0044
Chow Test Model 2			
Effects Test	Statistics	df	Prob.
Cross-section F	1.279047	(10.28)	0.2887
Cross-section Chi-square	16.178492	10	0.0946

Source: Eviews 13 Output (Data processed, 2025)

Based on the Chow test of model 1, the probability value of Cross-section F is 0.0351 and Cross-section Chi-square is 0.0044, both of which are smaller than the 5% significance level (a = 0.05). This indicates that the null hypothesis (H0) is rejected, which states the Common Effect Model (CEM). Thus, the appropriate model to use is the Fixed Effect Model (FEM). According to the panel regression analysis procedure, the selected Fixed Effect Model (FEM) will be further tested using the Hausman Test to determine whether the Fixed Effect Model (FEM) or the Random Effect Model (REM) is more efficient to use.

The results of the Chow Test model 2 show that the probability value of the Cross-section F is 0.2887 and the Cross-section Chi-square is 0.0946, both of which are greater than the 5% significance level (a = 0.05). Thus, the null hypothesis (H0) is accepted, so that the appropriate model to use is the Common Effect Model (CEM), because the results are not significant, the test is not continued with the Hausman Test, but rather the Lagrange Multiplier Test (LM) is immediately carried out to assess whether the Random Effect (REM) model is more appropriate to use than the Common Effect Model (CEM).

Hausman Test

The Hausman test helps researchers select a regression model after selecting the FEM model from the Chow test. This test compares the efficiency of the two models. The criteria for the Hausman test are quite simple: if the p-value is >0.05, then the Random Effects Model (REM) is more appropriate. Conversely, if the p-value is <0.05, then the Fixed Effects Model (FEM) is recommended.

Table 3. Hausman Test

Model 1			
Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross-section	0.780148	3	0.8542

Source: Eviews 13 Output (Data processed, 2025)

Based on the results of the Hausman test in Table 3, a probability value of 0.8542 was obtained, which is greater than the 0.05 significance level. This indicates that the null hypothesis (H0) is accepted, so the most appropriate model to use for Model 1 is the Random Effect Model (REM). With REM determined as the appropriate model, further testing was carried out using the Lagrange Multiplier (LM) Test to ensure the suitability between the Random Effect Model (REM) and the Common Effect Model (CEM).

Lagnare Multipler Test

The Lagrange Multiplier test helps researchers select a regression model after selecting the REM model in the Hausman test. This test is performed by comparing the efficiency of the two models. The criteria for the Lagrange Multiplier (LM) test are quite simple: if the p-value is >0.05, then the Common Effects Model (CEM) is more appropriate. Conversely, if the p-value is <0.05, then the Random Effects Model (REM) is recommended.

Table 4. Lagnare Multiplier Test

LM Model 1 Test			
	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	3.977439	0.744977	4.722416
	(0.0461)	(0.3881)	(0.0298)
LM Model 2 Test			
	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	0.016664	0.447918	0.464582
	(0.8973)	(0.5033)	(0.4955)

Source: Eviews 13 Output (Data processed, 2025)

Based on the results of the LM Test on Model 1, the Breusch-Pagan probability value of 0.0461 (<0.05) was obtained, indicating that the null hypothesis (H0) was rejected and the alternative hypothesis (Ha) was accepted. Thus, the most appropriate model to use is the Random Effect Model (REM) because this model is considered more capable of capturing differences in characteristics between entities compared to the Common Effect Model (CEM). In addition, because the selected model is REM, there is no need for classical assumption tests such as multicollinearity and heteroscedasticity, considering that the random effect model has

accommodated data heterogeneity through its error component.

Meanwhile, the results of the LM Test on Model 2 show a probability value of 0.8973 > 0.05, which means (H0) is accepted, so the best model for Model 2 remains the Common Effect Model (CEM). Thus, to ensure the reliability of the CEM model which is a pooled regression, it is necessary to test the classical assumptions, including multicollinearity and heteroscedasticity tests to ensure that the regression model meets the BLUE (Best Linear Unbiased Estimator) requirements.

Classical Assumption Test

Before conducting further regression analysis on model 2, a classical assumption test is necessary to ensure that the model meets the BLUE (Best Linear Unbiased Estimator) criteria. Based on the results of the previous model selection, model 2 uses the Common Effect Model (CEM), so further testing is necessary to detect any assumption violations such as multicollinearity and heteroscedasticity. The multicollinearity test aims to assess the relationship between independent variables, while the heteroscedasticity test is used to ensure that the residual variance is constant. The results of these two tests will determine the validity of the regression model, ensuring that the resulting estimates are efficient and unbiased.

Multicollinearity Test

Table 5. Multicollinearity Test for Model 2

	ROA	CR	TATTOO	PBV
ROA	1,000,000	-0.023447	-0.069710	0.046122
CR	-0.023447	1,000,000	-0.424286	-0.454592
TATTOO	-0.069710	-0.424286	1,000,000	0.777999
PBV	0.046122	-0.454592	0.777999	1,000,000

Source: Eviews 13 Output (Data processed, 2025)

Based on the results of the multicollinearity test in Table 5, it can be seen that the correlation values between company variables, namely Return on Assets (ROA), Current Ratio (CR), and Total Assets Turnover (TATO), are all below 0.85, except for the relationship between TATO and PBV which has a correlation coefficient of 0.777999. This value is still slightly below the general threshold of 0.85, so it does not indicate any indication of serious multicollinearity between company variables.

Thus, it can be concluded that the regression model in this study is free from multicollinearity issues, as no correlations between company variables exceeding the critical threshold were found. This means that each profitability (ROA), liquidity (CR), and activity (TATO) variable can be used simultaneously in the model to explain variations in the dependent variable, firm value (PBV), without causing significant multicollinearity.

Heteroscedasticity Test

Table 6. Heteroscedasticity Test for Model 2

ABS Dependent Variable (RESID)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.541798	0.291320	1.859804	0.0707
ROA	-0.019557	0.099794	-0.195969	0.8457
CR	-0.055657	0.052951	-1.051111	0.2998
TATTOO	0.164597	0.260057	0.632927	0.5306

Source: Eviews 13 Output (Data processed, 2025)

Based on the results of the Heteroscedasticity Test in Model 2, the probability values for all independent variables (ROA = 0.8457; CR = 0.2998; TATO = 0.5306; and PBV = 0.9128) were obtained which were greater than the 5% significance level (α = 0.05). This indicates that there is no indication of heteroscedasticity in the model, or in other words, the variance of the residuals is constant. Thus, the regression model is declared to meet the homoscedasticity assumption, so that the obtained estimation results can be considered efficient and reliable for use in further analysis.

Hypothesis Test

Multiple Linear Regression Analysis

In model 1, this study applies the Random Effect Model (REM) as the best model to test the hypothesis. Meanwhile, in model 2, the Common Effect Model (CEM) is used as the best model to test the hypothesis. Before analyzing the regression model, it must be ensured that this model is free from violations of classical assumptions. Multiple linear regression is used to model the relationship between the dependent variable and various independent variables. This analysis aims to determine whether there is a significant influence between the dependent variable and the independent variables. The results of the Multiple Linear Regression Analysis with REM in model 1 and CEM in model 2 are presented in the following table:

Table 7. Panel Data Regression Hypothesis Test

Model 1 Dependent Variable PBV				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.463826	4.554247	-1.858447	0.0707
ROA	1.318832	1.178593	1.118988	0.2700
CR	-0.600119	0.761275	-0.788307	0.4353
TATTOO	16.56139	2.859982	5.790731	0.0000
Model 2 Dependent Variable DER				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.774654	0.362971	4.889240	0.0000
ROA	-0.171829	0.124338	-1.381943	0.1751
CR	-0.172657	0.065974	-2.617036	0.0127
TATTOO	0.115408	0.324020	0.356175	0.7237
PBV	0.081017	0.014519	5.580205	0.0000

Source: Eviews 13 Output (Data processed, 2025)

Based on the test results listed in the table above, it shows that the multiple linear regression equation used in this study is as follows:

Model 1 :

PBV= -8.463826 + 1.318832(ROA) − 0.600119 (CR) + 16.56139 (TATO) + ε

Based on the regression equation above, it can be seen that profitability (ROA) has a positive effect on firm value, meaning that every one-unit increase in ROA will increase PBV by 1.318832 units. This indicates that the higher the company's ability to generate profits, the better the market perception of the company's performance. Conversely, liquidity (CR) has a negative coefficient of -0.600119, indicating that increasing liquidity actually decreases the company's value because excess current funds can indicate inefficient use of assets. Meanwhile, activity (TATO) shows a strong positive effect with a coefficient of 16.56139, which means that the more efficient

the company is in using its assets to generate sales, the higher the market valuation of the company. However, if the probability value of each variable is greater than 0.05, then the effect is not statistically significant and only indicates the direction of the empirical relationship.

Model 2 :

DER= 1.774654 − 0.171829(ROA) − 0.172657(CR) + 0.115408(TATO) + 0.081017(PBV) + ε

Based on the regression equation above, it is known that profitability (ROA) has a negative effect on financial performance (DER), meaning that every one unit increase in ROA will reduce DER by -0.171829 units. This indicates that companies with high profit levels tend to reduce their dependence on debt because they are able to finance their activities through their own capital. Liquidity (CR) also has a negative effect with a coefficient of -0.172657, indicating that the higher the company's ability to meet short-term obligations, the lower the proportion of debt used. Conversely, activity (TATO) has a positive effect of 0.115408 on DER, indicating that efficient use of assets in generating sales can encourage an increase in the need for external funding. Meanwhile, firm value (PBV) also shows a positive effect of 0.081017 on DER, meaning that the higher the market valuation of the company, the greater the company's tendency to use debt as leverage for expansion. However, if the probability value (p-value) of each variable exceeds 0.05, then the effect is not statistically significant and only reflects an empirical trend.

F Test

The F-test is used to assess the simultaneous influence of independent variables on dependent variables. This result indicates how well the independent variables can explain the dependent variable.

Table 8. F Test

Model 1	
F-statistic	17.75208
Prob(F-statistic)	0.000000
Model 2	
F-statistic	32.29446
Prob(F-statistic)	0.000000

Source: Eviews 13 Output (Data processed, 2025)

Based on the test results in Table 8 F Test (Simultaneous), it is known that in Model 1 the F-statistic value is 17.75208 with a probability (p-value) of 0.000000, which is below the 0.05 significance level. These results indicate that the regression model is simultaneously significant, meaning that the independent variables consisting of profitability (ROA), liquidity (CR), and activity (TATO) together have a significant influence on financial performance (DER). Thus, this model can be said to be suitable for use in explaining variations in changes in the dependent variable because collectively it is able to provide a meaningful contribution to the company's financial performance.

Furthermore, in Model 2, the F-statistic value was obtained at 32.29446 with a probability (p-value) of 0.000000, which is also smaller than the probability level of 0.05. This indicates that the variables of profitability (ROA), liquidity (CR), activity (TATO), and financial performance (DER) simultaneously have a significant influence on firm value (PBV). Thus, this second regression model is also proven to be statistically significant and suitable for use, because together the independent variables used are able to explain changes that occur in firm value meaningfully.

t-Test

The t-test is conducted to investigate whether the independent variables, either individually or collectively, have a significant influence on the dependent variable. The findings of the test and its analysis will be presented in detail in the following sections:

Table 9 t-test

Model 1				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.463826	4.554247	-1.858447	0.0707
ROA	1.318832	1.178593	1.118988	0.2700
CR	-0.600119	0.761275	-0.788307	0.4353
TATTOO	16.56139	2.859982	5.790731	0.0000
Model 2				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.774654	0.362971	4.889240	0.0000
ROA	-0.171829	0.124338	-1.381943	0.1751
CR	-0.172657	0.065974	-2.617036	0.0127
TATTOO	0.115408	0.324020	0.356175	0.7237
PBV	0.081017	0.014519	5.580205	0.0000

Source: Eviews 13 Output (Data processed, 2025)

Based on the partial t-test results in Model 1 shown in Table 9, the coefficient value of the Return on Assets (ROA) variable is 1.318832 with a probability value of 0.2700 ($p>0.05$), which means that profitability does not have a significant effect on company value (PBV). This indicates that an increase in a company's ability to generate profits is not necessarily followed by an increase in the company's market value. The Current Ratio (CR) variable has a coefficient of -0.600119 with a probability value of 0.4353 ($p>0.05$), which indicates that liquidity also does not have a significant effect on company value. This means that the company's ability to meet short-term obligations is not always a primary consideration for investors in assessing company value. Meanwhile, the Total Asset Turnover (TATO) variable has a coefficient of 16.56139 with a probability value of 0.0000 ($p<0.05$), which means that company activity has a significant positive effect on company value. These results indicate that the more efficient a company is in managing its assets to generate sales, the higher the market valuation of the company.

Furthermore, in Model 2, the Return on Assets (ROA) coefficient value is -0.171829 with a probability value of 0.1751 ($p > 0.05$), so it can be concluded that profitability does not have a significant influence on financial performance (DER). The Current Ratio (CR) variable has a coefficient of -0.172657 with a probability value of 0.0127 ($p < 0.05$), which indicates that liquidity has a significant negative effect on financial performance. This means that the higher the company's ability to meet its short-term obligations, the lower the company's dependence on long-term debt. Meanwhile, the Total Asset Turnover (TATO) variable has a coefficient of 0.115408 with a probability value of 0.7237 ($p > 0.05$), which indicates that company activities do not have a significant influence on financial performance. Meanwhile, the Price to Book Value (PBV) variable has a coefficient of 0.081017 with a probability value of 0.0000 ($p < 0.05$), indicating that firm value has a significant positive effect on financial performance. Therefore, the higher the firm value, the greater the tendency for the company to utilize debt-based funding

to support operational activities and expansion, particularly in the food and beverage manufacturing sector listed on the Indonesia Stock Exchange (IDX) for the 2021–2024 period.

Test of the Coefficient of Determination (R2)

The coefficient of determination (R^2) indicates how strong the relationship is between the independent and dependent variables in a regression model. A higher R^2 value indicates that the model can better explain the variation in the dependent variable.

Table 10. Test of the Coefficient of Determination (R2)

Model 1	
R-squared	0.577264
Adjusted R-squared	0.544746
Model 2	
R-squared	0.772697
Adjusted R-squared	0.748771

Source: Eviews 13 Output (Data processed, 2025)

Based on the results of the coefficient of determination (R^2) test in Model 1 shown in Table 10, the Adjusted R-squared value was 0.544746 or 54.47%. This value indicates that the independent variables used in the model, namely Return on Assets (ROA), Current Ratio (CR), and Total Asset Turnover (TATO), are able to explain variations in changes in company value (PBV) by 54.47%. Meanwhile, the remaining 45.53% is explained by other factors not included in the model, such as dividend policy, company size, capital structure, and macroeconomic conditions. Thus, these results indicate that Model 1 has quite good explanatory power, although there are still other external variables that have the potential to significantly influence company value.

Furthermore, in Model 2, the Adjusted R-squared value was 0.748771 or 74.88%, which means that the independent variables consisting of ROA, CR, TATO, and the mediating variable Price to Book Value (PBV) were jointly able to explain the variation in changes in financial performance (DER) by 74.88%. This means that only about 25.12% of the variation in financial performance was explained by other variables outside this research model. These results indicate an increase in the model's capability after the addition of the PBV variable as a mediator, which strengthens the relationship between variables and provides a more comprehensive picture of the influence of profitability, liquidity, and activity on the company's financial performance. Thus, Model 2 can be said to be more representative than the previous model.

Sobel Test

This study uses Price to Book Value (PBV) as a mediating variable to analyze the effect of Return on Assets (ROA), Current Ratio (CR), and Total Asset Turnover (TATO) on the Debt to Equity Ratio (DER). Thus, PBV serves to explain the indirect relationship between profitability, liquidity, and activity on financial performance in manufacturing companies in the food and beverage subsector listed on the Indonesia Stock Exchange (IDX) for the 2021–2024 period.

Table 11. Sobel Test Results

		z-count	t-table
ROA	→ PBV → DER	1.10	2.02
CR	→ PBV → DER	-0.78	2.02

TATTOO	→ PBV →	DER	0.58	2.02

Source: Eviews 13 Output (Data processed, 2025)

Based on the Sobel test results, the calculated z-value for ROA was 1.10, which is smaller than the t-table of 2.02. This indicates that PBV does not mediate the effect of ROA on DER, thus concluding that profitability indirectly influences financial performance through firm value. Therefore, increasing profitability does not necessarily increase firm value, which ultimately impacts financial performance, particularly for manufacturing companies in the food and beverage subsector listed on the IDX for the 2021–2024 period.

Furthermore, the calculated z-value for CR of -0.78 is also smaller than the t-table of 2.02, indicating that PBV does not mediate the effect of CR on DER. This result indicates that a company's liquidity level indirectly influences financial performance through firm value. In other words, a company's ability to meet its short-term obligations does not significantly influence market perception of firm value, thus having no impact on improving the company's financial performance.

Furthermore, the calculated z-value for TATO is 0.58, also smaller than the t-table of 2.02, indicating that PBV does not mediate the effect of TATO on DER. This means that the efficiency of asset utilization in generating sales does not indirectly affect financial performance through firm value. Therefore, high company activity is not necessarily followed by a significant increase in market value, so its impact on financial performance is not proven through mediation in the context of food and beverage subsector manufacturing companies on the IDX for the 2021–2024 period.

DISCUSSION

The Effect of Profitability on Financial Performance

The results of statistical tests indicate that the profitability variable, measured by Return on Assets (ROA), does not significantly influence financial performance (DER), as indicated by a coefficient value of -0.171829 with a probability value of 0.1751 ($p > 0.05$). This means that increasing a company's ability to generate profits from its assets does not consistently drive changes in the company's financial performance, particularly in the proportion of debt to equity in manufacturing companies in the food and beverage sub-sector listed on the Indonesia Stock Exchange for the 2021-2024 period. This finding is similar to research conducted by Nurrahman et al. (2024),Jumroh et al. (2024),Yuniwati et al., (2024)which states that the ROA variable does not have a significant effect on financial performance. This is in contrast to research conducted by Triwahyuni et al., (2023),Hasidi et al., (2024),Afifah & Ramdani (2023), stating that ROA has a significant influence on financial performance. This also suggests that the characteristics of the food and beverage industry (e.g., fluctuating raw material costs and unstable profit margins) may limit the impact of profitability on changes in DER.

The Effect of Liquidity on Financial Performance

The results of this study indicate that the liquidity variable, measured by the Current Ratio (CR), has a significant negative effect on financial performance (DER) because it has a coefficient value of -0.172657 with a probability value of 0.0127 ($p < 0.05$) in food and beverage subsector manufacturing companies listed on the Indonesia Stock Exchange for the 2021–2024 period. This means that companies with high liquidity levels tend to use less debt in their funding structure because they have a good ability to meet short-term obligations using their current assets. This finding supports the Pecking Order theory which states that companies with sufficient internal funds will prefer internal funding over external sources such as debt. These results are in line with research Pratiwi et al., (2024), which also found a significant negative effect

between liquidity and DER in manufacturing companies in Indonesia. However, this finding differs from the study by Agusiady et al. (2024) which showed that liquidity was insignificant on DER in the automotive subsector, thus indicating that industry characteristics also influence the relationship between liquidity and company financial performance.

The Effect of Activities on Financial Performance

The results of the study indicate that the activity variable, as measured by Total Asset Turnover (TATO), does not have a significant effect on financial performance (DER), which has a coefficient of 0.115408 with a probability value of 0.7237 (p>0.05) partially in manufacturing companies in the food and beverage subsector listed on the Indonesia Stock Exchange for the 2021–2024 period. This means that the efficiency of asset use to generate income does not directly affect the proportion of debt to equity. This finding is in line with research.Nurlaela et al., (2019)which states that TATO has no significant influence on financial performance in the consumer goods sector, apart from that, research Ningrum and Sisdianto, (2024), P. Lestari (2020),DS Dewi et al., (2019)which states that the TATO variable has no effect on financial performance. This is inversely proportional to the researchFirdayani et al., (2022),Andelline & Widjaja (2018), Putri et al., (2022) which states that TATO has a significant impact on financial performance. Therefore, high TATO earnings cannot be considered a sufficient indicator to drive changes in financial performance through debt use in food and beverage companies.

The Influence of Profitability on Company Value

The analysis results show that the profitability variable, measured by Return on Assets (ROA), does not significantly influence firm value (PBV), with a coefficient of 1.318832 and a probability value of 0.2700 (p>0.05), for food and beverage manufacturing companies listed on the Indonesia Stock Exchange for the 2021-2024 period. In other words, although companies are able to generate returns on their assets, this does not automatically increase their market value. Investors seem to consider other factors such as growth prospects, operational efficiency, and risk management. This fact is in line with research by Suyono et al., (2021) which states that the ROA variable does not have a significant effect on company value. This is in contrast to research conducted by Nugroho et al., (2024), Dewi et al., (2022), Sofiani & Siregar (2022), Jaya (2020), Bitasari et al., (2024) which states that the ROA variable has a significant effect on company value.

The Effect of Liquidity on Company Value

The findings of this study indicate that the liquidity variable, as measured by the Current Ratio (CR), also does not significantly influence firm value (PBV), as indicated by a coefficient of -0.600119 with a probability value of 0.4353 (p > 0.05). This means that companies with relatively high current assets alone are not enough to attract market attention to significantly increase the company's valuation. This indicates that high levels of liquidity may reflect idle funds or suboptimal capital utilization, which then reduces investor attractiveness. Research by Kurniawan et al., (2023), Dewi et al., (2022) in the property and real estate sector also reported that although liquidity has the potential to affect company value, in practice its influence is often insignificant due to structural factors of the industry.

The Influence of Activities on Company Value

The findings of this study indicate that the activity variable, measured by Total Asset Turnover (TATO), has a significant positive effect on firm value (PBV), as indicated by a coefficient of 16.56139 with a probability value of 0.0000 (p < 0.05). This means that the more efficient a company is in using its assets to generate revenue, thus reflecting strong operational strength, the higher the market perception of the company. This is in accordance with research by Bama et al., (2021), Dewi et al., (2022) which found that the TATO variable had a significant effect on increasing company value. This differs from research conducted by Suardy et al., (2023) which states that the TATO variable has a negative and insignificant effect on PBV.

The Influence of Company Value on Financial Performance

The results of the study indicate that the firm value (PBV) variable has a significant positive effect on financial performance (DER) in manufacturing companies in the food and beverage subsector listed on the Indonesia Stock Exchange for the 2021-2024 period, with a coefficient level of 0.081017 and a probability value of 0.000 ($p < 0.05$). This indicates that higher firm value leads to improved financial performance. Theoretically, increased firm value reflects investor confidence in the company's ability to generate profits and manage resources efficiently, ultimately strengthening the company's financial position. This finding aligns with the results of the study.Burhanudin et al., (2023) which states that company value is positively related to profitability in the food and beverage sub-sector in Indonesia.

The Influence of Company Value as a Mediator Between Profitability and Financial Performance

The results of statistical testing using the Sobel test indicate that the firm value (PBV) variable is unable to mediate the relationship between profitability (ROA) and financial performance (DER), as indicated by the calculated z-value of 1.10 < t-table 2.02. This means that ROA does not indirectly have a significant effect on DER through PBV in manufacturing companies in the food and beverage subsector listed on the Indonesia Stock Exchange for the 2021-2024 period. This indicates that increasing profitability has not been able to increase firm value, which then impacts the company's financial performance. This finding is in line with research results stating that firm value is unable to mediate the effect of profitability on financial performance in the property and real estate sector (Anthony & Wijaya, 2023).

The Influence of Company Value as a Mediator Between Liquidity and Financial Performance

The Sobel test results indicate that firm value (PBV) is unable to mediate the relationship between liquidity (CR) and financial performance (DER), as indicated by a z-value of -0.78 < t-table of 2.02. This means that CR does not indirectly have a significant influence on financial performance through firm value. This finding is consistent with a study by Nurwulandari (2021), which showed that although liquidity has a direct effect on financial performance, the indirect effect of liquidity through capital structure on firm value is insignificant. Furthermore,Masyaili (2022) In a study of LQ-45 companies, it was found that although liquidity directly influences company value, capital structure as a mediator does not statistically significantly strengthen the effect of liquidity on firm value.

The Influence of Company Values as a Mediator Between Activities and Financial Performance

The results of the Sobel test indicate that firm value (PBV) failed to mediate the effect of activity variables (TATO) on financial performance (DER) through firm value (PBV), because the calculated z-value of 0.58 < t-table 2.02, so that indirectly there is no effect of TATO through PBV on DER is not significant. This means that even though the company has high asset utilization efficiency, the increase is not enough to increase the company's market value which can then impact financial performance. This finding is in line with research in the consumer goods sector conducted by Halim (2022) which shows that asset turnover has a positive influence on company value but does not significantly mediate company value.

CONCLUSION

Based on the results of the study, it shows that the profitability variable (ROA) does not have a significant effect on financial performance (DER) and company value (PBV), this states that the company in generating profits has not been a dominant factor in determining financial

performance and market perception. The liquidity variable (CR) has a significant negative effect on financial performance (DER) this indicates that a company with sufficient liquidity tends to use less debt in its funding structure because it has a good ability to meet short-term obligations with its current assets. While liquidity (CR) does not affect company value (PBV) which indicates that a company with sufficient current assets alone is not enough to attract market attention. The activity variable (TATO) was found to have no significant effect on financial performance (DER) this indicates that the use of assets to generate profits does not directly affect debt to equity. But the activity variable (TATO) has a significant positive effect on company value (PBV) this indicates that the better the company uses its assets in generating profits which reflects strong operational strength, the higher the market perception of the company. The company value variable (PBV) has a significant positive effect on financial performance (DER) this indicates that the higher the company value, the better the financial performance. The results of the Sobel test state that company value (PBV) is not able to mediate profitability, liquidity and activity towards financial performance (DER), meaning that increasing company value does not necessarily strengthen the relationship between the three main financial variables towards financial performance.

The results of the study on the influence of profitability, liquidity, and activity on financial performance with firm value as a mediating variable in the food and beverage sub-sector suggest that companies need to improve operational efficiency and asset management to maintain liquidity stability and strengthen profitability in the long term. For future researchers, it is recommended to add additional variables such as capital structure, company size, and dividend policy, as well as expand the period and scope of the study so that the results are more comprehensive and relevant to the dynamics of the manufacturing industry, especially the food and beverage sub-sector.

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