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THE EFFECT OF LIQUIDITY, SOLVENCY, ACTIVITY, AND PROFITABILITY ON FINANCIAL PERFORMANCE OF MANUFACTURING COMPANIES

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ABSTRACT

Indonesia is a country with various economic and business activities. With the development of economic activities, companies that have similar sectors in Indonesia have emerged, creating competition between these companies. The development of the company itself can be assessed from the corporation's financial performance, if the corporation has financial performance. Financial performance describes ability of a corporation to produces profits effectively and efficiently over a set period by leveraging its assets. This analysis aimed to examine the effect of liquidity, solvency, activity, and profitability on the financial performance of non-cyclical consumer sector companies listed on the Indonesia Stock Exchange (IDX) over period of 2021 to 2023. For this research, purposive sampling was used, resulting in the selection of 120 companies from the non-cyclical consumer sector registered in IDX. Data processing applied in this research was Eviews 12 software. Hypothesis testing method employed was multiple linear regression. The model estimation applied was the Fixed Effects Model (FEM) to ensure alignment with multiple linear regression in analyzing the data. This research utilizes Return on Assets (ROA) to assess the financial performance of company The results obtained in this research indicate that liquidity have significant positive effect on financial performance. Solvency have significant negative effect on financial performance. Activity do not have a negative dan insignificant effect on financial performance. Profitability have significant positive effect on financial performance.

Keywords: *Financial Performance, Liquidity, Solvency, Activity, Profitability*

1. INTRODUCTION

Indonesia is a developing nation with various economic and business activities. The more economic activities develop, the more companies will have similar sectors and create competition between these companies. A company's success can be measured by its performance. Good financial performance in a company will attract shareholders, which encourages entrepreneurs to compete in managing their business optimally, with the aim of increasing the company's financial standing. Company financial stading can be seen from the growth in financial performance. Good financial control can reflect that the company can manage resources well and efficiently.

Financial performance reflects how effectively and efficiently a company's economic activities generate profits by utilizing its assets. To evaluate the company's financial performance, one can analyze financial statements using various financial ratios. While there are numerous financial ratio analyses available to assess a company's financial health, this study focuses on four specific ratios: liquidity, solvency, activity, and profitability. By employing four ratio analyses, the progression of financial performance can be assessed.

Agency theory is an agency relationship between one or more shareholders (principals) who employ company managers (agents) to manage the company according to the principal's

instructions. Managing the company's operations is expected to enable agents to make optimal decisions for the company in order to achieve the ultimate goal of enhancing company performance. In agency theory, agents act according to the directives of shareholders, who will generate financial report to show financial performance during that period. [1]

Liquidity serves as a metric for determine corporations's capacity to fulfill its current liabilities or debts that have matured. To evaluate liquidity, firms often rely on the Quick Ratio. [2] The Quick Ratio gauges the corporation's capability to settle current debts without liquidating assets. An increase Quick Ratio reflects a stronger ability to manage short-term liabilities efficiently, since it demonstrates the corporation's possesses adequate liquid funds to settle these obligations without needing to sell its inventory.

Solvency serves a metric for determine corporation's capacity to fulfill its liabilities in repaying long-term debts. To evaluate solvency, companies use the Debt to Equity Ratio. [3] The DER measures extent to which corporation depends on debt to finance its operations in comparison to using its own capital. A favorable DER suggests company have more capital than debt, thereby ensuring strong financial stability.

Activity represents an assessment of how efficiently or effectively corporation utilizes funds to run its operations, including activities such as purchasing, selling, and other functions. [4] To assess corporation's activity, total assets turnover can be used. Total Assets Turnover evaluates corporation's capacity to produce sales from its funds. A high Total Assets Turnover ratio indicates strong operational efficiency and the potential to produce higher profit from the property it owns.

Profitability acts as a metric for evaluate corporation's capacity to generate substantial profits, reflecting strong company performance. [5] To evaluate a company's profitability, Return on Equity can be used. Return on Equity evaluates the effeciency corporation creates profits from the capital invested by shareholders. A high Return on Equity suggests corporation is effectively utilizing the assets and delivering profitable returns for its investors.

The Effect of Liquidity on Financial Performance

Strong liquidity reflects corporate have competence to satisfy current debt liabilities. In research of Clarissya and Dewi (2024) [6] and Ningsih, et al. (2023) [7], liquidity does not have impact on financial performance. However, the discoveries of this study contradict research of Affi and As'ari (2023) [8], this research shows that liquidity affects financial performance.

H_1: Liquidity have a positive and significant effect on financial performance

The Effect of Solvency on Financial Performance

Perfect solvency, it will describe a company that is guaranteed to face the economic crisis so that it can survive during the crisis. According to the findinsgs of the research of Affi and As'ari (2023) [8], solvency does not have influence on financial performance. However, these results contradict the analysis results of Kertorahardjo and Susanto (2021) [9] and Ningsih, et al. (2023) [7] which show that solvency have a positive and significant influence on financial performance.

H_2: Solvency have a positive and significant effect on financial performance

The Effect of Activity on Financial Performance

Perfect activity management can show the organization's proficiency to manage assets productively so that it will increase corporation potential and financial performance. In research of Ningsih, et al. (2023) [7] and Grediani et al. (2022) [10], activity have positive and significant effect on financial performance.

H_3: Activity have a positive and significant effect on financial performance

The Effect of Profitability on Financial Performance

High profitability can show company can generate satisfactory profits so that it becomes a positive value for the company and attracting potential shareholders. In the research of Affi and As'ari (2023) [8] and Atika & Asih (2024) [11] showed that profitability affects financial performance. However, in the research of Ningsih, et al. (2023) [7], profitability did not affect financial performance because equity decreased slightly so that the corporation failed to produce satisfactory profits.

H_4: Profitability have a positive and significant effect on financial performance

Conceptual Framework

Conceptual framework is structure that delineates the understanding of how theory influence the critical elements associated with the topic. According to problem conception, philosophical underpinnings, and prior research, the conceptual framework in this analysis is outlined the following manner:

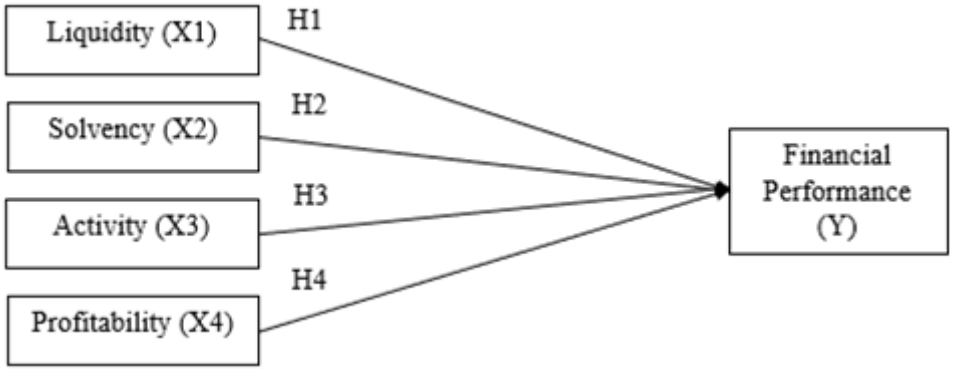


Figure 1. Conceptual Framework

2. RESEARCH METHOD

Methodology applied in this research is quantitative descriptive inquiry. Descriptive research seeks to explain the relationships and effects between variables. Quantitative data analysis is employed to evaluate the hypothesis, which will be applied to a specific population and sample. [12]

The data employed in this analysis consist secondary information sourced from the yearly financial report of corporation registered in Indonesia Stock Exchange for the years 2021-2023, forming population of the research. The sampling method employed in this analysis is purposive sampling, chosen according to spesific parameters, namely; Consumer non-cyclical manufacturing companies listed on the Indonesia Stock Exchange (IDX); Consumer non-Cyclical manufacturing companies that have conducted an Initial Public Offering on the Indonesia Stock Exchange (IDX) in 2021-2023; Consumer non-Cyclical manufacturing companies that have delisted on the Indonesia Stock Exchange (IDX) in 2021-2023; Consumer non-Cyclicals manufacturing companies that have been suspended by the

Indonesia Stock Exchange (IDX) in 2021-2023; Consumer non-Cyclicals manufacturing companies that did not present financial reports during 2021-2023; Consumer non-Cyclicals manufacturing companies that have just entered the Consumer non-Cyclicals sector in 2023; Consumer non-Cyclicals manufacturing companies that do not use the Rupiah currency during 2021-2023. According to sampling parameters mentioned above, total of 79 companies were utilized as sample in this analysis.

Multiple linear regression analysis was employed to analyze the data in this research with Eviews 12 software, with the purpose of investigating the influence of independent variables on dependent variable. The selection of regression models is tested using Chow Test and Hausman Test. Hypothesis testing conducted both simultaneously and individually.

Table 1. Variabel Operationalizations

Variable	Size	Scale
Financial Performance	$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$	Ratio
Liquidity	$QR = \frac{\text{Current Asset} - \text{Inventory}}{\text{Current Liabilites}}$	Ratio
Solvency	$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$	Ratio
Activity	$TATO = \frac{\text{Net Sales}}{\text{Average Total Assets}}$	Ratio
Profitability	$ROE = \frac{\text{Net Income}}{\text{Share Capital}}$	Ratio

3. RESULTS AND DISCUSSIONS

Descriptive Analysis

The test are aim to elucidate the information that has been gathered and make it easier to understand the variables used in this study. The findings of descriptive analysis:

Table 2. Descriptive Analysis
Source: Data processed with EViews 12

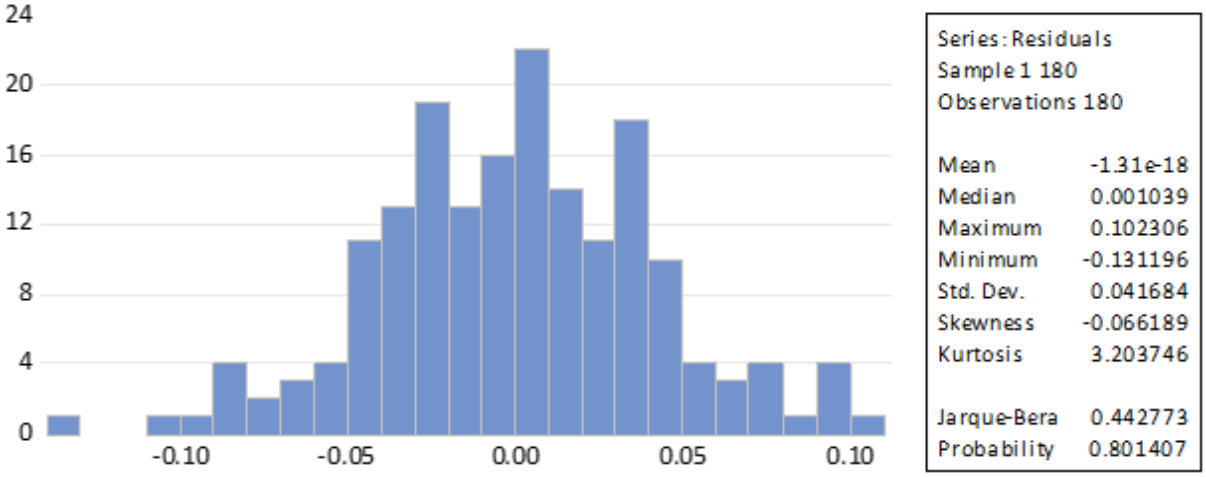
	ROA	C	QR	DER	TATO	ROE
Mean	0.057179	1.000000	1.522658	1.566889	1.341859	4.178589
Median	0.051609	1.000000	0.982818	0.855166	1.123816	0.813925
Maximum	0.312982	1.000000	11.42870	29.31668	4.494645	75.46721
Minimum	-0.113514	1.000000	-1.080279	0.102822	0.004798	-1.013558
Std. Dev.	0.071989	0.000000	1.723272	3.096379	0.931716	10.82800

Based on analysis outcomes above, descriptive statistical reveals the following: the dependent variable (ROA), which represents financial performance, have average of 0.057179, maximum of 0.312982, minimum of -0.113514, and standard deviation of 0.071989. For first independent variable (QR), which measures liquidity, mean is 1.522658, maximum is 11.42870, minimum is -1.080279, and standard deviation is 1.723272. Second independent variable (DER), representing solvency, shows mean of 1.566889, maximum of 29.31668, minimum of 0.102822, and standard deviation of 3.096379. Regarding third independent variable (TATO), which indicates activity, the mean is 1.341859, with maximum of 4.494645, minimum of 1.080279, and standard deviation of 0.931716. Lastly, for fourth independent variable (ROE), which measures profitability, the mean is 4.178589, with a maximum of 75.46721, minimum of -1.013558, and standard deviation of 0.931716.

Normality Test

This test is an assessment carried out to evaluate degree of normality of the variables under investigation, determining if they follow a normal distribution [14].

Table 2. Normality Test
Source: Data processed with EViews 12



In light of the test outcomes in Table 2, p-value is 0.801407, which exceeds 0.05. Consequently, it can inferred the variables under examination follow a normal distribution.

Multicollinearity Test

What follows are the findings of the variance analysis:

Tabel 3. Multicollinearity Test
Source: Data processed with EViews 12

Variance Inflation Factors
Date: 11/09/24 Time: 21:58
Sample: 1 180
Included observations: 180

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	4.75E-05	4.805591	NA
QR	3.59E-06	1.915033	1.072797
DER	1.10E-06	1.337722	1.063790
TATO	1.16E-05	3.120844	1.011367
ROE	8.55E-08	1.161015	1.009793

According to findings of multicollinearity test for liquidity measured using the QR proxy, Variance Inflation Factor (VIF) is 1.072797, which is below 10. Therefore, it may be inferred that no multicollinearity exists among the independent variables in liquidity.

According to findings of multicollinearity test for solvency assessed using DER proxy, Variance Inflation Factor (VIF) is 1.063790, which is also below 10. Hence, it may be ascertained that no multicollinearity exist among the independent variables in solvency.

According to findings of multicollinearity test for activity represented by TATO proxy, Variance Inflation Factor (VIF) is 1.011367, which is less than 10. Thus, it may be surmised that no multicollinearity exist among the independent variables in activity.

According to findings of multicollinearity test for profitability indicated by ROE proxy, Variance Inflation Factor (VIF) is 1.009793, which is lower than 10. Therefore, it may be determined that no multicollinearity exist among the independent variables in profitability.

Heteroscedasticity Test
What follows are the findings of the variance analysis:

Tabel 4. Heteroscedasticity Test
Source: Data processed with EViews 12

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.210381	Prob. F(4,175)	0.3081
Obs*R-squared	4.845792	Prob. Chi-Square(4)	0.3035
Scaled explained SS	5.046931	Prob. Chi-Square(4)	0.2825

In light of the findings, indicates prob. value is 0.3035, which is exceed 0.05. Therefore, it is possible to concluded there is no issue of heteroscedasticity.

Autocorrelation Test
What follows are the findings of the test:

Tabel 5. Autocorrelation Test
Source: Data processed with EViews 12

R-squared	0.153330	Mean dependent var	-1.31E-18
Adjusted R-squared	0.123966	S.D. dependent var	0.041684
S.E. of regression	0.039015	Akaike info criterion	-3.611616
Sum squared resid	0.263339	Schwarz criterion	-3.487445
Log likelihood	332.0454	Hannan-Quinn criter.	-3.561270
F-statistic	5.221662	Durbin-Watson stat	1.993609
Prob(F-statistic)	0.000058		

According to test, indicates that the Durbin-Watson statistic of 1.993609 can be assessed against the values defined in the criteria: $1.7109 < 1.993609 < 3.2891$, suggesting that there is no evidence of positive or negative autocorrelation.

Multiple Linear Regression Analysis Results
In accordance to findings of regression selection model through Chow and Hausman test, the framework utilized in analysis is FEM with regression outcomes:

Table 6. Multiple Linear Regression Analysis Results
Source: Data processed with EViews 12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.029089	0.006888	4.222941	0.0000
QR	0.012763	0.001894	6.738783	0.0000
DER	-0.006135	0.001050	-5.844621	0.0000
TATO	-0.000943	0.003401	-0.277284	0.7819
ROE	0.004675	0.000292	15.98650	0.0000

R-squared	0.664716	Mean dependent var	0.057179
Adjusted R-squared	0.657052	S.D. dependent var	0.071989
S.E. of regression	0.042158	Akaike info criterion	-3.467393
Sum squared resid	0.311029	Schwarz criterion	-3.378700
Log likelihood	317.0654	Hannan-Quinn criter.	-3.431432
F-statistic	86.73639	Durbin-Watson stat	0.707709
Prob(F-statistic)	0.000000		

According to outcomes, model for the analysis result use by fixed effect method can be defined as follows:

$$ROA = 0.029089 + 0.012763\ QR - 0.006135\ DER - 0.000943\ TATO + 0.004675\ ROE + Ɛ$$

The equation can be constructed as follows: when the independent variables liquidity, solvency, activity, and profitability are set to 0, value of the dependent variable, financial performance, remains constant at 0.029089. Liquidity has a regression coefficient of 0.012763, indicating that for each unit increase in liquidity, the financial performance value rises by 0.012763. Solvency has a regression coefficient of -0.006135, suggesting that each unit increase in solvency results in a decrease in financial performance by 0.006135. Activity has a regression coefficient of -0.000943, meaning that for each unit increase in activity, the financial performance value decreases by 0.000943. Profitability has a regression coefficient of 0.004675, meanings that for each unit increase in profitability, financial performance improves by 0.004675.

Chow Test

Table 7. Chow Test
Source: Data processed with EViews 12

Effects Test	Statistic	d.f.	Prob.
Cross-section F	8.517126	(59,116)	0.0000
Cross-section Chi-square	301.270302	59	0.0000

Outcome of the test in the table above indicate that Fixed Effects Model (FEM) is more suitable framework to use, as Chi-square prob. is 0.0000, whichis falls below 0.05. Following this, Hausman test will be performed.

Hausman Test

Table 8. Hausman Test
Source: Data processed with EViews 12

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.362895	4	0.0000

The findings of Hausman test indicate that FEM is more fitting framework to apply, as prob. is 0.0000, which bellow 0.05.

T-test

In light of findings presented Table 3, it is feasible to observed that liquidity (QR), solvency (DER), and profitability (ROE) significantly influence the dependent variable, while activity (TATO) does not exert a significant influence on dependent variable.

Liquidity (QR), have probability value of 0.0000, which is below the 0.05 threshold and t-statistic of 6.738783. This signifies that liquidity exerts positively and significant effect on financial performance, leading to acceptance of H1: Liquidity has positive and significant effect on financial performance.

Solvency (DER), shows probability value is 0.0000, which is less than 0.05, and t-statistic is -5.844621. This suggests that variable negatively and significant effect on financial performance, leading to rejection of H2: Solvency has positive and significant effect on financial performance.

Activity (TATO), shows probability of 0.7819, which is exceed 0.05, and t-statistic of -0.277284. This implies that activity does not have negative and significant effect on financial performance, resulting in rejection of H3: Activity has positive and significant effect on financial performance.

Lastly, profitability (ROE), shows probability of 0.0000, which is below 0.05, and t-statistic of 15.98650. This indicates that profitability positively and significant effect on financial performance, and H4: Profitability has positive and significant effect on financial performance is accepted.

4. CONCLUSIONS AND SUGGESTIONS

According to research findings have discussed, it may be inferred that: Liquidity positively effect on the financial performance. This suggests companies with adequate liquid assets are better able to manage their short-term liabilities, thereby enhancing financial performance. Solvency, have negative effect on financial performance, indicating that elevated levels of debt lead to higher interest expenditures, which dimish the company's profitability. Conversely, a lower debt level leads to reduced interest obligations, thereby potentially improving profits. Activity does not has negative and not significant influences on financial performance, which suggests that companies may face challenges in efficiently managing their assets to optimize operations. Finally, Profitability positively influences the financial performance of manufacturing companies, demonstrating that companies generating satisfactory profits are viewed favorably by investors, thus attracting investment.

This study is anticipated to function as benchmark and comparison for forthcoming studies. Future researchers could explore similar studies with a different time frame to analyze how the financial performance of companies evolves over time. Additionally, it is hoped that entrepreneurs will be more prudent in making investment decisions by thoroughly analyzing a company's financial statements before proceeding with investments.

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