GOLDEN RATIO OF FINANCE MANAGEMENT
VOLUME 5, ISSUE. 2 (2025)
Website: https://goldenratio.id/index.php/grfm

GOLDEN RATIO
ISSN [Online]: 2776-6780

FINANCE | RESEARCH ARTICLE

Effect of Liquidity, Profitability, and Solvency on Stock Returns of Non-Cyclical Consumer Manufacturing Firms on IDX 2021–2023

Afin Widianto[1], Batara Daniel Bagana[2]

[1, 2] Department of Accounting, Faculty of Economy and Business, Universitas Stikubank, Semarang. Indonesia. Email: afinwidianto@mhs.unisbank.ac.id[1], batara@edu.unisbank.ac.id[2]

ARTICLE HISTORY

Received: July 16, 2025
Revised: August 13, 2025
Accepted: September 14, 2025

DOI
https://doi.org/10.52970/grfm.v5i2.1582

ABSTRACT
This study aims to examine and investigate the factors that influence stock returns. The variables analyzed in this study include liquidity, profitability, and solvency. The study population consists of manufacturing companies in the Consumer Non-Cyclical sector listed on the Indonesia Stock Exchange (IDX) during the 2021-2023 period. This study employs a quantitative approach, utilizing secondary data analysis. Sampling was conducted using a purposive sampling method, resulting in an initial sample of 127 companies with a total of 270 observations. During the data processing process, several outliers were identified, so they were removed, resulting in 123 valid observations. The analytical approach employed was quantitative, used to examine the relationship between variables. The results show that liquidity and solvency have a significant positive effect on stock returns.

Keywords: Stock Return, Liquidity, Profitability, Solvency.
JEL Code: G10, G12, G32, C33

I. Introduction

The capital market plays a crucial role in national economic development, serving as a means of financial intermediation, enhancing capital allocation efficiency, and strengthening economic resilience (Alfian & Indah, 2022). Capital markets expand access to financial resources and encourage active participation of economic actors in sustainable investment, especially in the context of globalization and international financial market integration. A variety of financial instruments, capital markets provide access to capital for listed companies and offer portfolio diversification opportunities for investors, where stock returns serve as a key indicator of investment performance and evaluation (Alfian & Indah, 2022). In relation to stock returns, the Consumer Non-Cyclical sector is an interesting one to analyze, considering that companies in this sector are engaged in providing basic goods and services such as food, beverages, and health products that have stable demand over time. This stable demand makes the revenue of companies in this sector relatively consistent even amidst volatile economic conditions, thus positively impacting the stability of the stock returns offered. With its characteristics that are relatively resistant to fluctuations in the economic cycle, the Consumer Non-Cyclical sector is often considered a more stable and secure investment alternative, especially for investors with low-risk preferences and a focus on long-term goals. Therefore, the study of stock returns in this sector is significant because it can provide insight into the extent to which a company's fundamental financial variables

ISSN [Online]: 2776-6780

contribute to the formation of stock value and how this can enhance the issuer's competitiveness amidst the increasing intensity of market competition.

The Consumer Non-Cyclical sector, which provides necessities such as food and health products, is interesting to analyze due to its stable demand despite economic fluctuations. This sector offers relatively consistent stock returns and is a safe investment alternative for long-term investors. However, since the beginning of 2021, the sector's stock index fell 11.29% YTD, making it one of the most affected sectors, although by the end of 2022, it showed a significant recovery on the back of defensive factors, improved financial reports, and corporate actions available on IDX websites. In contrast, at the end of 2022, shares of issuers in the Consumer Non-Cyclical sector were showing off their strength. Several stocks in this sector were able to accelerate amidst the shadow of soaring inflation and economic uncertainty. Sectorally, the IDX was the driving force behind the rise of the Jakarta Composite Index (JCI) this week. The IDX strengthened 1.29% and 2.5% in the past two years. Several large-cap stocks in this sector are also on the rise. For example, PT Unilever Indonesia Tbk (Tbk) rose significantly by 9.18%. Furthermore, the Salim Group duo, PT Indofood Sukses Makmur Tbk (INDF) and PT Indofood CBP Sukses Makmur Tbk (ICBP), have also consistently strengthened this year. PT Mayora Indah Tbk (MYOR) also showed impressive performance, with its shares rising 23.53% in one week. On Thursday (October 20th), MYOR's share price jumped 13% to Rp 2,520 per share.

Among cigarette issuers, PT Gudang Garam Tbk (GGRM) and PT HM Sampoerna Tbk (HMSP) showed positive movement. On Thursday (October 20th), GGRM shares rose sharply by 8.46%, while HMSP shares increased by 6.01%. Primary consumer goods stocks performed strongly due to three main factors: first, the sector is considered defensive and remains attractive to investors amid inflation and monetary normalization; second, market anticipation of expected improvement in third-quarter financial reports, supported by falling raw material prices; and third, technical factors and corporate actions, such as those seen in cigarette stocks like GGRM and HMSP. Strong household consumption and consumer optimism also support the sector's performance, making stocks like ICBP, AMRT, LSIP, and CPIN attractive investment options with potential for sustainable growth, available on Kontan websites. The primary factors that influence stock returns in this sector include liquidity, profitability, and solvency. Liquidity reflects the company's ability to meet short-term obligations (Nirawati et al., 2022), with research by Aryaningsih et al. (2022) and Rahayu & Triyonowati (2021) showing a positive influence, in contrast to Ali et al. (2022). Profitability measures the effectiveness of management in generating profits (I. G. A. A. Dewi et al., 2020), supported by Yanita Sanjaya & Maulida (2023) and Vanessa & Wulan (2023), but contrary to Isnaini et al. (2023). Solvency assesses the ability to meet long-term obligations (Ass, 2020), with support from Ningsih et al. (2023) and Anggelia B. Nursalim et al. (2021). However, Ali et al. (2022) did not find a significant effect.

II. Literature Review and Hypothesis Development

2.1. Signaling Theory

According to Brigham & Houston (2009), signal theory describes management behavior in conveying data to owners of capital regarding prospects. Vanessa & Wulan (2023) noted that signal theory explains how management actions aim to provide investors with information about the company's prospects and performance, serving as a basis for informed investment decisions. The information provided through this signal is crucial in reducing the information gap between management and investors, enabling more accurate investment decisions to be made. Investors need to consider the factors conveyed by management in determining the company's prospects. Companies with good prospects tend to avoid selling shares and prefer funding through debt, while companies with poor prospects sell their shares more often (Nursita, 2021).

ISSN [Online]: 2776-6780

2.2. Pecking Order Theory

The Pecking Order Theory, proposed by Myers (1984), states that companies have specific priorities in choosing funding sources, where these decisions are made in order based on the amount of capital costs that must be borne. Cella Anastasya (2023) states that this theory also involves rational investor preferences in making funding decisions to maximize shareholder value. Companies prefer to use internal funds rather than issuing new shares because issuing shares can reduce the old share price and company image. Pecking Order Theory explains that companies prioritize the use of internal funds (retained earnings) rather than the use of external equity (issuing new shares) because this theory assumes that choosing internal equity will be more profitable than issuing new shares which will reduce the price of old shares and make the share price fall so that this is interpreted as bad news by investors which can lower the company's image.

2.3. Stock Return

According to Bagaswara & Wati (2020), Stock return is the profit obtained by investors from buying and selling stocks. Karyatun (2023) distinguishes stock returns into realized returns (returns that actually occur) and expected returns (returns that are estimated in the future with uncertainty risk). The greater the uncertainty, the higher the risk and the higher the expected return. Returns are divided into two primary forms: realized returns, which are factual and can be measured historically, and expected returns, which are predictive and depend on future risk levels. Understanding both returns is crucial for investment decision-making, as there is a direct relationship between uncertainty, risk, and expected returns. Stock returns are influenced by factors such as liquidity, profitability, and solvency.

2.4. Liquidity

According to Mayar (2020), the liquidity ratio is a measure used to assess a company's ability to settle its short-term obligations. Liquidity indicates a company's readiness to meet its short-term obligations on time, as reflected in the amount of current assets it holds (Pratiwi et al., 2024). One more specific form of Liquidity ratio is the Quick Ratio, which measures a company's ability to meet its obligations as they fall due. Quick Ratio, according to Sari & Informatics (2020), measures the company's ability to meet short-term obligations with the most liquid assets. The higher the Quick Ratio, the healthier the company's financial condition, which is also attractive to investors because it reflects financial stability and potential for increased share prices.

2.5. Profitability

According to Dewi et al. (2020), the Profitability ratio is an indicator used to measure the extent to which a company can generate profits in a period. This ratio also reflects the level of management performance efficiency, as indicated by the amount of profit earned through sales and the income generated from investment activities. One of the leading indicators of the profitability ratio is Net Profit Margin. Net Profit Margin, according to Well (2023), is used to evaluate the company's ability to generate net income from its main operating activities after deducting all operating expenses, taxes, and interest. This ratio shows the effectiveness of management in optimizing resources.

2.6. Solvency

According to Resti Alia Desprisila et al. (2022), the Solvency ratio is a ratio used to assess the company's ability to meet its long-term obligations and compare the proportion of total debt to the company's own capital. This ratio plays a crucial role in indicating the composition of a company's capital

ISSN [Online]: 2776-6780

structure and the level of financial risk it faces. A high Solvency Ratio indicates a company's heavy dependence on external funding sources, which can increase the risk of default. Conversely, a ratio within the ideal range indicates a company with a proportional capital structure and the ability to maintain long-term financial stability, thus increasing its credibility in the eyes of investors and lenders. For internal and external parties, the greater this ratio, the more unprofitable it will be, and the greater the ratio that is borne for failures that occur in the company (Tangngisalu, 2022). Debt to Equity Ratio (DER), according to Sari & Maryoso (2023), is used to evaluate the proportion of company financing that comes from debt compared to own capital. High DER indicates dependence on debt, while low DER indicates a more solid financial structure.

2.7. Hypothesis Development

a. The Effect of Liquidity on Stock Return

According to Syafrida (2015:121), liquidity reflects the company's availability of funds to meet all maturing debts. Based on Signaling Theory, companies strive to provide signals to the market to reduce information asymmetry between management and investors. One relevant and easily observable signal for investors is the company's liquidity level. High liquidity is generally considered a positive indication that the company has strong financial health and can meet short-term obligations without hindrance. This statement aligns with previous research conducted by Resti Alia Desprisila et al. (2022), Rika Widianita (2023), and Putri & Suryono (2023), which argues that liquidity affects stock returns.

H1 : Liquidity affects stock return

b. The Effect of Profitability on Stock Return

According to Gulo (2024), profitability is a measure of a company's ability to generate profits from its share capital, sales levels, and assets. Profitability reflects a company's capacity to generate profits from its operational activities. High profitability provides a positive signal regarding the effectiveness of performance and future business prospects. Based on Signaling Theory, profitability serves as a corporate communication tool to reduce the information gap between management and investors, thereby increasing trust, encouraging investment interest, and impacting stock returns. This statement aligns with previous research conducted by M. L. Sari & Juniati Gunawan (2023), Kristiawan (2023), and Resti Alia Desprisila et al. (2022), which argues that profitability influences stock returns.

H2 : Profitability affects stock return

c. The Effect of Solvency on Stock Return

According to Albab & Putri (2024), the Solvency Ratio is a formula used to assess a company's ability to meet its long-term needs. This ratio measures the extent to which a company relies on financing through financial leverage by comparing the proportion of debt obligations to equity and total assets. This ratio not only reflects the company's overall capital structure but also indicates the level of financial risk exposure it faces. Similarly, the Pecking Order Theory explains that companies prioritize their funding sources, starting with internal funds such as retained earnings, followed by debt, and finally issuing new shares. This statement aligns with previous research conducted by Yanita Sanjaya & Maulida (2023), R. C. Dewi et al. (2022), and Irene H. Kusumaningdinni (2021), which found that Solvency influences stock returns.

H3 : *Solvency affects stock returns*

III. Research Method

3.1. Research Object

According to Sugiyono (2017), the research object can be interpreted as characteristics, properties, or values of individuals, objects, or activities that have certain variations and are selected by researchers to be

ISSN [Online]: 2776-6780

studied and analyzed in order to conclude. The object of this research is manufacturing companies in the Non-Cyclical Consumer sector listed on the Indonesia Stock Exchange (IDX) for the period 2021-2023.

3.2. Population and Sampling

Population is a generalization rule that identifies an object or subject that researchers think should be methodically taught (Sugiyono, 2017). The population includes all manufacturing companies in the Non-Cyclical Consumer sector listed on the Indonesia Stock Exchange from 2021 to 2023, totaling 127 companies or 270 data points. According to Sugiyono (2017), the sample is a part of the population in terms of number and characteristics. The sample criteria taken include:

a. Manufacturing companies engaged in the Consumer Non-Cyclical sector and have published complete financial reports during the 2021-2023 period.
b. Non-Cyclical Consumer sector manufacturing companies that show asset growth during the period.
c. Non-Cyclical Consumer sector manufacturing companies that show positive profits during the period.
d. Non-Cyclical Consumer sector manufacturing companies that do not have negative profits in the observation period.

3.3. Definition of Concepts, Operationalization, and Variable Measurement

a. Stock Return

According to Putri & Suryono (2023), stock return is a measure used by investors to evaluate the benefits obtained from investments in a company. This measure reflects changes in stock prices and dividends, allowing investors to assess and compare investment performance objectively. Stock return is measured by calculating the difference between stock prices in a given period and the previous period, relative to the stock price of the previous period. M. Fikri Arif Setya Pambudi et al. (2022) present the following formula for stock return:

$$Stock\ Return = \frac{(Price_t - Price_{t-1})}{(Price_{t-1})}$$

b. Liquidity

According to Syafrida (2015:121), liquidity reflects the availability of company funds to meet all debts that are due. This means that liquidity demonstrates a company's ability to use its current assets to pay short-term liabilities promptly so that the company can cover its obligations. Liquidity is measured using the Quick Ratio (QR), which indicates the extent to which a company can pay its short-term liabilities using assets that are easily liquidated, such as current assets excluding inventory. The formula for the Quick Ratio is as follows:

$$Quick\ Ratio = \frac{Current\ Assets - Inventory}{Current\ Liabilities}$$

c. Profitability

According to Dewi et al. (2020), profitability is a dimension used to measure the extent to which a company can generate profit within a specific period. This dimension reflects the effectiveness of management in utilizing resources and assets to earn profit from operational and investment activities. Profitability is measured using the Net Profit Margin (NPM), which assesses company performance by comparing net profit after tax to total revenue. The formula for NPM is as follows:

$$NPM = \frac{Net\ Profit\ After\ Tax}{Total\ Revenue} \times 100\%$$

ISSN [Online]: 2776-6780

d. Solvency

Solvency refers to the ratio between total debt and the company's own capital. According to Rohmadhoni & Santoso (2019), solvency assesses the extent to which a company's operations are financed through debt. Solvency is measured using the Debt to Equity Ratio (DER), which shows the proportion of total debt relative to equity. The formula for DER is as follows:

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

IV. Results and Discussion

The population includes all manufacturing companies in the Consumer Non-Cyclical sector listed on the Indonesia Stock Exchange from 2021 to 2023. Sampling was conducted using a purposive sampling technique, resulting in a total of 270 data samples. During the data processing stage, outliers are identified and handled. According to Hawkins (1980), outliers are data points that are significantly different from the rest of the set and can affect the analysis. After identifying and handling outliers, the remaining sample was 123 data points, resulting in a total sample of 123 data points.

4.1. Descriptive Statistics

According to Ghozali (2018), descriptive statistics is an analysis technique used to describe research data through minimum, maximum, average (mean), and standard deviation values.

Table 1. Descriptive Statistics Before Outliers and Data Transformation

Variable	Mean	Maximum	Minimum	Std. Deviation	Observations
Y	0.150280	14.25000	-0.811111	1.141621	270
X1	1.855657	53.23607	0.055966	4.522936	
X2	0.059583	5.011796	-2.395063	0.427175	
X3	2.019622	54.97976	-4.862583	5.244996	

Table 2. Descriptive Statistics After Outliers and Data Transformation

Variable	Mean	Maximum	Minimum	Std. Deviation	Observations
LN_Y	-0.486040	1.490366	-2.571257	0.995698	123
LN_X1	-0.057277	2.575218	-3.474223	1.328006	
LN_X2	-2.500707	1.284272	-10.175660	2.260170	
LN_X3	-0.225234	4.437865	-3.987835	1.556659	

Table 2 presents the results of the descriptive statistical analysis, which can be explained as follows:

a. Stock Return

Stock returns were transformed using the Natural Logarithm (LN) from a total of 123 data samples. The descriptive statistical analysis shows that the mean value is -0.486040. The maximum stock return value is 1.490366, observed in PT Sawit Sumbermas Sarana Tbk in 2021, while the minimum stock return value is -2.571257, found in PT Sariguna Primatirta Tbk in 2022. The standard deviation is 0.995698.

b. Liquidity (QR)

Liquidity, measured using the Quick Ratio (QR), was also transformed into the Natural Logarithm (LN). The analysis shows that the mean value is -0.057277. The maximum liquidity value is 2.575218, recorded in PT

ISSN [Online]: 2776-6780

Sawit Sumbermas Sarana Tbk in 2021, while the minimum liquidity value is -3.474223, found in PT Panca Mitra Multiperdana Tbk in 2022. The standard deviation is 1.328006.

c. Profitability (NPM)

Profitability, measured using the Net Profit Margin (NPM), was transformed into the Natural Logarithm (LN). The results indicate a mean value of -2.500707. The maximum profitability value is 1.284272, observed in PT Martina Berto Tbk in 2022, while the minimum value is -10.17566, found in PT Asia Sejahtera Mina Tbk in 2023. The standard deviation is 2.260170.

d. Solvency (DER)

Solvency, measured using the Debt to Equity Ratio (DER), was also transformed into the Natural Logarithm (LN). The analysis shows a mean value of -0.225234. The maximum solvency value is 4.437865, recorded in PT Wicaksono Overseas International Tbk in 2023, while the minimum value is -3.987835, found in PT Uni-Charm Indonesia Tbk. The standard deviation is 1.556659.

4.2. Classical Assumption Test

This classical assumption test is carried out using the Normality Test, Autocorrelation Test, Heteroscedasticity Test, and Multicollinearity Test.

a. Normality Test

The Normality Test is a statistical method that aims to evaluate whether the data obtained follows a typical distribution pattern or comes from a population with a normal distribution. In this study, the author employed the Jarque-Bera statistical analysis method to test normality. The condition that the data is said to be normally distributed is if the Jarque-Bera probability value is more than 0.05. If the probability value is less than 0.05, the data is considered not to follow a normal distribution. The following are the results of normality testing based on Jarque-Bera analysis.

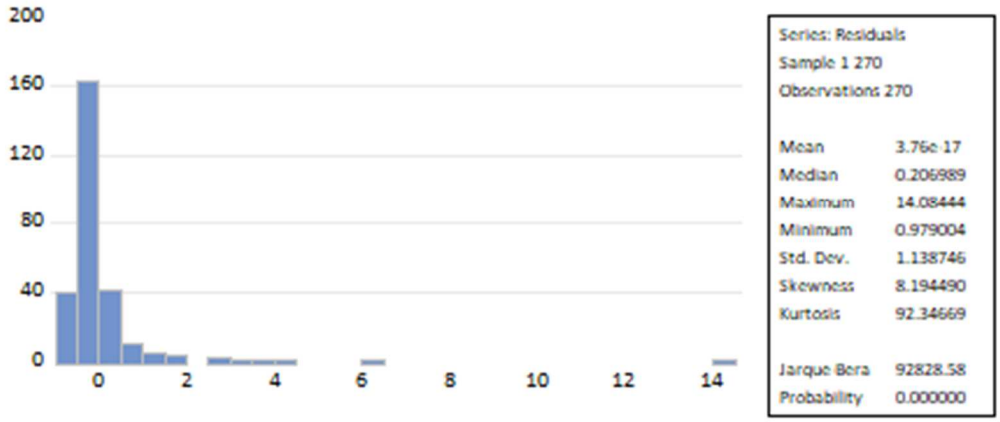

Figure 1. Normality Test Before Outliers and Data Transformation
Normality Test Results - Histogram
Sources: E-Views 13, 2025

ISSN [Online]: 2776-6780

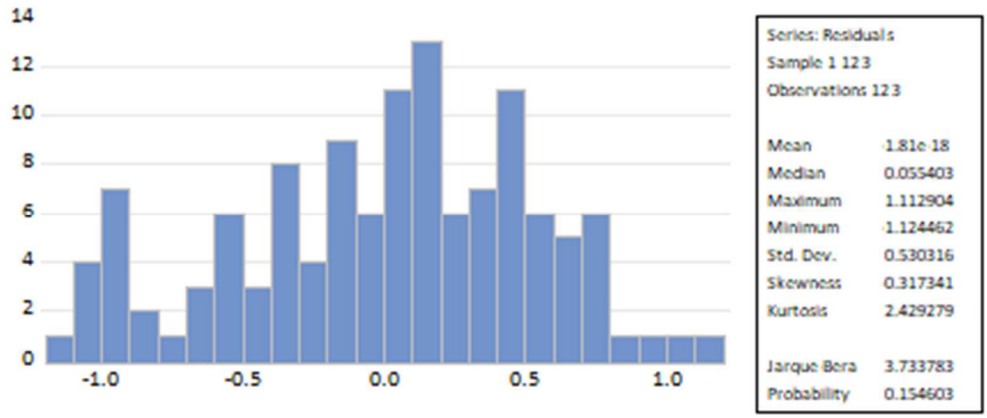

Figure 2. Normality Test After Outliers and Data Transformation
Normality Test Results - Histogram
Sources: E-Views 13, 2025

Based on the test results using Jarque-Bera analysis, the probability value is 0.154603. A normality test with a p-value above 0.05 indicates that the data is usually distributed.

b. Autocorrelation Test

The autocorrelation test aims to check whether in the linear regression model there is a correlation between the error in period t and the error in the previous period (t-1). According to Ghozali (2018), one method often used to detect the presence of autocorrelation is the Durbin-Watson (DW) test. The results of the autocorrelation test data analysis can be seen in the following table:

Table 3. Autocorrelation Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.284277	0.076639	-3.709315	0.0003
LN_QR	0.480063	0.039005	12.30759	0.0000
LN_NPM	0.047188	0.025164	1.875185	0.0632
LN_DER	0.249803	0.034554	7.229349	0.0000
Model Summary				
Statistic			**Value**	
R-squared			0.716330	
Adjusted R-squared			0.709178	
S.E. of regression			0.536959	
Sum squared resid			34.31066	
Log likelihood			-96.01066	
F-statistic			100.1671	
Prob (F-statistic)			0.000000	
Mean dependent var			-0.486040	
S.D. dependent var			0.995698	
Akaike info criterion			1.626190	
Schwarz criterion			1.717643	
Hannan-Quinn criterion			1.663338	
Durbin-Watson stat			1.983385	

Sources: E-Views 13, 2025

GOLDEN RATIO
ISSN [Online]: 2776-6780

Table 3 shows the Durbin-Watson (DW) value of 1.983385. When compared with the Durbin-Watson table at a 5% significance level, with a sample size (n) of 123 and three independent variables (k = 3), the upper limit (du) is 1.7559. The DW value of 1.983385 is greater than the du value of 1.7559 and smaller than the 4–du value of 2.2441 (1.7559 < 1.983385 < 2.2441). Therefore, it can be concluded that the model is free from autocorrelation.

c. Heteroscedasticity Test

According to Ghozali (2018), the heteroscedasticity test aims to determine whether the residual variance in a regression model differs across observations. One method of detection is the Glejser test, which regresses the absolute value of the residuals on the independent variables. If the significance value is greater than 0.05, the data is considered free from heteroscedasticity. The results of the Glejser test are presented in the following table.

Table 4. Heteroscedasticity Test

Statistic	Value	Probability
F-statistic	2.668324	Prob. F(3,119) = 0.0508
Obs*R-squared	7.752543	Prob. Chi-Square(3) = 0.0514
Scaled explained SS	6.949343	Prob. Chi-Square(3) = 0.0735

Source: E-Views 13, 2025

Based on the results of the Glejser test, the probability value of Obs*R-squared is 0.0514, which is greater than 0.05. This indicates that all variables in this study are free from heteroscedasticity.

d. Multicollinearity Test

According to Ghozali (2018), the multicollinearity test aims to identify correlations among the independent variables in the regression model, which should ideally not occur. Detection is carried out by examining the Variance Inflation Factor (VIF) and Tolerance values. Multicollinearity is indicated if VIF ≥ 10 and Tolerance ≤ 0.10, whereas no multicollinearity is indicated if VIF ≤ 10 and Tolerance ≥ 0.10. The results of the multicollinearity test are shown in the following table.

Table 5. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.005873	2.505636	NA
LN_QR	0.001521	1.137474	1.135345
LN_NPM	0.000633	3.058123	1.368772
LN_DER	0.001194	1.250062	1.224223

Source: E-Views 13, 2025

Based on the results of the multicollinearity test in Table 5:

a. The Liquidity variable (LN_Liquidity) has a centered VIF value of 1.135345 (< 10), indicating no multicollinearity.
b. The Profitability variable (LN_Profitability) has a centered VIF value of 1.368772 (< 10), indicating no multicollinearity.
c. The Solvency variable (LN_Solvency) has a centered VIF value of 1.224223 (< 10), also indicating no multicollinearity.

Thus, it can be concluded that all independent variables in this study are free from multicollinearity.

ISSN [Online]: 2776-6780

4.3. Panel Data Regression Analysis

a. Common Effect Model (CEM)

According to Kuncoro (2003), CEM is the most basic estimation model in panel data regression, combining time series and cross-sectional data without distinguishing between individuals or time. This model uses the Ordinary Least Squares (OLS) method and assumes the behavior of all observation units is the same throughout the observed time period. In other words, this model assumes no specific variation between individuals or over time, so the intercept and slope coefficients are considered constant and uniform across the data.

b. Fixed Effect Model (FEM)

According to Gujarati (2004), the Fixed Effect Model (FEM) is an approach that assigns a different intercept to each observation unit (cross-section), while the slope coefficient is assumed to be the same across all units. This difference in intercept is usually accommodated by including a dummy variable in the regression model, known as the Least Squares Dummy Variable (LSDV) method. In this way, FEM can handle unobserved variations between individuals that are constant throughout the observation period, resulting in more precise parameter estimates that are in line with the characteristics of the panel data being analyzed.

c. Random Effect Model (REM)

According to Gujarati (2012), the Random Effects Model (REM) is a method in panel data regression analysis that incorporates variation between individuals and over time into the error term. This error component consists of two parts: individual-specific error and a combined error across time and individuals. This model is often referred to as the Error Components Model due to its multi-component error structure. REM assumes that errors across time and individuals are interrelated, and parameter estimation is performed using the Generalized Least Squares (GLS) method. This model was chosen to overcome the limitations of the Fixed Effects Model, which uses dummy variables, reducing degrees of freedom. REM assumes that individual effects are random and uncorrelated with the independent variable, allowing for more efficient estimation. To determine whether REM or FEM is more appropriate, a Hausman test is typically performed, with REM being chosen if the individual effects are uncorrelated with the independent variable.

4.4. Model Test

To analyze panel data accurately, it is necessary to test model specifications to determine the model that best fits the data characteristics. The following are some commonly used tests for model selection:

a. Chow Test

According to Widarjono (2009), the Chow test is used to determine the most appropriate panel data regression model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). Decision-making is based on the probability value of the cross-section F test. The Chow test results are presented in the following table:

Table 5. Redundant Fixed Effect Test (Chow Test)

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.299980	(40,79)	0.1600
Cross-section Chi-square	62.206421	40	0.0138

Source: E-Views 13, 2025

ISSN [Online]: 2776-6780

Based on the results of the Redundant Fixed Effects test shown in the table, the probability value (Prob.) for Cross-section F is 0.1600 > 0.05. Therefore, the appropriate estimation model for this panel data is the Common Effect Model (CEM).

b. Hausman Test

According to Widarjono (2009), the Hausman test aims to determine whether the Fixed Effect Model (FEM) or the Random Effect Model (REM) is more appropriate for panel data by evaluating the relationship between individual effects and independent variables. However, if the Common Effect Model (CEM) has already been selected, the Hausman test does not need to be performed. Furthermore, the Lagrange Multiplier (LM) test is used to assess whether the Random Effect Model is more suitable than the Common Effect Model.

c. Lagrange Multiplier Test

According to Widarjono (2009), the Lagrange Multiplier (LM) test is used to determine whether the Random Effect Model is more suitable than the Common Effect Model in panel data regression. The results of the Lagrange Multiplier (LM) test are shown in the following table:

Table 6. Lagrange Multiplier Test

Test Hypothesis	Cross-section	Time	Both
Breusch-Pagan	0.323455 (0.5695)	0.898339 (0.3432)	1.221794 (0.2690)

Based on the results of the Lagrange Multiplier (LM) test presented in the table, the Breusch-Pagan value for Cross-section is 0.5695 > 0.05. Therefore, the appropriate estimation model for this panel data is the Common Effect Model (CEM). After conducting various model estimation tests, the results of the selected panel data regression model are summarized as follows:

Table 7. Model Test

Model Test	Model Test Results
Chow Test	CEM > 0.05 FEM < 0.05
Hausman Test	CEM > 0.05 FEM < 0.05
Langrage Multiplier Test	CEM > 0.05 FEM < 0.05
Selected Model	**CEM**

The results in Table 4.3 show that the most appropriate model to use is the Common Effect Model (CEM). Therefore, the next step is to continue the panel data regression analysis using this model, as presented below:

$$LNY = -0.2838 + 0.4803 \cdot LN\_QR + 0.0473 \cdot LN\_NPM + 0.2497 \cdot LN\_DER$$

From the table above, an explanation of the results of the panel data regression analysis can be conveyed as follows:

a. The constant value obtained is -0.28, which means that without the Liquidity (LN_QR), Profitability (LN_NPM), and Solvency (LN_DER) variables, the Stock Return (LNY) variable will decrease significantly by 28%.

ISSN [Online]: 2776-6780

b. The beta coefficient of the Liquidity variable (LN_QR) is 0.48, meaning that if other variables are constant and LN_QR increases by 1%, the Stock Return (LNY) will increase by 0.48%. Conversely, if LN_QR decreases by 1%, the Stock Return (LNY) will decrease by 0.48%.
c. The beta coefficient of the Profitability variable (LN_NPM) is 0.047, meaning that if other variables are constant and LN_NPM increases by 1%, the Stock Return (LNY) will increase by 0.047%. Conversely, if LN_NPM decreases by 1%, the Stock Return (LNY) will decrease by 0.047%.
d. The beta coefficient of the Solvency variable (LN_DER) is 0.24, meaning that if other variables are constant and LN_DER increases by 1%, the Stock Return (LNY) will increase by 0.24%. Conversely, if LN_DER decreases by 1%, the Stock Return (LNY) will decrease by 0.24%.

4.5. Coefficient of Determination Test (R^2)

The coefficient of determination (R^2) test measures the extent to which the independent variables explain the dependent variable. Values close to 1 indicate a strong influence. However, R^2 tends to increase as the number of independent variables increases, although not significantly. Therefore, the Adjusted R^2 is more appropriate, as it accounts for the number of independent variables. The Adjusted R^2 value ranges from 0 to 1, with values above 0.5 indicating a good model. The results are presented below.

Table 8. Coefficient of Determination Test (Panel Least Squares)

Statistic	Value
R-squared	0.716249
Adjusted R-squared	0.709096
S.E. of Regression	0.537274
Sum Squared Residuals	34.35094
Log Likelihood	-96.08281
F-statistic	100.1275
Prob (F-statistic)	0.000000

Source: E-Views 13, 2025

The test results in the table above show that the Adjusted R^2 value is 0.709096, which indicates that the Liquidity, Profitability, and Solvency variables together explain approximately 70.9% of the variation in Stock Returns. The remaining 29.1% is influenced by other factors not included in the this study.

4.6. Simultaneous Significance Test (F-Test)

The F-test is used to examine the joint effect of the independent variables on the dependent variable (Goodness of Fit), ensuring that all independent variables in the model collectively have a significant effect. The results of the model significance test are presented in the following table.

Table 9. F-Test (Panel Least Squares)

Statistic	Value
R-squared	0.716249
Adjusted R-squared	0.709096
S.E. of Regression	0.537274
Sum Squared Residuals	34.35094
Log Likelihood	-96.08281
F-statistic	100.1275
Prob (F-statistic)	0.000000

ISSN [Online]: 2776-6780

The test results in the table above show that the significance value of Prob (F-Statistic) is 0.000000. This indicates that the model used to test the effect of Liquidity, Profitability, and Solvency on Stock Returns is feasible and fit to use.

4.7. Hypothesis Testing (t-Test)

According to Ghozali (2018), the t-test is used to evaluate the effect of each independent variable individually on the dependent variable. The test is conducted using a significance level of 0.05 (α = 5%). The results of the hypothesis tests are presented in the following table:

Table 10. Results of t-Test
Panel Data Regression Model (CEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.283811	0.076681	-3.701213	0.0003
LN_QR	0.480345	0.039034	12.30578	0.0000
LN_NPM	0.047332	0.025177	1.879988	0.0626
LN_DER	0.249658	0.034574	7.220980	0.0000

Sources: E-Views 13, 2025

a. Hypothesis Testing of the Effect of Liquidity on Stock Returns

Based on the t-test results in the table, the significance value of the Quick Ratio on Stock Returns is 0.0000 < 0.05. With a positive coefficient, the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected. Thus, it can be concluded that Liquidity has a positive effect on Stock Returns.

b. Hypothesis Testing of the Effect of Profitability on Stock Returns

Based on the t-test results in the table, the significance value of Net Profit Margin on Stock Returns is 0.0626 > 0.05. With a positive coefficient, the alternative hypothesis (H1) is rejected and the null hypothesis (H0) is accepted. Thus, it can be concluded that Profitability has no significant effect on Stock Returns.

c. Hypothesis Testing of the Effect of Solvency on Stock Returns

Based on the t-test results in the table, the significance value of the Debt to Equity Ratio on Stock Returns is 0.0000, which is below the 0.05 threshold. With a positive coefficient, the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected. Thus, it can be concluded that Solvency has a positive effect on Stock Returns.

4.8. Hypothesis Discussion

a. Effect of Liquidity on Stock Returns

The results of testing the first hypothesis reveal that liquidity has a positive influence on stock returns. An increase in company liquidity tends to be followed by an increase in the return received by investors. Strong liquidity conditions can enhance investor confidence in the company's financial health, thereby positively impacting stock value and investment returns. This finding confirms the importance of management's role in managing cash and current assets to increase investment value and provide optimal returns for shareholders. These results are consistent with previous research by Resti Alia Desprisila et al. (2022), Rika Widianita (2023), and Putri & Suryono (2023), who also found a positive relationship between liquidity and stock returns.

ISSN [Online]: 2776-6780

b. Effect of Profitability on Stock Returns

The results of testing the second hypothesis indicate that profitability has no significant effect on stock returns in the Non-Cyclical Consumer manufacturing sector. This may be due to the nature of the product, which is a basic necessity with relatively stable demand and is less affected by economic cycles. The movement of stock returns is more influenced by external factors, such as capital market conditions, investor perceptions, and the macroeconomic situation, than it is based solely on the company's profit performance. In addition, investors also consider other aspects, such as business risk, dividend policy, and growth prospects, that may not be fully reflected in current profitability figures. This finding is consistent with the research results of Lestari et al. (2022) and Rika Widianita (2023), who also concluded that profitability does not affect stock returns.

c. The Effect of Solvency on Stock Returns

The results of testing the third hypothesis indicate that solvency has a positive influence on stock returns in the non-cyclical consumer manufacturing sector. In this sector, solvency is considered an important indicator because companies generally have a stable capital structure and significant long-term funding needs to maintain the continuity of producing and distributing daily necessities products that are relatively resistant to economic fluctuations. Investors view companies with healthy solvency levels as entities that can effectively manage financial risks and maintain business sustainability, thereby increasing trust and investment interest, which has a positive impact on stock returns. This finding supports the results of previous research by Irene H. Kusumaningdinni (2021), Yanita Sanjaya & Maulida (2023), M. L. Sari & Juniati Gunawan (2023), and Makhsunnah & Susilo (2023).

V. Conclusion

5.1. Conclusion

Based on the analysis and discussion carried out, the following conclusions can be drawn:

a. Liquidity, as measured by the Quick Ratio (QR), has a positive influence on stock returns in non-cyclical consumer sector manufacturing companies listed on the IDX during 2021–2023. A company's ability to quickly meet short-term obligations increases investor confidence and drives higher stock returns.
b. Profitability, as measured by the Net Profit Margin (NPM), has no significant effect on stock returns in the same sector, as return movements are more influenced by external factors such as capital market conditions, investor perceptions, and the macroeconomic environment.
c. Solvency, as measured by the Debt-to-Equity Ratio (DER), contributes positively to stock returns. This suggests that a well-balanced capital structure, particularly in terms of the debt-to-equity ratio, has a substantial impact on increasing the returns earned by investors.

5.2. Research Implications

This research has several limitations that may affect the results obtained, including:

a. The study only covers three years from 2021 to 2023, focusing on companies in the non-cyclical consumer sector listed on the Indonesia Stock Exchange, where this sector index has only been available since 2021.
b. Differences exist in the format of company financial statements, with some using rupiah currency while others use foreign currencies such as the US dollar.
c. Several important variables, such as ROA and EPS, were not included in the analysis, even though these variables may also play a role in influencing stock returns.

ISSN [Online]: 2776-6780

5.3. Research Implications

a. Methodological and theoretical implications:

Future researchers are recommended to include additional variables such as firm value, dividend policy, and other managerial factors to broaden the scope of the analysis. Moreover, examining companies from different sectors is expected to provide further insights into other factors affecting stock returns beyond the non-cyclical consumer manufacturing sector.

b. Policy implications:

For manufacturing companies, especially those in the non-cyclical consumer sector, sound financial management—including liquidity and solvency—is crucial, as both significantly affect stock returns. By implementing effective policies in profit management, maintaining adequate liquidity, and efficiently managing capital structure and debt levels, companies can enhance investor confidence and optimize sustainable stock investment returns. This approach also plays a vital role in creating shareholder value and maintaining stable financial performance amidst dynamic market conditions.

References

Alfian, Y., & Indah, N. P. (2022). Pengaruh Return 0n Asset (ROA), Current Ratio (CR), Total Asset Turnover (TATO), dan Debt to Equity Ratio (DER) terhadap Return Saham Perusahaan Sub Sektor Aneka Industri Otomotif & Komponen selama pada masa Pandemi Covid-19. El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam, 4(3), 839–851.

Ali, F., Hasan, H., & Machmud, M. (2022). Pengaruh Rasio Likuiditas, Solvabilitas, dan Aktivitas Terhadap Profitabilitas Pada PDAM. Amsir Management Journal, 3(1), 60–77.

Anggelia B. Nursalim, Paulina V. Rate, & Dedy N. Baramuli. (2021). Pengaruh Inflasi, Profitabilitas, Solvabilitas dan Ratio Aktivitas Terhadap Nilai Perusahaan Sektor Manufaktur Periode 2015-2018. Jurnal EMBA, 9(4), 559–571.

Aryaningsih, L. K., Novitasari, N. L. G., & Widhiastuti, N. L. P. (2022). Pengaruh Ukuran Perusahaan, Corporate Social Responsibility, Solvabilitas dan Likuiditas Terhadap Kinerja Keuangan. Jurnal Karma (Karya Riset Mahasiswa Akuntansi), 2(1), 2329–2338.

Ass, S. B. (2020). Analisis Rasio Profitabilitas dan Solvabilitas pada PT. Mayora Indah Tbk. BRAND Jurnal Ilmiah Manajemen Pemasaran, 2(2), 195–206.

Bagaswara, A., & Wati, L. N. (2020). Pengaruh Faktor Internal Dan Eksternal Terhadap Return Saham Dengan Moderasi Good Corporate Governance (GCG). 10, 263–277.

Brigham, E. F., & Houston, J. F. (2009). Fundamentals Of Financial, Twelfth Edition.

Cella Anastasya. (2023). Pengaruh Return On Asset , Debt To Equity Ratio Dan Net Profit Margin Terhadap Harga Saham Pada Perusahaan Jasa Sub-Sektor Pariwisata. 3(1), 47–55.

Dewi, I. G. A. A., Gunadi, I. G. N. B., & Suarjana, I. W. (2020). Pengaruh Rasio Pasar dan Rasio Profitabilitas Terhadap Return Saham Pada Perusahaan Perbankan Yang Terdaftar di Bursa Efek Indonesia. Values, 1(3), 64–72.

Ghozali, I. (2018). Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25. Semarang: Universitas Diponegoro. 1–457.

Gujarati, D. N. (2004). Basic Econometrics, 4th Edition. McGraw-Hill/Irwin, New York.

Gujarati, D. N. (2012). Basic Econometrics, 5th Edition.

Isnaini, P., Hariyanto, D., & Ferdian, R. (2023). Pengaruh Likuiditas, Analisis Terhadap Harga Saham. JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen Dan Akuntansi, 1(2), 163–175.

Karyatun, S. (2023). Determinan return saham pada perusahaan manufaktur periode 2016-2020 dengan analisis rasio keuangan. AKURASI: Jurnal Riset Akuntansi Dan Keuangan, 5(2), 147–158.

ISSN [Online]: 2776-6780

Kuncoro, M. (2003). Kuncoro, Mudrajat. Metode Riset Untuk Bisnis dan Ekonomi. Erlangga: Jakarta.

M. Fikri Arif Setya Pambudi, Ade Irma Suryani Lating, Ashari Lintang Yudhanti, & Mulyani Rahman Soulisa. (2022). Pengaruh Return on Asset, Return on Equity, Net Profit Margin Dan Quick Ratio Terhadap Return Saham Perusahaan Sektor Energi Pada Masa Pandemi Covid-19. Jurnal Akuntansi, Ekonomi Dan Manajemen Bisnis, 2(3), 361–372.

Mayar, A. &. (2020). Pengaruh rasio likuiditas, solvabilitas dan rentabilitas terhadap return saham pada perusahaan lq45 yang terdaftar di bei periode 2014-2018. 2(1), 2391–2406.

Myears, S. C. (1984). The Capital Structure Puzzle. The Journal of Finance, 39(3), 574–592.

Ningsih, A. M., Hardiwinoto, H., Ridwan, M., & Putri, A. P. r. . (2023). Analisis Rasio Likuditas, Solvabilitas, Aktivitas Dan Profitabilitas Untuk Menilai Kinerja Keuangan Pada Perusahaan Food And Beverage Yang Terdaftar Di Bursa Efek Indonesia Tahun 2019-2021. Kompartemen : Jurnal Ilmiah Akuntansi, 21(1), 94.

Nirawati, L., Samsudin, A., Stifanie, A., Setianingrum, M. D., RyanSyahputra, M., Khrisnawati, N., & Saputri, Y. (2022). Profitabilitas dalam Perusahaan. Jurnal Manajemen Dan Bisnis, 5(1), 60–68.

Nursita, M. (2021). Pengaruh Laba Akuntansi, Arus Kas Operasi, Arus Kas Investasi, Arus Kas Pendanaan Dan Ukuran Perusahaan Terhadap Return Saham. 16(1), 1–15.

Pratiwi, D., Nurfadilah, N., Ramlah, R., Lawalata, I. L. D., & Panus, P. (2024). The Influence of Liquidity and Sales Growth on Capital Structure in Manufacturing Companies on The Indonesian Stock Exchange. Golden Ratio of Finance Management, 4(2), 142–150.

Putri, H., & Suryono, B. (2023). Pengaruh Profitabilitas, Likuiditas, Solvabilitas dan Kebijakan Dividen Terhadap Return Saham (Studi Kasus Pada Perusahaan Properti). Jurnal Ilmu Dan Riset Akuntansi, 12(8), 1–18.

Rahayu, L. P., & Triyonowati. (2021). Pengaruh Likuiditas, Profitabilitas Dan Solvabilitas Terhadap Harga Saham Perusahaan Lq-45. Jurnal Ilmu Dan Riset Manajemen, 10(5), 1–15.

Resti Alia Desprisila, Rofiqoh Ferawati, & G.W.I. Awal Habibah. (2022). Pengaruh Profitabilitas, Likuiditas Dan Solvabilitas Terhadap Return Saham Perusahaan Manufaktur Di Jakarta Islamic Index Periode 2018-2022. Jurnal Publikasi Manajemen Informatika, 2(1), 161–180.

Rohmadhoni, J. N., & Santoso, B. H. (2019). Pengaruh Solvabilitas, Nilai Pasar, Inflasi Dan Kurs Terhadap Return Saham Perusahaan Farmasi Yang Terdaftar Di Bei Sekolah Tinggi Ilmu Ekonomi Indonesia (Stiesia) Surabaya. Jurnal Ilmu Dan Riset Manajemen, 8(7), 1–17.

Sari, D. I., & Maryoso, S. (2023). Pengaruh DER, ROA dan NPM Terhadap Return Saham Perusahaan Properti Terdaftar Di BEI Periode 2017-2020. Profitabilitas, 2(1), 18–27.

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif Dan R & D. ALFABETA, 1–330.

Syafrida, H. (2015). Teknik Analisa Laporan Keuangan. 121.

Tangngisalu, J. (2022). Current Ratio, Return on Asset, and Debt-to-Equity-Ratio on the Stock Price of Sector Property and Real Estate. Golden Ratio of Finance Management, 2(1), 1–14.

Vanessa, F., & Wulan, M. (2023). Pengaruh Profitabilitas , Leverage , Dan Ukuran Perusahaan Terhadap Return Saham. 3, 3249–3265.

Well, R. (2023). Pengaruh Debt To Equity Ratio , Earning Per Share , Net Profit Margin Dan Price To Book Value Terhadap Return Saham Pada Perusahaan Sub Sektor Industri Barang. 3(2), 103–109.

Widarjono, A. (2009). Ekonometrika : Teori dan Aplikasi Untuk Ekonomi dan Bisnis.

Yanita Sanjaya, M., & Maulida, A. (2023). Analisis Pengaruh Rasio Likuiditas, Solvabilitas dan Profitabilitas terhadap Return Saham. MES Management Journal, 2(2), 65–83.