

Post-Pandemic Evidence on Financial Health and Stock Returns in Indonesian Manufacturing Firms

Muhammad Rakha Benaya^{1*}, Gemi Ruwanti², Saifhul Anuar Syahdan³, Soelistijono Boedi⁴

^{1,2,3,4}Institute Business and Technology Kalimantan, Faculty of Business and Economics, Indonesia

rakhaben29@gmail.com, gemiruwanti@ibitek.ac.id, saifhulanuarsyahdan@ibitek.ac.id, soelistijonoledi@ibitek.ac.id

*Corresponding Author

Submitted: Jun 12, 2026

Accepted: Jun 27, 2026

Published: Oct 1, 2026

ABSTRACT

This study analyzes the effect of financial health, profitability, leverage, and liquidity on stock returns of manufacturing sub-sector companies listed on the Indonesia Stock Exchange (IDX) during 2022–2024. The rapid growth of Indonesia's capital market following the post-COVID-19 economic recovery has heightened the importance of understanding the financial fundamentals driving investment returns in this sector. This study contributes to the literature by addressing inconsistencies in prior findings and extending the work of Fachrudin & Ihsan (2021) and Handayani et al. (2023), which were largely confined to the pre-pandemic period, by covering the entire manufacturing sub-sector during the more recent post-pandemic recovery phase. A quantitative research design was employed using secondary data obtained from the official IDX website (www.idx.co.id). The population comprised 200 manufacturing sub-sector companies, from which 85 were selected through purposive sampling, yielding 255 panel data observations over three years. Financial health was measured using the Altman Z-Score, profitability by Return on Assets (ROA), leverage by the Debt-to-Equity Ratio (DER), and liquidity by the Current Ratio (CR). Multiple linear regression was applied following classical assumption testing. The model demonstrated strong explanatory power, with an Adjusted R² of 0.619, indicating that 61.9% of the variation in stock returns is explained by the four variables. The results show that financial health, profitability, leverage, and liquidity each exert a positive and significant effect on stock returns. Leverage emerged as the most dominant predictor ($\beta = 0.696$). These findings suggest that investors should comprehensively evaluate these four financial indicators when making investment decisions in manufacturing companies listed on the specifically on the (IDX).

Keywords: Financial Health; Leverage; Liquidity; Profitability; Stock Returns.

INTRODUCTION

The capital market plays a strategic role in national economic development by allocating funds from investors to firms requiring long-term financing (Brigham & Houston, 2019). IDX market capitalization reached IDR 10,000 trillion in 2023, up from IDR 7,300 trillion in 2020, though growth was not uniform across sectors. The manufacturing companies listed on the specifically on the (IDX), contributing approximately 18.67% to national GDP, has exhibited notable volatility in equity returns (Ayuningtyas, 2025).

Manufacturing stock returns have been highly dynamic: average returns grew 12.1% in 2021 amid the post-pandemic recovery, then fell below 4% in 2023 as Bank Indonesia raised interest rates to 6.00%, inflation reached 5.28%, and purchasing power declined (BPS, 2023). From late 2024 through mid-2025, further pressures emerged, including rupiah depreciation to IDR 16,820 per USD and foreign capital outflows of IDR 50.72 trillion year-to-date through April 2025 (OJK, 2023), underscoring the need to understand the financial factors driving return variability in this sector.

Investors rely heavily on financial ratios to evaluate firm value and predict returns. Among the most studied determinants are financial health, profitability, leverage, and liquidity. Financial health, measured by the Altman Z-Score (Altman, 1968), captures proximity to bankruptcy, profitability, proxied by Return on Assets (ROA), reflects asset-use efficiency, leverage, measured by the Debt-to-Equity Ratio (DER), quantifies reliance on debt, and liquidity, measured by the Current Ratio (CR), assesses short-term solvency.

These variables are theoretically grounded in Signaling Theory (Spence, 1973) and Agency Theory (Jensen & Meckling, 1976). Signaling Theory holds that firms communicate financial health through disclosed information, to which investors respond by adjusting share demand; Agency Theory explains leverage and profitability as governance mechanisms aligning managers' and shareholders' interests. However, both theories were conceptualized under relatively stable macroeconomic conditions and offer limited guidance on how investors interpret financial signals amid heightened uncertainty, such as the post-pandemic recovery, when signal reliability may itself be compromised by monetary tightening, currency depreciation, and capital outflows. This constitutes a theoretical gap, whether Signaling Theory's premise that disclosures are read as stable health indicators still holds when the macroeconomic environment itself is unstable remains unclear.

OJK (2023) data show that roughly 32% of manufacturing firms experienced declining liquidity and rising leverage during 2021–2023, signaling heightened distress risk. The empirical literature is also inconsistent. Fachrudin & Ihsan (2021) found significant effects in the energy sector, Handayani et al. (2023) reported positive profitability effects in manufacturing, Akbar et al. (2022) found no significant profitability effect, and Aprillia & Amanah (2023) reported a negative leverage effect. This inconsistency alone, however, does not establish a sufficient research gap; it must be examined alongside the theoretical, methodological, and contextual limitations of prior work to justify the present study.

Theoretically, Signaling Theory (Spence, 1973) was developed under conditions in which financial disclosures were assumed to be read by investors as comparatively stable indicators of firm condition, so it does not specify how signal interpretation should change when the macroeconomic backdrop itself is volatile, as during a post-pandemic recovery marked by rising interest rates, currency depreciation, and capital outflows. Consequently, the theory offers no clear prediction on whether financial signals retain the same weight in investors' return expectations under these conditions, or whether their informativeness is itself compromised by the surrounding uncertainty, and this study addresses that gap empirically by testing the theory's core predictions in precisely this unstable setting. Methodologically, this gap is compounded by the fact that Fachrudin & Ihsan (2021) and Aprillia & Amanah (2023) draw their samples and estimation periods from 2016–2021, before the distinctive post-pandemic combination of monetary tightening and capital outflow had materialized, so their parameter estimates reflect a different macroeconomic regime and cannot be assumed to generalize to 2022–2024 conditions. Contextually, the post-pandemic environment with Bank Indonesia's rate hikes to 6.00%, rupiah depreciation to IDR 16,820 per USD, and foreign capital outflows of IDR 50.72 trillion through April 2025 differs structurally from the pre-pandemic conditions under which earlier studies were conducted, which further limits the generalizability of their findings to the present period.

This study addresses these gaps by examining the simultaneous effects of financial health, profitability, leverage, and liquidity on stock returns for manufacturing sub-sector companies listed on the IDX during 2022–2024. While the variables themselves are well established, the study's primary contribution is contextual it extends, Fachrudin & Ihsan (2021) and Handayani et al. (2023) by covering the full manufacturing sub-sector during the distinct post-pandemic period, testing whether Signaling Theory's predictions hold outside the stable conditions under which it was formulated. It should be acknowledged that this contribution is primarily contextual rather than conceptual or methodological, the four predictors examined here are well-established in the literature, and the analytical technique follows the conventional pooled OLS approach used in prior studies. The value of this contribution lies in the fact that financial-signal theories have rarely been tested in a setting where the signal-generating environment itself is under macroeconomic stress, demonstrating whether, and to what degree, established predictors retain their explanatory power

under such conditions is a necessary empirical step before more elaborate moderated or panel-based models can be meaningfully specified. The findings aim to inform investors, managers, and regulators, while pointing to the need for future research incorporating moderating or mediating mechanisms, as well as panel data methods, to better capture financial signal transmission during volatile periods.

The Manufacturing sector listed on the Indonesia Stock Exchange (IDX), suits this investigation well; its heterogeneity, spanning consumer goods, automotive, and chemical firms, provides variability ideal for testing generalizability. Its reliance on fixed assets and working capital makes it sensitive to leverage and liquidity, and its exposure to global supply chains links its performance to both domestic and international dynamics.

STUDI LITERATUR

Signaling Theory

Signaling Theory, introduced by Spence (1973), serves as the primary theoretical foundation of this study. The theory posits that information asymmetry exists between firm managers and external investors, and that firms communicate their financial condition through publicly disclosed financial information. Investors rationally respond to these signals by adjusting their demand for shares, which in turn affects stock prices and returns. In this study, financial indicators such as the Altman Z-Score, ROA, DER, and CR each function as distinct signals of a firm's financial health, managerial efficiency, capital structure, and liquidity position.

Agency Theory

Agency Theory, formulated by Jensen & Meckling (1976), explains conflicts of interest between shareholders (principals) and managers (agents). The theory holds that debt (DER) and profitability (ROA) serve as governance mechanisms that align managerial behavior with shareholder interests. Jensen (1986) argues that debt obligations discipline managers to operate more efficiently, reducing wasteful expenditure and ultimately improving stock returns for shareholders. Within this study, Agency Theory therefore explains not only why leverage matters in principle, but specifically why DER is expected to constrain managerial discretion and translate into return performance. This disciplining channel is expected to operate with particular force in the manufacturing sector examined here, where debt is routinely tied to fixed-asset financing and is therefore directly observable by creditors and investors as a commitment device; firms that fail to service this debt face concrete, asset-linked consequences, which sharpens the monitoring effect that Agency Theory predicts and provides a substantive, rather than purely statistical, account of why leverage is hypothesized to carry more weight in investors' return expectations than the other three indicators in this setting.

Financial Health

Financial health refers to a firm's ability to maintain financial stability and meet both short-term and long-term financial obligations. It is measured in this study using the Altman Z-Score model (1968): $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$. Importantly, the Z-Score is constructed such that a higher score indicates healthier financial conditions and lower bankruptcy risk, while a lower score signals elevated distress Fachrudin & Ihsan (2021). To avoid conflating the direction of the indicator with the underlying construct, this study refers to this variable as Financial Health (proxied by the Altman Z-Score) rather than financial health, and hypothesizes its relationship with stock returns accordingly, a higher Z-Score reflects a healthier firm, which under Signaling Theory should be read by investors as a positive recovery signal, plausibly driving higher returns, particularly during post-crisis economic conditions (Merlyana & Kusumah, 2021).

Profitability

Profitability measures a firm's ability to generate earnings relative to its assets, proxied in this study by Return on Assets (ROA), calculated as net profit after tax divided by total assets. ROA reflects the efficiency with which management deploys assets to generate earnings (Brigham & Houston, 2019). Under Signaling Theory, a high ROA functions as a direct, quantifiable signal of

managerial competence. Investors observe ROA disclosures in financial statements and adjust share demand accordingly, which in turn affects returns. This positive relationship is empirically supported by Fachrudin & Ihsan (2021) and Handayani et al. (2023).

Leverage

Leverage captures the extent to which a firm relies on debt to finance its assets, measured in this study by the Debt-to-Equity Ratio (DER). Two complementary theoretical mechanisms link DER specifically to stock returns. First, under Trade-Off Theory (Myers, 1984), moderate debt use generates a tax shield that increases the income available to shareholders, so that a higher DER, up to a reasonable threshold, raises net returns rather than merely firm risk. Second, under Agency Theory (Jensen, 1986), debt servicing obligations impose financial discipline on managers, compelling more efficient capital allocation and reducing free cash flow available for value-destroying discretionary spending. This disciplining effect is expected to be particularly pronounced in capital-intensive manufacturing firms, where debt is routinely used to finance fixed assets. Because DER simultaneously signals tax-efficient financing and managerial discipline, leverage is theorized to carry more weight in investors' return expectations than the other three indicators, consistent with its identification as the most dominant predictor of stock returns in prior studies (Handayani et al., 2023).

Liquidity

Liquidity measures a firm's capacity to meet short-term financial obligations using its current assets, proxied in this study by the Current Ratio (CR) (Kasmir, 2019). Grounded in both Signaling Theory and Liquidity Preference Theory (Keynes, 1936), a high CR functions as a direct signal of financial stability and low default risk. Investors interpret strong short-term liquidity coverage as reduced downside risk, which lowers required returns and increases share demand. This positive relationship is empirically supported by Aprillia & Amanah (2023), Bradrania et al. (2022), and Fachrudin & Ihsan (2021).

Stock Return

Stock return represents the financial gain or loss an investor receives from holding a share over a given period, encompassing both capital gains and dividend income (Brigham & Houston, 2019). In Indonesia's Manufacturing companies listed on the IDX., stock returns have exhibited considerable volatility due to post-pandemic macroeconomic pressures, including interest rate hikes, inflation, and foreign capital outflows, making it a critical variable for investors and analysts.

Table 1. Summary of Prior Studies

No	Researcher/ Year	Variables	Similarities	Differences	Research Findings
1	Fachrudin & Ihsan (2021)	<i>Financial Health</i> , Profitability, Liquidity, Stock Return	Both examine the influence of internal company factors on stock returns.	The object of study is energy sector companies, not manufacturing.	Financial health, profitability, and liquidity have a significant effect on stock returns.
2	Handayani et al. (2023)	Profitability, Leverage, Liquidity, Stock Return	Examines the influence of financial variables on stock returns in Manufacturing companies listed on the Indonesia Stock Exchange (IDX).	Different research period and does not include the Financial health variable.	Profitability and leverage have a significant positive effect on stock returns, while liquidity has no significant effect.

3	Merlyana & Kusumah (2021)	Financial Health, Stock Return	Both examine the influence of financial health on stock returns.	Focuses on public companies in general, not specifically on the manufacturing subsector.	Financial health has a negative effect on stock returns.
No	Researcher/Year	Variables	Similarities	Differences	Research Findings
4	Aprillia & Amanah(2023)	Leverage, Liquidity, Stock Return	Both examine the effect of leverage and liquidity on stock returns.	Does not include the Financial health and profitability variables.	<i>Leverage has a negative effect, while liquidity has a positive effect on stock returns.</i>
5	Bradrania et al.(2022)	Liquidity, Idiosyncratic Volatility, Stock Return	Both examine the influence of liquidity on stock returns.	The study is international in scope and cross-country in nature.	Liquidity and idiosyncratic volatility are key determinants of expected stock returns.

Source : Compiled by the author from various previous studies, 2021–2023

Hypothesis

Based on the Signaling Theory and Agency Theory, as well as the empirical evidence presented above, the following hypotheses are proposed :

H₁: Financial Health has a positive and significant effect on stock returns.

H₂: Profitability has a positive and significant effect on stock returns.

H₃: Leverage has a positive and significant effect on stock returns.

H₄: Liquidity has a positive and significant effect on stock returns.

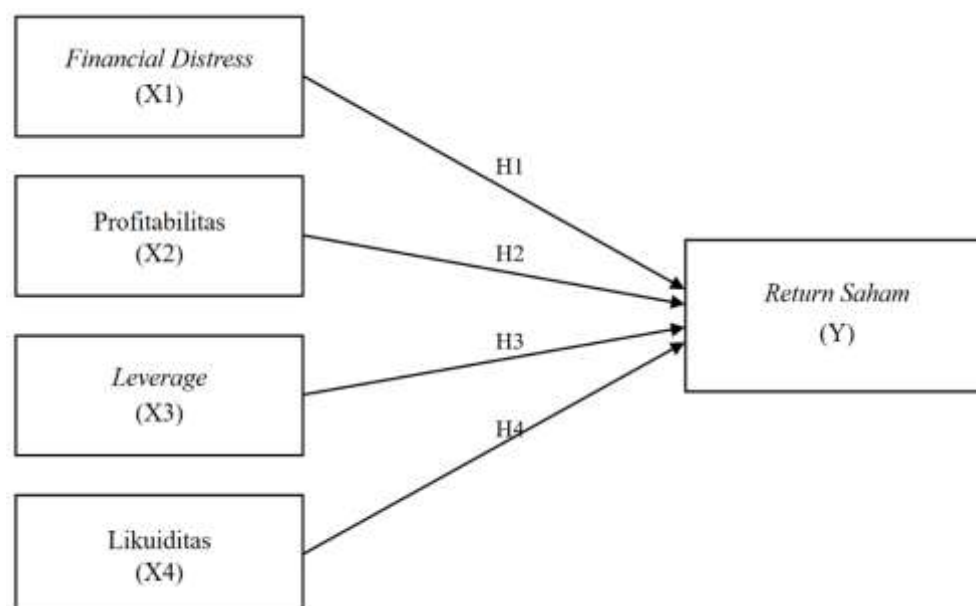


Figure 1. Conceptual Framework
Source: Developed by Researchers, 2026

METHOD

This study employs a quantitative approach with an explanatory research design to examine the causal relationships between financial health, profitability, leverage, liquidity, and stock returns. Specifically, the study investigates whether financial health, profitability, leverage, and liquidity as independent variables have statistically significant effects on stock returns as the dependent variable for manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2022–2024 period. This research design is considered appropriate because it aims to test causal relationships among objectively measurable financial variables using statistical analysis.

The data used in this study are secondary data obtained from annual reports and audited financial statements published on the official website of the Indonesia Stock Exchange. Annual reports were selected because they provide standardized, reliable, and comprehensive financial information that is widely utilized in accounting and capital market research.

The population of this study consists of all manufacturing companies listed on the Indonesia Stock Exchange during the 2022–2024 period, totaling 200 companies. The sample was determined using purposive sampling based on the following criteria: (1) companies consistently listed on the IDX during the 2022–2024 period; (2) companies publishing complete audited annual financial statements for three consecutive years; (3) companies with complete data for all research variables; and (4) companies not experiencing delisting during the observation period. Based on these criteria, 85 companies were selected, resulting in a total of 255 firm-year observations.

Financial health was measured using the Altman Z-Score model, which combines five financial ratios, namely Working Capital to Total Assets (X1), Retained Earnings to Total Assets (X2), Earnings Before Interest and Taxes to Total Assets (X3), Market Value of Equity to Book Value of Total Debt (X4), and Sales to Total Assets (X5). The Altman Z-Score was calculated using the formula: $Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5$. Profitability was measured using Return on Assets (ROA), leverage was measured using the Debt-to-Equity Ratio (DER), and liquidity was measured using the Current Ratio (CR).

Data analysis was performed using IBM SPSS Statistics version 26. IBM SPSS was selected because it provides reliable procedures for pooled multiple linear regression analysis and classical assumption testing, which are consistent with the analytical framework adopted in this study. Although the dataset consists of firm-year observations covering the 2022–2024 period, this study treats all observations as pooled data because the primary objective is to examine the overall relationship between financial health, profitability, leverage, liquidity, and stock returns across manufacturing companies rather than estimating firm-specific or time-specific effects.

The analytical procedures consisted of three stages. First, descriptive statistical analysis was conducted to summarize the characteristics of the research variables, including minimum values, maximum values, means, and standard deviations. Second, classical assumption tests were conducted to verify that the pooled Ordinary Least Squares (OLS) regression model satisfied the assumptions required for obtaining Best Linear Unbiased Estimator (BLUE) estimates (Ghozali, 2020). These tests included the Kolmogorov–Smirnov Monte Carlo normality test, Glejser heteroscedasticity test, Tolerance and Variance Inflation Factor (VIF) multicollinearity test, and Durbin–Watson autocorrelation test. Third, pooled multiple linear regression analysis based on the Ordinary Least Squares (OLS) approach was employed to estimate the effects of financial health, profitability, leverage, and liquidity on stock returns. Hypothesis testing was conducted using the coefficient of determination (Adjusted R^2), the F-test to examine the simultaneous effects of the independent variables, and the t-test to examine the partial effects of each independent variable at a significance level of 5%.

This study has several limitations. First, the analysis employed pooled Ordinary Least Squares (OLS) regression using IBM SPSS Statistics and therefore did not explicitly account for firm-specific and time-specific effects. Future studies are encouraged to employ panel data regression techniques, such as the Fixed Effect Model (FEM) or Random Effect Model (REM), to provide more robust estimates and better capture the heterogeneity across firms and time periods.

RESULTS

Descriptive Statistical Analysis

Table 2 presents the descriptive statistics for all research variables across 255 firm-year observations.

Table 2. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Financial Health (X1)	255	-23.560,22	81,666084	10.472,72947	76.577,07432
Profitability (X2)	255	-21.966,76	75,90207	1.005,56	8.092,59
Leverage (X3)	255	-30.023,02	4,766751	815,35	6.472,63
Liquidity (X4)	255	-11.842,66	5,779151	9.983,20	58.911,78
Stock Return (Y)	255	15,00	29.000,00	2.385,28	4.272,16

Source : Data Processed, 2026

The descriptive statistical results reveal substantial variability across all research variables, as evidenced by standard deviations that substantially exceed their respective mean values. It should be clarified at the outset that all ratio variables in Table 2 are expressed in percentage-point units (i.e., a raw ratio of 1.00 is reported as 100), consistent with the SPSS output; this convention, rather than a data-entry or decimal-formatting error, explains why the reported magnitudes for ROA, DER, and CR appear numerically large relative to the textbook decimal form of these ratios. The data were re-verified against the original IDX financial statements following this concern, and no input or transcription errors were found. For the financial health variable (Altman Z-Score), the mean value of 10,472,729.47 is considerably higher than zero, suggesting that, on average, the sampled manufacturing companies maintained financial conditions above the distress threshold. However, the minimum value of -23,560.22 indicates that some companies experienced severely distressed financial conditions, while the maximum value of 816,466,084.05 reflects a small number of financially exceptional firms with extremely high Z-Score values, likely due to their high market capitalization relative to book debt. This extreme range is characteristic of panel data covering companies of vastly different sizes.

For profitability (ROA), the presence of negative minimum values confirms that several companies in the sample generated net losses during the study period, while the positive mean of 1,005.56 indicates that the majority of firms were profitable on average. The maximum ROA of 75,902.07 (i.e., 759.02% in decimal terms) belongs to a single small-asset-base firm in which a comparatively modest net profit was divided by an unusually low total-asset denominator, mechanically inflating the ratio; this is a known characteristic of ROA in cross-sectional samples containing firms of widely differing scale rather than an error in the underlying figures. The leverage variable (DER) exhibits negative minimum values as well, which may occur when companies report negative equity due to accumulated losses. The mean leverage of 815.35 points to widespread use of debt financing within the sector. Similarly, the DER maximum of 4,766.751 (476.68% in decimal terms) reflects a firm whose book equity had been substantially eroded relative to its liabilities, producing a numerically extreme but valid ratio. The liquidity variable (CR) demonstrates a high maximum value, indicating that some companies maintained very conservative current asset positions. The CR maximum of 5,779.151 (577.92% in decimal terms) corresponds to a firm holding current assets many times its current liabilities, an extreme but not implausible position for a manufacturing firm carrying minimal short-term debt. These four extreme values were retained rather than removed because each was traced to a genuine, identifiable firm-year condition rather than a data-entry artifact; nonetheless, their influence on the regression estimates is acknowledged as a limitation of this study, and future research may consider sensitivity checks using winsorized or trimmed samples to assess the robustness of the coefficients reported here. Finally, stock returns ranged from a minimum of 15.00 to a maximum of 29,000.00, with a mean of 2,385.28 and a standard deviation of 4,272.16, reflecting the broad range of investment performance outcomes observed across the sample.

Classical Assumption Tests

Before conducting the regression analysis, classical assumption tests were first performed, including tests for normality, heteroscedasticity, multicollinearity, and autocorrelation, to ensure that the regression model is a BLUE (Best Linear Unbiased Estimator) (Ghozali, 2020).

Normality Test

Table 2. Normality Test
One-Sample Kolmogorov-Smirnov Test

N		RES_1
Normal Parameters ^{a,b}	Mean	85
	Std. Deviation	6.8008
Most Extreme Differences	Absolute	1.41882
	Positive	.131
	Negative	.108
Test Statistic		-.131
Asymp. Sig. (2-tailed)		.131
Monte Carlo Sig. (2-tailed)	Sig.	.001 ^c
	99% Confidence Interval	.099 ^d
	Lower Bound	.091
	Upper Bound	.106

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Based on 10000 sampled tables with starting seed 299883525.

Source : Data Processed, 2026

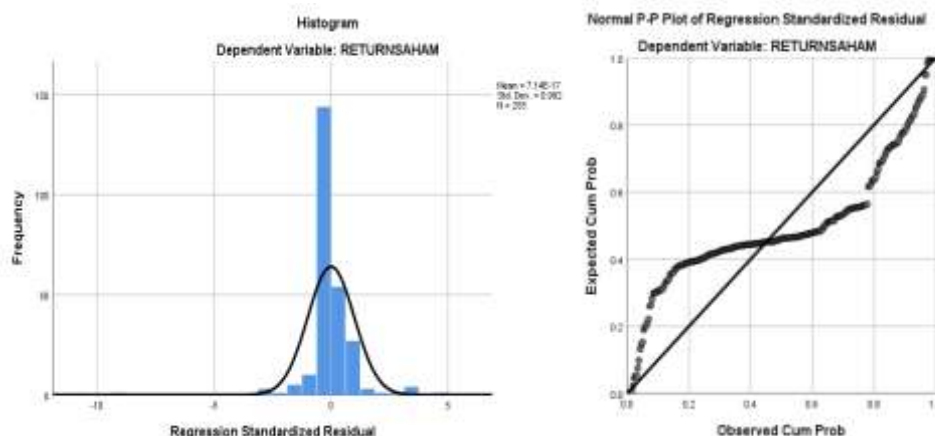


Figure 2. Histogram and P-P Plot

Source : Data Processed, 2026

The normality test in this study was conducted using the Kolmogorov-Smirnov Monte Carlo method, which yielded a Monte Carlo Sig. (2-tailed) value of 0.099 > 0.05 with a 99% confidence interval (0.091–0.106). Thus, it can be concluded that the regression residual model is normally distributed and the normality assumption is satisfied. The Monte Carlo approach was used because it is more robust against the extreme values commonly found in cross-firm financial data, compared to the conventional asymptotic approach, which yielded an Asymp. Sig. value of 0.001. These results are visually supported by a histogram showing a leptokurtic distribution pattern with a concentration of residuals around zero, a condition commonly observed in financial data across firms of varying sizes. The Normal P-P Plot also indicates that most data points follow the diagonal line, although there is a slight deviation in the tails of the distribution due to the presence of extreme values in the data, which does not affect the statistical conclusions of the normality test.

Heteroscedasticity Test

Table 3. Glejser Test Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	2705.771	223.322			12.116	.000
Financial Health (X1)	-2.986E-6	.000	-.068		-1.081	.281
Profitability (X2)	-.037	.030	-.078		-1.238	.217
Leverage (X3)	-.043	.053	-.051		-.810	.419
Liquidity (X4)	-.004	.004	-.068		-1.087	.278

a. Dependent Variable: ABS_RES

Source : Data Processed, 2026

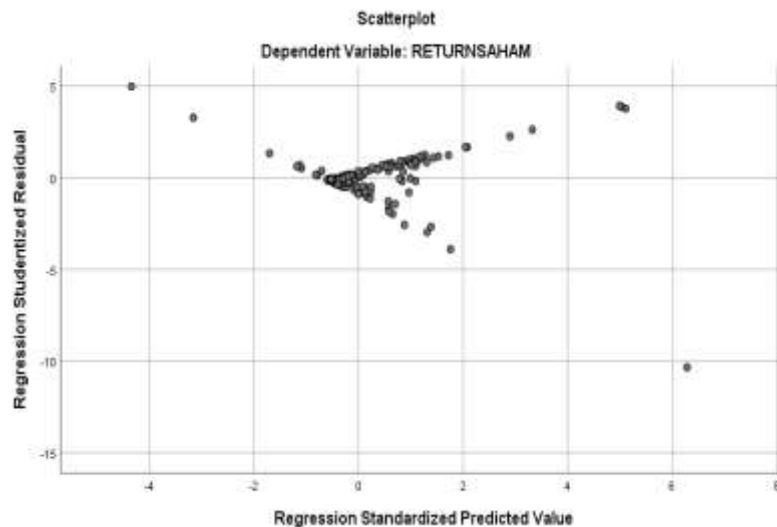


Figure 3. Scatter Plot

Source : Data Processed, 2026

The results of the heteroscedasticity test indicate that all independent variables have significance levels above 0.05, namely financial health (Sig. 0.281), profitability (Sig. 0.217), leverage (Sig. 0.419), and liquidity (Sig. 0.278), therefore, it can be concluded that there is no heteroscedasticity in this regression model. Although the scatterplot graph visually shows a funnel-like pattern due to differences in the scale of return values between large and small companies, this visual assessment is subjective and cannot be used as the sole reference. The statistically objective results of the Glejser test prove that the residual variance remains constant (homoscedasticity), so the assumption of homoscedasticity is met and the regression model is valid for use.

Autocorrelation Test

Table 4. Durbin-Watson Test Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.790 ^a	.625	.619	2637.98937	2.017

a. Predictors: (Constant), X4, X1, X2, X3

b. Dependent Variable: RETURN SAHAM

Source : Data Processed, 2026

Based on Table 4, the Durbin-Watson value is 2.017. With a sample size of $n = 85$, the number of independent variables $k = 4$, and a significance level of 5%, the value of $dU = 1.721$ is obtained

from the DW table. Since $DW (2.017) > dU (1.721)$ and $DW (2.017) < 4 - dU (2.279)$, it can be concluded that there is no autocorrelation in this regression model, so the model is suitable for further analysis.

Multicollinearity Test

Table 5. Multicollinearity Test Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Financial Health (X1)	.999	1.001
Profitability (X2)	.874	1.144
Leverage (X3)	.844	1.185
Liquidity (X4)	.948	1.055

a. Dependent Variable: STOCK_RETURN

Source : Data Processed, 2026

Based on Table 5, all independent variables have Tolerance values well above 0.10 and VIF values well below 10, namely financial health (Tolerance = 0.999; VIF = 1.001), profitability (Tolerance = 0.874; VIF = 1.144), leverage (Tolerance = 0.844; VIF = 1.185), and liquidity (Tolerance = 0.948; VIF = 1.055). These results demonstrate that there is no multicollinearity in the research model, meaning that the estimation of regression coefficients is not distorted by linear relationships among the independent variables.

Multiple Linear Regression Analysis

The resulting regression model is as follows:

$$Y = 1,814.196 + 5.373E-6 X1 + 0.080 X2 + 0.459 X3 + 0.006 X4$$

Where Y = Stock Return; X1 = Financial health; X2 = Profitability; X3 = Leverage; X4 = Liquidity. The constant value of 1,814.196 indicates that if all independent variables are zero, the stock return is predicted to be 1,814.196. Positive coefficients for all independent variables indicate a direct positive effect on stock returns.

Hypothesis Testing

Testing the Coefficient of Determination (R²)

Table 6. Test of the Coefficient of Determination (R²)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.790 ^a	.625	.619	2637.98937

a. Predictors: (Constant), X4, X1, X2, X3

b. Dependent Variable: STOCK_RETURN

Sumber : Data Processed, 2026

Based on Table 6, an R value of 0.790 indicates a strong relationship between the independent variables collectively and stock returns. The R-squared value of 0.625 indicates that 62.5% of the variation in stock returns can be explained by financial health, profitability, leverage, and liquidity simultaneously, while the remaining 37.5% is explained by other variables outside the model. The adjusted R-squared value of 0.619, which is not significantly different from the R-squared value, suggests that the regression model is quite robust.

Simultaneous Test (F)**Table 7. Simultaneous Test (F)**

		ANOVA ^a				
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2896094141.823	4	724023535.456	104.041	.000 ^b
	Residual	1739746978.559	250	6958987.914		
	Total	4635841120.382	254			

a. Dependent Variable: STOCK_RETURN

b. Predictors: (Constant), X4, X1, X2, X3

Source : Data Processed, 2026

Based on Table 7, the calculated F-value is 104.041 with a significance level of $0.000 < 0.05$. This indicates that, collectively, financial health, profitability, leverage, and liquidity have a significant impact on the stock returns of companies in the manufacturing subsector listed on the Indonesia Stock Exchange (IDX) for the period 2022–2024. Thus, the regression model used in this study is appropriate (goodness of fit) and can be used to predict stock returns.

Partial Test (t)**Table 8. Partial Test (t)**

		Coefficients ^a				Collinearity Statistics	
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			Tolerance VIF
	(Constant)	1814.196	170.334		10.651	.000	
1	Financial Health (X1)	5.373E-6	.000	.096	2.485	.014	.999 1.001
	Profitability (X2)	.080	.022	.151	3.635	.000	.874 1.144
	Leverage (X3)	.459	.028	.696	16.497	.000	.844 1.185
	Liquidity (X4)	.006	.003	.083	2.097	.037	.948 1.055

a. Dependent Variable: STOCK_RETURN

Source : Data Processed, 2026

Based on Table 8, all independent variables were found to have a positive and significant effect on stock returns, as detailed below:

1. Financial health (X1) yielded a regression coefficient of 5.373E-6 with a significance level of $0.014 < 0.05$. The positive direction of the coefficient indicates that the higher the Altman Z-Score (the healthier the financial condition), the more stock returns tend to increase. Thus, H1 is accepted.
2. Profitability (X2) yields a regression coefficient of 0.080 with a Sig. value of $0.000 < 0.05$, indicating that a 1-unit increase in ROA will increase stock returns by 0.080 units. Therefore, H2 is accepted.
3. Leverage (X3) yields a regression coefficient of 0.459 with a Sig. value of $0.000 < 0.05$. Leverage is the variable with the most dominant influence in this study, as reflected by the highest standardized Beta coefficient of 0.696 compared to the other variables. Therefore, H3 is accepted.
4. Liquidity (X4) yields a regression coefficient of 0.006 with a Sig. value of $0.037 < 0.05$, indicating a significant positive effect on stock returns, albeit with the smallest magnitude. Thus, H4 is accepted.

DISCUSSIONS**The Effect of Financial Health on Stock return**

Financial health was found to have a positive and significant effect on stock returns, thus supporting H1. The positive coefficient indicates that an increase in the Altman Z-Score, which

reflects better financial health and lower financial distress, is associated with higher stock returns. This result suggests that investors place considerable importance on a company's financial stability when making investment decisions. During the post-pandemic recovery period (2022–2024), companies with stronger financial conditions were perceived as having a greater ability to sustain operations, generate future earnings, and adapt to economic uncertainty. Consequently, these firms attracted higher investor demand, which contributed to increased stock returns. From the perspective of Signaling Theory (Spence, 1973), a high Altman Z-Score serves as a positive signal regarding a firm's financial strength and lower bankruptcy risk. Investors interpret this information as an indication of better future prospects, leading to increased confidence and investment. Therefore, healthier financial conditions provide valuable information to the market and positively influence stock performance during periods of economic recovery. This positive result differs from Merlyana & Kusumah (2021), who reported a negative effect of financial health on stock returns. The discrepancy is plausibly attributable to sample and period differences: their study examined plantation-sector firms during 2015–2018, a pre-pandemic period in which investors may not have prioritized distress signals as heavily as they appear to during the heightened uncertainty of the 2022–2024 post-pandemic recovery, when the ability to demonstrate financial resilience plausibly carries greater weight in investors' return expectations.

The Effect of Profitability on Stock Returns

Profitability was found to have a positive and significant effect on stock returns, thus supporting H2. This finding is consistent with the studies of Fachrudin & Ihsan (2021) and Handayani et al. (2023), which demonstrate that companies with higher profitability tend to generate higher returns for investors. The results indicate that firms capable of efficiently utilizing their assets to generate profits are viewed more favorably by investors. High profitability reflects strong operational performance and demonstrates management's ability to maximize company resources. As a result, investors are more willing to invest in profitable firms, increasing demand for their shares and ultimately raising stock returns. According to Signaling Theory (Spence, 1973) profitability represents a positive signal regarding the firm's future performance and financial prospects. Investors interpret a high Return on Assets (ROA) as evidence of effective management and sustainable earnings potential. Furthermore, from the Resource-Based View (Barney, 1991), profitability reflects the firm's capability to utilize valuable internal resources efficiently, thereby creating a sustainable competitive advantage that contributes to long-term firm value and shareholder returns.

The Effect of Leverage on Stock Returns

Leverage was found to have a positive and significant effect on stock returns; therefore, H3 is accepted. Moreover, leverage emerged as the most dominant variable affecting stock returns in this study. This finding is consistent with (Handayani et al., 2023), who argue that the effective utilization of debt can improve corporate performance through the financial leverage effect. The positive relationship indicates that investors do not necessarily perceive debt as a negative factor. Instead, debt can be viewed as a strategic financing source when it is managed efficiently and used to support productive investments. Companies that successfully utilize debt to expand operations and increase profitability are likely to generate higher returns, which are positively appreciated by the market. This finding is supported by the Trade-Off Theory (Myers, 1984), which suggests that an optimal level of debt provides tax advantages while maintaining acceptable financial risk. In addition, Agency Theory (Jensen, 1986) explains that debt can function as a monitoring mechanism that encourages managers to allocate resources more efficiently and avoid unnecessary expenditures. Consequently, appropriate debt management enhances firm performance and contributes to higher stock returns.

The Effect of Liquidity on Stock Returns

Liquidity was found to have a positive and significant effect on stock returns, thus supporting H4. This finding is consistent with the studies of Aprillia & Amanah (2023), Bradrania et al. (2022), Fachrudin et al. (2021), although it differs from Handayani et al. (2023), who reported

no significant relationship. The positive effect indicates that companies with higher liquidity are better able to fulfill their short-term obligations and maintain operational stability. During the 2022–2024 recovery period, investors tended to prefer firms with stronger liquidity positions because they were considered more resilient to economic uncertainty and less exposed to financial risk. Consequently, these firms attracted greater investor confidence, resulting in higher stock returns. According to Signaling Theory (Spence, 1973), a high Current Ratio provides a positive signal regarding a company's financial capability and short-term solvency, thereby reducing perceived investment risk. Furthermore, Liquidity Preference Theory (Keynes, 1936) suggests that firms with sufficient liquid assets possess greater financial flexibility and are less likely to experience financial health, increasing investor confidence. The difference between this study and Handayani et al. (2023) may be attributed to differences in research periods, sample characteristics, and macroeconomic conditions, particularly the economic recovery experienced after the Covid-19 pandemic.

CONCLUSION

This study examines the effect of financial health, profitability, leverage, and liquidity on stock returns of manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2022–2024 period. The empirical results indicate that all four independent variables have a positive and significant effect on stock returns. Among them, leverage is identified as the most influential determinant, suggesting that the effective use of debt can enhance firm performance and generate higher returns for shareholders. In addition, healthier financial conditions, stronger profitability, and better liquidity are positively valued by investors, particularly during the post-COVID-19 economic recovery period. This study contributes to the literature by providing empirical evidence that financial indicators remain important determinants of stock returns in emerging capital markets during periods of economic recovery. Theoretically, the findings also support the relevance of Signaling Theory in explaining investor responses to corporate financial performance, while the positive role of leverage is consistent with the Trade-Off Theory and Agency Theory, indicating that these theories retain explanatory power even under the unstable macroeconomic conditions of the post-pandemic recovery, an extension that addresses the theoretical gap identified in the introduction. From a practical perspective, the findings suggest that investors should evaluate financial health, profitability, leverage, and liquidity simultaneously when making investment decisions rather than relying on a single financial indicator. For corporate management, maintaining financial stability, improving profitability, optimizing capital structure, and preserving adequate liquidity are essential strategies to enhance investor confidence and firm value. Furthermore, regulators such as the Indonesian Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX) are encouraged to strengthen financial disclosure and corporate transparency to support efficient capital market decisions. For investment decision-making specifically, the dominance of leverage as a predictor implies that investors screening manufacturing stocks during economic recovery periods may give particular weight to a firm's capital structure and debt-servicing capacity, alongside, rather than instead of, conventional profitability and liquidity screens. This study has several limitations. First, the analysis focuses only on manufacturing companies listed on the Indonesia Stock Exchange during the 2022–2024 period, limiting the generalizability of the findings to other sectors and time periods. Second, the model explains approximately 62.5% of the variation in stock returns, indicating that other factors not included in this study may also influence stock performance. Therefore, future research is recommended to incorporate additional firm-specific variables, such as firm size, dividend policy, and corporate governance, as well as macroeconomic variables, including inflation, interest rates, and exchange rates, to provide a more comprehensive explanation of stock return behavior.

REFERENCE

- Akbar, R. N., Hariyanto, E., Wahyuni Sri, & Hapsari Ira. (2022). The Effect of Profitability, Leverage, and Dividend Policy on Stock Returns. *Jurnal Bisnis Manajemen & Ekonomi*, 20(2).
- Altman, E. I. (1968). Financial Ratios, Discriminant Analysis And The Prediction Of Corporate Bankruptcy. *The Journal of Finance*, 23(4), 589–609. <https://doi.org/10.1111/j.1540-6261.1968.tb00843.x>
- Aprillia, D., & Amanah, L. (2023). *The Influence of Leverage, Profitability, Company Size and Liquidity on Stock Returns. Jurnal Ilmu dan Riset Akuntansi*, Vol 12(6), 1-20.
- Ayuningtyas, A. D. (2025, March 6). The Manufacturing Industry Contributes 18.98% To Indonesia's GDP. *Goodstats.Id*. <https://goodstats.id/article/industri-manufaktur-sumbang-18-98-terhadap-pdb-indonesia-tSkW8?>
- Barney, Jay. (1991). Firm Resources and Sustained Competitive Advantage. *Journal Of Management*, Vol 17 (1), 99–120. <https://doi.org/10.1177/014920639101700108>
[https://josephmahoney.web.illinois.edu/BA545_Fall%202022/Barney%20\(1991\).pdf](https://josephmahoney.web.illinois.edu/BA545_Fall%202022/Barney%20(1991).pdf)
- BPS. (2023). *Laporan Perekonomian Indonesia 2023 Badan Pusat Statistik*. <https://www.bps.go.id>
- Bradranian, R. M., Peat, M., & Satchell, S. (2022). Liquidity Costs, Idiosyncratic Volatility and Expected Stock Returns. *International Review of Financial Analysis in December 2015*, 42, 394–406.
<https://www.sciencedirect.com/science/article/abs/pii/S1057521915001520>. "Phone:+61883 020523Fax:+61883020992.
- Brigham, E. F., & Houston, J. F. (2019). *Fundamentals of Financial Management (14th Edition)*. Salemba Empat.
- Fachrudin, K. A., & Ihsan, M. F. (2021). The Effect Of Financial Health Probability, Firm Size And Liquidity On Stock Return Of Energy Users Companies In Indonesia. *International Journal of Energy Economics and Policy*, 11(3), 296–300.
<https://doi.org/10.32479/ijeep.10677>
- Ghozali, I. (2020). *Multivariate Analysis Applications with the IBM SPSS 25 Program (9th Edition)*. Diponegoro University Publishing Agency.
- Handayani, T., Hasibuan, R., Shally Rizkiyanti, Ardelia Suharmanto, & Maulidia Berlianti. (2023). Factors Affecting Stock Returns in Manufacturing Companies on the Indonesia Stock Exchange (IDX) in 2019-2022. *JURNAL MUTIARA AKUNTANSI*, 8(2), 66–72.
<https://doi.org/10.51544/jma.v8i2.4708>
- Jensen, M. C. (1986). Agency Cost of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, 76(2), 323–329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
[https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kasmir. (2019). *Financial Statement Analysis: First Edition (Twelfth Printing)*. PT Raja Grafindo Perjada.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest, and Money*. https://www.files.ethz.ch/isn/125515/1366_keynestheoryofemployment.pdf
- Merlyana, R. D., & Kusumah, R. W. R. (2021). The Effect of Financial Health and Earnings Per Share (EPS) on Company Stock Returns (in the Palm Oil Plantation Sub-Sector Listed on the Indonesian Stock Exchange for the Period 2015-2018). *Journal of Economic Discourse*, 21, 014–024.
- Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39(3), 574–592.
<https://doi.org/10.1111/j.1540-6261.1984.tb03646.x>
- OJK. (2023). Weekly Statistical Report, Directorate of Capital Market Information Analysis. <https://ojk.go.id/id/kanal/pasar-modal/data-dan-statistik/statistik-pasar-modal/Documents/2.%20STATISTIK%20MEI%20MGG%20KE-2%202023.pdf?>
- Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355.
<https://doi.org/10.2307/1882010>