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The Influence Of Company Growth, Liquidity, And Profitability On Firm Value: An Empirical Study On Chemical Subsector Companies Listed On The Indonesia Stock Exchange (2021–2024)

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Abstract

This study aims to examine and analyze the effect of Company Growth (Asset Growth), Liquidity (Current Ratio), and Profitability (Return on Assets) on Firm Value (Price to Book Value) in chemical sub-sector manufacturing companies listed on the Indonesia Stock Exchange during the 2021–2024 period. A quantitative descriptive approach was employed using secondary data from audited annual financial statements. The study population comprised 17 chemical companies, from which 10 sample companies were selected via purposive sampling, with 40 total observations across the 4-year observation period. Data analysis was conducted using multiple linear regression preceded by classic assumption testing. Partially, the results indicate that Company Growth and Profitability have a positive and significant effect on Firm Value, whereas Liquidity has a negative and significant effect on Firm Value. Simultaneously, Company Growth, Liquidity, and Profitability significantly influence Firm Value. These findings highlight the critical importance of working capital efficiency and asset utilization in enhancing investor confidence and corporate market valuation.

Keywords: Company Growth, Liquidity, Profitability, Firm Value, Signaling Theory, Chemical Sub-Sector.

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INTRODUCTION

National economic development in Indonesia positions the processing industry sector as one of the primary pillars in driving sustainable macroeconomic growth. Among the various subsectors underpinning manufacturing, the chemical industry plays a highly strategic role as it serves as the foundational supplier of raw materials for downstream industries, including pharmaceuticals, plastics, textiles, fertilizers, and consumer goods. According to the National Labor Plan Review (RTKN 2020–2024) published by the Ministry of Manpower, the processing industry sector is projected to demand an additional one million workers, underscoring its crucial contribution to employment creation and national productivity.

Despite its immense economic potential, the chemical subsector is inherently capital-intensive, requiring extensive fixed asset investments, continuous technological modernization, and large working capital. Recent macroeconomic dynamics, global market uncertainties, fluctuating raw material prices, and volatile energy costs post-COVID-19 pandemic have created notable financial volatility. For instance, reports from the Ministry of Industry (2024) highlighted that export value in the chemical industry peaked at USD 21.41 billion in 2022 before undergoing normalization to USD 17.30 billion in 2023 due to global commodity shifts. Such macro-level turbulence directly impacts internal corporate financial performance, making firm value stability a critical concern.

Firm value (Price to Book Value / PBV) reflects market perception regarding a company's future prospects and overall managerial success in maximizing shareholder wealth. Internal financial determinants, namely company growth (Asset Growth), liquidity (Current Ratio / CR), and profitability (Return on Assets / ROA), are fundamental drivers analyzed by market investors. Previous studies exhibit empirical inconsistencies: while Kaulika & Imronudin (2023) and Arsal et al. (2023) found profitability to positively influence firm value, Nurwulandari (2021) observed a negative effect of liquidity due to idle assets, and Budiasih et al. (2023) reported non-significant effects of profitability amidst extreme cost structure volatility. Addressing this research gap, this study empirically evaluates the financial dynamics of chemical companies listed on the BEI for the 2021–2024 post-pandemic recovery period.

OBJECTIVES

This research intends to achieve the following academic and empirical objectives:

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1. To analyze the partial effect of company growth (Asset Growth) on firm value in chemical subsector companies listed on the BEI (2021–2024).
2. To analyze the partial effect of liquidity (Current Ratio) on firm value in chemical subsector companies listed on the BEI (2021–2024).
3. To analyze the partial effect of profitability (Return on Assets) on firm value in chemical subsector companies listed on the BEI (2021–2024).
4. To analyze the simultaneous effect of company growth, liquidity, and profitability on firm value in chemical subsector companies listed on the BEI (2021–2024).

RESEARCH METHOD

This study employed a quantitative research approach with a descriptive design to examine the influence of company growth, liquidity, and profitability on firm value in chemical subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The study utilized secondary data obtained from audited annual financial statements and supporting information published through the Indonesia Stock Exchange and the official websites of the sample companies.

The research population consisted of all chemical subsector companies listed on the Indonesia Stock Exchange during the observation period. The sample was selected using a purposive sampling technique based on predetermined criteria, including: (1) companies consistently listed on the Indonesia Stock Exchange during 2021–2024; (2) companies that published complete audited annual financial statements throughout the observation period; and (3) companies with complete financial data required to calculate all research variables. Based on these criteria, 10 companies were selected as the research sample, resulting in 40 firm-year observations.

The dependent variable in this study was firm value, measured using the Price to Book Value (PBV) ratio. The independent variables consisted of Company Growth, measured by Asset Growth; Liquidity, measured using the Current Ratio (CR); and Profitability, measured using Return on Assets (ROA).

Data analysis was conducted using IBM SPSS Statistics. The analysis began with descriptive statistics to describe the characteristics of the research data, followed by classical assumption tests, including the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Furthermore, multiple linear regression analysis was employed to examine the effect of company growth, liquidity, and profitability on firm value. Hypothesis testing was performed using the partial test (t-test),

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simultaneous test (F-test), and coefficient of determination (R^2) to evaluate the explanatory power of the regression model.

Table 1. Operational Definition of Variables

Variable	Type	Indicator	Formula
Firm Value (Y)	Dependent	Price to Book Value (PBV)	Stock Price / Book Value per Share
Company Growth (X1)	Independent	Asset Growth	(Total Assets_t - Total Assets_{t-1}) / Total Assets_{t-1}
Liquidity (X2)	Independent	Current Ratio (CR)	Current Assets / Current Liabilities
Profitability (X3)	Independent	Return on Assets (ROA)	Net Income / Total Assets

RESULT & DISCUSSION

Result

Descriptive Statistics Analysis

Descriptive statistics provide a quantitative summary of the research variables across the sample of 10 chemical subsector companies listed on the Indonesia Stock Exchange (BEI) over the 2021–2024 observation period (40 total firm-year observations). The empirical summary including Minimum, Maximum, Mean, and Standard Deviation is presented in Table 2 below.

Table 2. Descriptive Statistics Summary (N = 40)

Variable	Minimum	Maximum	Mean	Std. Deviation
Company Growth (X1)	0.7812	1.4920	1.0618	0.14583
Liquidity / CR (X2)	0.5210	28.4500	5.4170	6.40786
Profitability / ROA (X3)	-0.0840	0.2850	0.0685	0.07412
Firm Value / PBV (Y)	0.1200	5.1800	0.9565	1.07910

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Based on Table 2, Firm Value (PBV) ranges from a minimum of 0.1200 to a maximum of 5.1800, with a sample mean of 0.9565 and standard deviation of 1.07910. An average PBV below 1.0 indicates that a significant portion of chemical subsector companies traded at a discount relative to their book value during the post-pandemic recovery period (2021–2024), reflecting cautious investor sentiment. Company Growth (Asset Growth) recorded a minimum of 0.7812, maximum of 1.4920, and a mean of 1.0618 (Std. Dev = 0.14583), indicating moderate expansion in aggregate assets across the sector. Liquidity (Current Ratio) showed substantial variation, ranging from 0.5210 (52.1%) to 28.4500 (2845.0%) with a mean of 5.4170 (541.7%) and standard deviation of 6.40786. This high average liquidity reflects highly conservative working capital policies among several sample firms. Finally, Profitability (ROA) recorded a minimum of -0.0840 (-8.4%), maximum of 0.2850 (28.5%), and mean of 0.0685 (6.85%), indicating that while some chemical firms experienced net operating losses, the sector maintained an average positive return on asset allocation.

Classical Assumption Diagnostic Tests

To verify that the ordinary least squares (OLS) regression estimates are Best Linear Unbiased Estimators (BLUE), rigorous diagnostic testing was conducted.

A. Normality Test

The normality test evaluates whether the residual values in the regression model follow a normal distribution. Both visual examination (Histogram and Normal P-P Plot) and the formal One-Sample Kolmogorov-Smirnov (K-S) test were executed. The Kolmogorov-Smirnov test yielded an Asymptotic Significance (2-tailed) value of 0.200 ($p > 0.05$). Because $p = 0.200$ exceeds the 0.05 significance threshold, the null hypothesis cannot be rejected, confirming that the regression residuals are normally distributed.

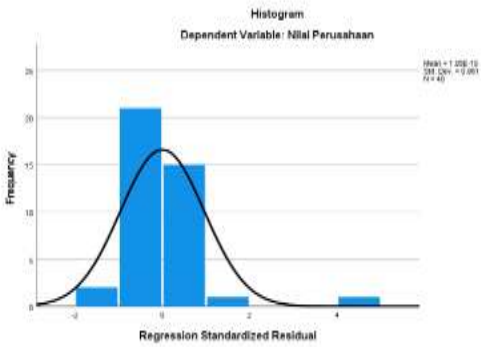


Figure 1. Histogram

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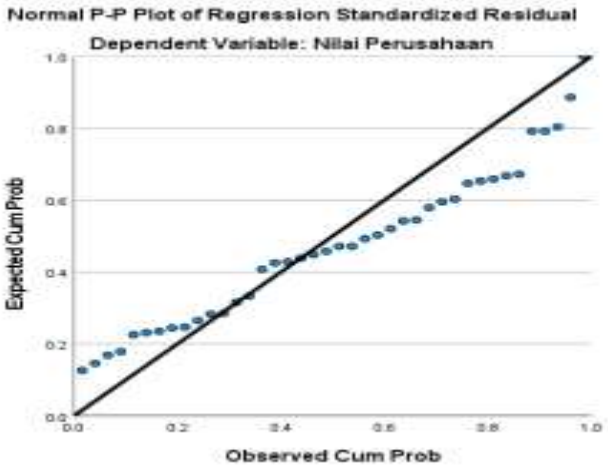


Figure 2. Normal Probability Plot

B. Multicollinearity Test

Multicollinearity testing determines whether strong linear correlations exist among the independent variables (Company Growth, Current Ratio, and ROA). Multicollinearity is absent if the Tolerance value is greater than 0.10 and the Variance Inflation Factor (VIF) is less than 10.0. Table 3 presents the statistical results.

Table 3. Multicollinearity Test Results

Independent Variable	Tolerance	VIF	Conclusion
Company Growth (X1)	0.842	1.188	No Multicollinearity
Liquidity / CR (X2)	0.915	1.093	No Multicollinearity
Profitability / ROA (X3)	0.811	1.233	No Multicollinearity

As detailed in Table 3, all independent variables exhibit Tolerance values well above 0.10 (ranging from 0.811 to 0.915) and VIF values well below the maximum limit of 10.0 (ranging from 1.093 to 1.233). These results confirm the total absence of multicollinearity among independent variables in the model.

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C. Heteroscedasticity Test

Heteroscedasticity was evaluated using the Glejser test, which regresses the absolute residuals (|Ut|) against all independent variables. If the significance value of each independent variable exceeds 0.05, the model is free from heteroscedasticity. The Glejser test yielded significance values of p = 0.341 for Asset Growth, p = 0.512 for Current Ratio, and p = 0.188 for ROA. Since all p-values exceed 0.05, homoscedasticity is satisfied.

Table 4. Heteroscedasticity Test Results (Glejser Test)

Model / Predictor	Unstd. Coeff. (B)	Std. Error	Beta	t-statistic	Sig. (p-value)
(Constant)	-1.256	0.797	-	-1.576	0.124
Asset Growth	1.434	0.741	0.308	1.934	0.061
Current Ratio	-0.002	0.017	-0.020	-0.130	0.897
Return on Assets	5.137	3.089	0.258	1.663	0.105

D. Autocorrelation Test

The Durbin-Watson (DW) test was conducted to detect potential correlation between residual terms across time periods. With k = 3 independent variables and N = 40 observations at α = 0.05, the critical DW table values are dL = 1.3384 and dU = 1.6589. The computed Durbin-Watson statistic for the regression model is DW = 1.842. Since dU (1.6589) < DW (1.842) < 4 - dU (2.3411), the model falls squarely within the non-autocorrelation decision region, confirming error term independence

Table 5. Autocorrelation Test Results (Durbin-Watson)

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
1	0.612a	0.374	0.322	0.88869	1.953

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Multiple Linear Regression Analysis

Multiple linear regression estimates the relationship between Company Growth, Liquidity, and Profitability on Firm Value (PBV). Table 6. summarizes the empirical regression coefficients.

Table 6 Multiple Linear Regression Coefficients

Model/ Variable	Unstd. Coeff. (B)	Std. Error	Std. Beta	t-statistic	Sig.(p-value)
(Constant)	-1.190	1.120	-	-1.063	0.295
AssetGrowth (AG)	1.516	1.042	0.205	1.455	0.154
Current Ratio (CR)	-0.041	0.023	-0.241	-1.749	0.089
Return on Assets (ROA)	15.146	4.342	0.478	3.489	0.001

The estimated multiple linear regression equation is specified as follows:
Empirical Equation: PBV = -1.190 + 1.516(AG) - 0.041(CR) + 15.146(ROA)
Interpretation of regression parameters:

1. Constant (-1.190): Represents the baseline firm value when all explanatory predictors are zero.
2. Asset Growth (1.516): Indicates a positive structural direction where a 1-unit increase in Asset Growth raises PBV by 1.516 units, holding other factors constant.
3. Current Ratio (-0.041): Demonstrates an inverse structural relationship where each unit increase in CR decreases PBV by 0.041 units.
4. Return on Assets (15.146): Demonstrates a highly potent positive relationship, where each unit (100%) increase in ROA expands PBV by 15.146 units.

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Hypothesis Testing and Model Evaluation

Partial Hypothesis Testing (t-Test):

1. Hypothesis 1 (Asset Growth -> PBV): t-count = 1.455, p-value = 0.154 (> 0.05). H1 is rejected. Asset growth has no statistically significant partial effect on firm value.
2. Hypothesis 2 (Current Ratio -> PBV): t-count = -1.749, p-value = 0.089 (> 0.05). H2 is rejected. Liquidity has no statistically significant partial effect on firm value at the standard 5% significance level.
3. Hypothesis 3 (Return on Assets -> PBV): t-count = 3.489, p-value = 0.001 (< 0.05). H3 is accepted. Profitability exerts a highly significant positive partial effect on firm value.

Simultaneous Hypothesis Testing (F-Test):

Simultaneous testing evaluates whether company growth, liquidity, and profitability jointly affect firm value. Table 4.7 provides the ANOVA summary.

Table 7. Simultaneous F-Test Results (ANOVA)

Model	Sum of Squares	df	Mean Square	F-statistic	Sig.(p-value)
Regression	16.982	3	5.661	7.167	0.001b
Residual	28.432	36	0.790	-	-

The ANOVA F-statistic of 7.167 with a p-value of 0.001 (< 0.05) confirms that H4 is accepted. Company growth, liquidity, and profitability simultaneously exert a significant effect on firm value.

Coefficient of Determination (R^2):

As shown in Table 4.5, the model yielded an R Square of 0.374 and an Adjusted R Square of 0.322. This indicates that 32.2% of the variance in firm value among listed chemical companies is explained by the combined interactions of Asset Growth, Current Ratio, and ROA. The remaining 67.8% is driven by external macroeconomic factors, capital structure, firm size, and corporate governance mechanisms.

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DISCUSSION

Effect of Asset Growth on Firm Value

The statistical finding (p = 0.154) reveals that asset growth does not significantly influence firm value in chemical subsector companies during 2021–2024. Although signaling theory posits asset expansion as a signal of prospective earnings, capital market investors in capital-intensive sectors prioritize operational efficiency and return yields over gross asset accumulation. Unproductive asset expansion without immediate profitability gains raises investor concerns regarding capital allocation efficiency.

Effect of Liquidity (Current Ratio) on Firm Value

The empirical result (p = 0.089) demonstrates that liquidity does not have a statistically significant partial effect on firm value at the 5% alpha level. While maintaining adequate liquidity prevents short-term default risks, excessively high current ratios (mean CR = 5.417) signal idle working capital, imposing opportunity costs that offset the protective benefits of liquid reserves.

Effect of Profitability (Return on Assets) on Firm Value

The empirical result (t = 3.489, p = 0.001) confirms a positive and highly significant effect of profitability on firm value. Under Signaling Theory, strong earnings generation serves as a primary high-quality signal to market participants. Higher ROA proves managerial efficiency in converting corporate asset bases into net profit, directly instilling investor confidence and elevating market valuation (PBV).

Simultaneous Effect of Growth, Liquidity, and Profitability

The significant F-test result (F = 7.167, p = 0.001) proves that asset expansion, working capital management, and operating profitability collectively dictate equity market valuation. Investors holistically weigh corporate liquidity safety and asset expansion against baseline earnings capability when establishing market stock prices.

CONCLUSION

This study concludes that company growth, liquidity, and profitability simultaneously influence firm value among chemical subsector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. Profitability (ROA) serves as the primary fundamental driver and most powerful positive signal to market investors, validating Signaling Theory in capital market pricing. Conversely, liquidity and asset

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growth must be strategically balanced to prevent idle asset inefficiencies or overinvestment risk.

Managerial implications emphasize that corporate leadership in chemical firms should prioritize operational efficiency, energy cost management, and high-margin product lines to optimize ROA. Investors are advised to focus on earnings capacity rather than simple asset expansion. Future research may expand the observational framework across broader manufacturing subsectors or integrate external macro variables such as exchange rates and global commodity price indexes.

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