



The Effect of Leverage, Liquidity and Total Asset Turnover on Financial Performance (A Case Study of Property & Real Estate Sector Companies for the 2020–2024 Period)

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ABSTRACT

The property and real estate sector are important industries that reflects national economic conditions and corporate performance through the ability to generate profits. However, fluctuations in the financial performance of companies in this sector indicate the need to analyze the financial factors that influence it. This study aims to examine the effect of leverage measured by Debt to Equity Ratio (DER), liquidity measured by Current Ratio (CR), and activity measured by Total Asset Turnover (TATO) on financial performance measured by Return on Assets (ROA) of property and real estate companies listed on the Indonesia Stock Exchange during the 2020–2024 period. This research uses a quantitative approach with secondary data obtained from annual financial reports. Purposive sampling resulted in 24 companies with a total of 120 observations. Data was analyzed using multiple linear regression, classical assumption tests, coefficient of determination, t-test and F-test using IBM SPSS Statistics version 27. The results show that partially DER and CR have no significant effect on ROA, while TATO has a positive and significant effect on ROA. Simultaneously, the three variables have a significant effect on financial performance.

Keywords: *Leverage, Liquidity, Total Asset Turnover, Financial Performance, Property and Real Estate.*

How to Cite:

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INTRODUCTION

Business competition continues to develop alongside changes in economic conditions and increasingly competitive market dynamics. Companies are required to maintain business sustainability by improving optimal financial performance to survive in a dynamic business environment (Kamila & Anita, 2023). Financial performance is one of the important indicators used by investors to assess a company’s ability to generate profits and the effectiveness of managing company resources (Risna & Putra, 2021). A company’s financial performance can be measured using various financial ratios, one of which is Return on Assets (ROA). ROA is used to measure the company’s ability to generate profit through the utilization of all assets owned by the company (Kusumawati & Widaryanti, 2022). A higher ROA indicates that the company is more effective in managing its assets to generate profits.

One of the factors affecting financial performance is leverage. Leverage reflects the company’s ability to fulfil both short-term and long-term obligations using debt financing (Mayliana & Damayanti, 2024). Proper use of leverage can help companies increase profits; however, excessive debt usage can also increase financial risk. In addition to leverage, liquidity is another factor influencing a company’s financial performance. Liquidity describes the company’s ability to meet its short-term obligations using current assets owned by the company (Fitriyah & Syaiful, 2024). Companies with good liquidity levels are generally more trusted by investors and creditors because they are considered capable of maintaining operational stability. Another factor influencing financial performance is Total Asset Turnover (TATO). This ratio is used to measure the effectiveness of a company in utilizing all of its assets to generate sales (Siregar et al., 2022). A higher TATO value indicates that the company is more efficient in utilizing company assets, thereby increasing profitability.

The property and real estate sector are one of the sectors that plays an important role in national economic growth. However, this sector has fluctuating characteristics and is highly sensitive to changes in macroeconomic conditions (Nasution & Cholida, 2023). Following the Covid-19 pandemic, property and real estate companies experienced pressure on their profitability, although this sector remains one of the sectors favoured by investors (Darma et al., 2023). According to data from the Central Statistics Agency (BPS), the real estate sector contributed IDR 520.7 trillion to Indonesia’s Gross Domestic Product in 2024 with a growth rate of 2.5% (Putri, n.d.). This indicates that the property and real estate sector still has promising growth prospects in the future.

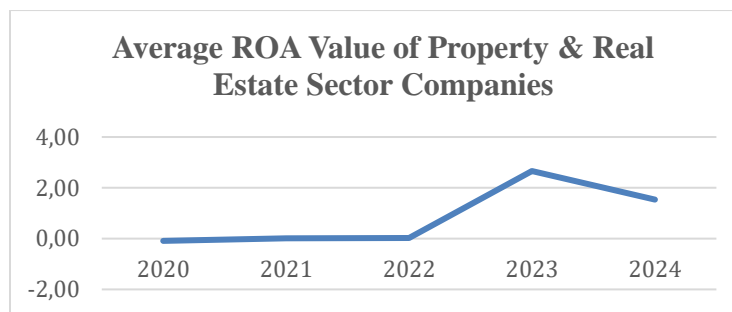


Figure 1. Average ROA Value of Property & Real Estate Sector Companies

Source: Indonesia Stock Exchange, Processed Data (2026)

The following figure presents the average Return on Assets (ROA) of property and real estate companies during the 2020–2024 period based on data processed by the researcher from the Indonesia Stock Exchange. Based on the figure above, the financial performance of property and real estate companies measured using Return on Assets (ROA) showed fluctuating patterns during the 2020–2024 period. In 2020, the average ROA was recorded at -0.09% due to the impact of the Covid-19 pandemic on business activities. Furthermore, in 2021 and 2022, ROA gradually increased to 0.01% and 0.02%, indicating a gradual recovery in company performance. In 2023, the average ROA increased significantly to 2.66% as economic conditions improved and asset management became more effective. However, in 2024, ROA declined again to 1.53%, presumably influenced by global economic uncertainty and rising interest rates. These fluctuations indicate that the financial performance of property and real estate companies is still affected by various internal and external factors.

LITERATURE REVIEW

Signaling Theory

Signaling Theory explains how companies provide information signals to investors and external parties regarding the company's condition and prospects. This theory was first introduced by Spence and later developed by Ross, who stated that information asymmetry often occurs between management and shareholders because management possesses more complete information about the company (Purba, 2023). Through financial statements and financial ratio disclosures, companies attempt to send positive signals to investors regarding their financial performance and operational efficiency. Investors generally interpret positive financial signals as indicators of good company prospects, which may increase investor confidence in making investment decisions. In this study, leverage, liquidity, and Total Asset Turnover are considered important financial signals that can reflect the company's financial condition and operational effectiveness. Companies with stable liquidity, efficient asset management, and optimal debt utilization are more likely to provide positive signals to the market. Therefore, Signaling Theory is considered relevant in explaining the relationship between financial ratios and financial performance in property and real estate companies listed on the Indonesia Stock Exchange.

Financial Performance

Financial performance reflects the company's ability to manage its financial resources effectively to achieve organizational goals and generate profits. Financial performance can be measured through financial statement analysis using various financial ratios, one of which is Return on Assets (ROA) (Fitriana, 2024). ROA is widely used because it measures how efficiently a company utilizes its assets to generate earnings. A higher ROA value indicates that the company is more effective in converting its investments in assets into profits. Financial performance is an important aspect for management, investors, and creditors because it describes the company's operational success and financial stability. Financial performance assessment also plays a significant role in managerial decision-making, investment evaluation, and long-term corporate planning (Brigham & Houston, 2019). In the property and real estate sector, financial performance is particularly important because companies in this industry generally require large

investments in assets and are highly influenced by macroeconomic conditions. Therefore, maintaining strong financial performance becomes essential for sustaining business growth and attracting investors.

Leverage

Leverage refers to the use of debt financing by companies to support operational and investment activities. Leverage is commonly measured using the Debt-to-Equity Ratio (DER), which compares total debt to shareholders' equity (Supriyadi et al., 2024). A higher DER indicates that a company relies more heavily on debt as a source of financing. The use of debt can provide benefits to companies by increasing operational capacity and supporting business expansion. However, excessive leverage may also increase financial risk because companies are required to fulfil interest and principal payment obligations regardless of profit conditions. According to Safitri and Muniroh (2023), companies must manage leverage carefully to maintain financial stability and avoid financial distress. Investors also tend to pay close attention to leverage levels because they reflect the company's risk profile and capital structure management. In this study, leverage is analysed to determine whether debt utilization contributes positively or negatively to the financial performance of property and real estate companies.

Liquidity

Liquidity is the company's ability to fulfil its short-term financial obligations using its current assets. Liquidity is commonly measured using the Current Ratio (CR), which compares current assets to current liabilities (Zalogo et al., 2025). A high Current Ratio indicates that the company has sufficient liquid assets to meet short-term obligations, which may increase investor and creditor confidence. According to Mulyana et al. (2024), liquidity is an important indicator of a company's short-term financial health because it reflects the firm's ability to sustain operational activities without experiencing cash flow problems. Good liquidity management also enables companies to avoid financial distress and maintain operational continuity. However, excessively high liquidity may indicate inefficient use of assets because too many current assets remain idle and unproductive. In the property and real estate sector, liquidity management becomes more challenging due to the industry's dependence on long-term projects and significant asset investments. Therefore, maintaining optimal liquidity is essential to support stable financial performance and business sustainability.

Total Asset Turnover

Total Asset Turnover (TATO) is an activity ratio used to measure how effectively a company utilizes its total assets to generate sales revenue. This ratio is calculated by dividing total sales by total assets owned by the company (Sukamulja, 2022). A higher TATO value indicates that the company is more efficient in using its assets to support operational activities and generate income. Efficient asset utilization is essential because it contributes directly to profitability and overall company performance. According to Saragih and Adam (2024), companies with effective asset management tend to achieve higher operational efficiency and better financial outcomes. In asset-intensive industries such as property and real estate, Total Asset Turnover becomes an important indicator because companies generally own substantial fixed assets and property inventories. A low TATO ratio may indicate underutilized assets or ineffective operational management, while a high ratio reflects productive asset utilization. Therefore, this study examines whether

Total Asset Turnover significantly influences the financial performance of property and real estate companies listed on the Indonesia Stock Exchange.

Based on the theoretical framework, the research model in this study is presented in Figure 2:

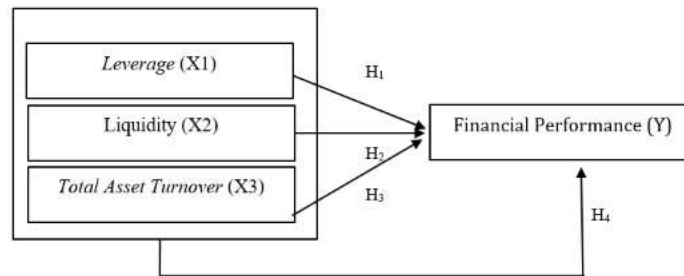


Figure 2. Conceptual Framework

The hypotheses in this study are:

H1: There is an effect of leverage on financial performance

H2: There is an effect of liquidity on financial performance

H3: There is an effect of total asset turnover on financial performance

H4: There is a simultaneous effect of leverage, liquidity, and total asset turnover on financial performance

METHODS OF RESEARCH

This study adopts a quantitative approach to analyze the effect of leverage, liquidity, and total asset turnover on financial performance in companies listed on the Indonesia Stock Exchange during the 2020-2024 period. The data used are secondary data obtained from companies listed on the Indonesia Stock Exchange (IDX). Data analysis was performed using SPSS version 27 software. The sampling method used was purposive sampling. From an initial population of 92 property and real estate companies, 24 companies were selected using purposive sampling, resulting in 120 observation data during the 2020–2024 period. This study also uses multiple linear regression analysis to determine the effect of leverage measured by Debt to Equity Ratio (DER), liquidity measured by Current Ratio (CR), and Total Asset Turnover (TATO) on financial performance measured by Return on Assets (ROA). The multiple linear regression equation used in this study is formulated as follows: $ROA = \alpha + \beta_1 DER + \beta_2 CR + \beta_3 TATO + e$.

The dependent variable in this study is financial performance proxied by Return on Assets (ROA). According to Hamidah et al. (2022), Return on Assets is a ratio used to measure management’s ability to generate overall profits from the company’s assets. The formula for Return on Assets (ROA) is as follows:

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}}$$

The first independent variable is leverage measured using the Debt to Equity Ratio (DER). According to Supriyadi et al. (2024), Debt to Equity Ratio is a ratio used to assess the proportion of debt relative to equity. The formula for Debt to Equity Ratio (DER) is as follows:

$$DER = \frac{\text{Total debt}}{\text{Total Equity}}$$

The second independent variable is liquidity measured using the Current Ratio (CR). According to Zalogo et al. (2025), Current Ratio reflects the company’s ability to meet short-term obligations using current assets. The formula for Current Ratio (CR) is as follows:

$$CR = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The third independent variable is Total Asset Turnover (TATO). According to Sopi and Aryanto (2023), Total Asset Turnover can be measured through sales volume and indicates the extent to which all company assets can generate sales. The formula for Total Asset Turnover (TATO) is as follows:

$$TATO = \frac{\text{Net Sale}}{\text{Total Assets}}$$

RESULTS AND DISCUSSION

Descriptive Statistics Analysis

Descriptive statistical analysis was conducted to provide a general overview of the data characteristics, including the minimum, maximum, average (mean), and standard deviation values of each variable. The result of the descriptive statistical tests in this study can be seen in Table 2 below:

Table 1. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Debt to Equity Ratio	120	.0200	1.3000	.501833	.3390842
Current Ratio	120	.0300	4.5000	1.830667	1.0500370
Total Asset Turnover	120	.0000	.3400	.129750	.0814002
Return on Assets	120	-.0600	.1100	.021917	.0385732
Valid N (listwise)	120				

Source: Processed SPSS Data (2026)

Based on Table 2, the average Debt to Equity Ratio (DER) value is 1.2450, indicating that the companies tend to use debt financing greater than equity. The Current Ratio (CR) has an average value of 2.4312, which indicates that the companies are generally capable of fulfilling their short-term obligations. Meanwhile, the average Total Asset Turnover (TATO) value is 0.3214, meaning that the companies have not fully optimized their assets to generate sales. The average Return on Assets (ROA) value is 0.0265, indicating relatively low profitability among property and real estate companies during the observation period.

The next stage of analysis is the classical assumption test, which consists of the normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. These tests are conducted to ensure that the regression model fulfills the required assumptions and produces reliable results. A regression model is considered appropriate if it is free from the symptoms of non-normality, multicollinearity, autocorrelation, and heteroscedasticity. After the classical assumption tests were fulfilled, the analysis

continued with multiple linear regression analysis, partial test (t-test), simultaneous test (F-test), and coefficient of determination test (R^2). The results of each analysis are presented sequentially in the following tables and explanations.

Normality Test

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

		Unstandardized Residual
N		120
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.02910425
Most Extreme Differences	Absolute	.071
	Positive	.057
	Negative	-.071
Test Statistic		.071
Asymp. Sig. (2-tailed) ^c		.200 ^d

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Source: Processed SPSS Data (2026)

Based on the results of the normality test using the One-Sample Kolmogorov-Smirnov Test, the Asymp. Sig. (2-tailed) value obtained was 0.200. Since the significance value is greater than 0.05 ($0.200 > 0.05$), it can be concluded that the residual data are normally distributed and meet the normality assumption. Therefore, the regression model used in this study is considered suitable for further analysis.

Multicollinearity Test

**Table 3. Multicollinearity Test
Coefficients^a**

Model		Collinearity Statistics	
		Tolerance	VIF
1	transform_SQRTx1	.919	1.088
	transform_SQRTx2	.760	1.315
	transform_SQRTx3	.746	1.340

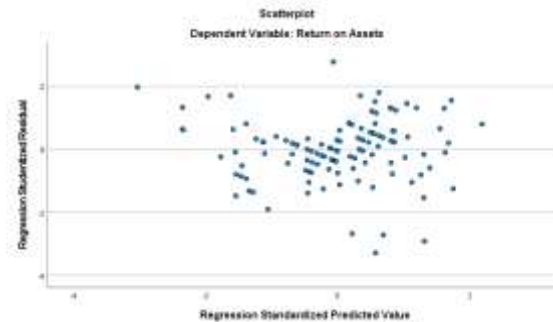
- a. Dependent Variable: Return on Assets

Source: Processed SPSS Data (2026)

Table 4. shows that the Debt to Equity Ratio (X1) variable has a tolerance value of 0.919 and a VIF value of 1.088. Current Ratio (X2) has a tolerance value of 0.760 and a VIF value of 1.315, while Total Asset Turnover (X3) has a tolerance value of 0.746 and a VIF value of 1.340. Since all tolerance values are above 0.10 and all VIF values are below 10, it can be concluded that the regression model does not experience multicollinearity problems. This means that all independent variables can explain the dependent variable properly without strong correlations among them.

Heteroscedasticity Test

Table 4. Heteroscedasticity Test



Source: Processed SPSS Data (2026)

Based on the scatterplot graph, the data points are randomly distributed above and below the zero line and do not form a specific pattern. Therefore, it can be concluded that the regression model does not experience heteroscedasticity problems. This means that the residual variance is constant across observations.

Autocorrelation Test

Table 5. Autocorrelation Test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.503 ^a	.253	.234	.02772	1.983

a. Predictors: (Constant), LAG_X3, LAG_X1, LAG_X2

b. Dependent Variable: LAG_Y

Source: Processed SPSS Data (2026)

Based on the autocorrelation test, the Durbin-Watson value obtained was 1.983. This value lies between dU and $(4 - dU)$, namely $1.656 < 1.983 < 2.344$. Therefore, it can be concluded that the regression model does not experience autocorrelation problems. This indicates that the residual values are independent from one observation to another.

Multiple Linear Regression Analysis

Table 6. Multiple Linear Regression

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.014	.006		2.383	.019
	LAG_X1	.015	.020	.113	.709	.480
	LAG_X2	-.023	.014	-.273	-1.689	.094
	LAG_X3	.275	.045	.510	6.174	.000

a. Dependent Variable: LAG_Y

Source: Processed SPSS Data (2026)

Based on the results of the multiple linear regression analysis, the following equation was obtained:

$$Y = 0.014 + 0.015X_1 - 0.023X_2 + 0.275X_3 + e$$

The equation shows that the constant value is 0.014, meaning that if all independent variables are equal to zero, the Return on Assets value will be 0.014. The Debt to Equity Ratio coefficient of 0.015 indicates a positive relationship with Return on Assets. The Current Ratio coefficient of -0.023 indicates a negative relationship with Return on Assets. Meanwhile, the Total Asset Turnover coefficient of 0.275 indicates a positive relationship and shows the strongest effect on Return on Assets.

Partial Test (t-Test)

Table 7. Partial Test (t-Test)

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.014	.006		2.383	.019
	LAG_X1	.015	.020	.113	.709	.480
	LAG_X2	-.023	.014	-.273	-1.689	.094
	LAG_X3	.275	.045	.510	6.174	.000

a. Dependent Variable: LAG_Y

Source: Processed SPSS Data (2026)

The partial test results show that Debt to Equity Ratio has a significance value of 0.480, which is greater than 0.05, meaning that Debt to Equity Ratio does not significantly affect Return on Assets. Current Ratio has a significance value of 0.094, which is also greater than 0.05, indicating that Current Ratio does not significantly affect Return on Assets. Meanwhile, Total Asset Turnover has a significance value of 0.000, which is lower than 0.05, meaning that Total Asset Turnover has a positive and significant effect on Return on Assets.

Simultaneous Test (F-Test)

Table 8. Simultaneous Test (F-Test)

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.030	3	.010	13.005	.000 ^b
	Residual	.088	115	.001		
	Total	.118	118			

a. Dependent Variable: LAG_Y

b. Predictors: (Constant), LAG_X3, LAG_X1, LAG_X2

Source: Processed SPSS Data (2026)

Based on the F-test results, the significance value obtained is 0.001, which is lower than 0.05. Therefore, it can be concluded that Debt to Equity Ratio, Current Ratio, and Total Asset Turnover simultaneously have a significant effect on Return on Assets.

Coefficient of Determination Test

Table 9. Coefficient of Determination Test

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.503 ^a	.253	.234	.02772

a. Predictors: (Constant), LAG_X3, LAG_X1, LAG_X2

b. Dependent Variable: LAG_Y

Source: Processed SPSS Data (2026)

Based on the coefficient of determination test, the Adjusted R Square value obtained is 0.234. This indicates that Debt to Equity Ratio, Current Ratio, and Total Asset Turnover are able to explain 23.4% of the variation in Return on Assets, while the remaining 76.6% is influenced by other variables outside this study.

Discussion

The Effect of Debt to Equity Ratio on Return on Assets

Based on the results of the partial hypothesis test (t-test), H1 is rejected because the Debt to Equity Ratio variable obtained a significance value of 0.480, which is greater than 0.05. This indicates that, during the 2020–2024 period, Debt to Equity Ratio does not have a significant effect on Return on Assets in property and real estate sector companies.

The results of this study indicate that a company’s financial performance, as measured by Return on Assets, is not significantly improved by either high or low levels of leverage. This condition suggests that companies have not optimally utilized debt to generate profits from their assets. In addition, companies in the property and real estate sector generally use debt in their operations due to high capital requirements.

The findings of this study are consistent with the studies conducted by Nurjanah et al. (2025), Effendi et al. (2025), and Ramayanti et al. (2023), which stated that Debt to Equity Ratio does not have a significant effect on Return on Assets.

The Effect of Current Ratio on Return on Assets

Based on the results of the partial hypothesis test (t-test), H2 is rejected because the significance value of the Current Ratio variable is 0.094, which is greater than 0.05. This indicates that, during the 2020–2024 period, Return on Assets of property and real estate companies is not significantly affected by Current Ratio.

The results of this study indicate that the company's liquidity level has not been able to significantly improve financial performance. A high Current Ratio does not necessarily reflect better company conditions because there may be idle current assets that are not effectively utilized to generate profits. In the property and real estate sector, most company assets consist of property inventories and fixed assets, meaning that high liquidity does not necessarily increase company profitability. The findings of this study are consistent with the studies conducted by Sa'adah and Fadhilah (2025), Nurjanah et al. (2025), and Pratiwi et al. (2024) which stated that Current Ratio does not have a significant effect on Return on Assets.

The Effect of Total Asset Turnover on Return on Assets

Based on the results of the partial hypothesis test (t-test), the Total Asset Turnover variable obtained a significance value of 0.000, which is lower than 0.05; therefore, H3 is accepted. This indicates that Total Asset Turnover has a positive and significant effect on Return on Assets in property and real estate companies during the 2020–2024 period.

The results of this study indicate that a company's ability to generate profits increases along with the level of asset turnover. Total Asset Turnover reflects how effectively a company utilizes all of its assets to generate revenue. Return on Assets, as a measure of company financial performance, increases as the efficiency of asset utilization improves. Since companies in the property and real estate sector generally possess relatively large amounts of assets, effective asset management plays an important role in improving company performance. Therefore, companies will find it easier to increase sales and profitability if they are able to manage their assets efficiently. The findings of this study are consistent with the studies conducted by Pratama et al. (2025), Fathor and Saputra (2024), Ramayanti et al. (2023), and Lestiani et al. (2024), which stated that Total Asset Turnover has a positive and significant effect on Return on Assets.

The Effect of Debt to Equity Ratio, Current Ratio, and Total Asset Turnover on Return on Assets

Based on the simultaneous test results (F-test), the significance value obtained is 0.001, which is lower than 0.05; therefore, H4 is accepted. This indicates that Debt to Equity Ratio, Current Ratio, and Total Asset Turnover simultaneously have a significant effect on Return on Assets in property and real estate companies during the 2020–2024 period.

CONCLUSION

Based on the results of this study, it can be concluded that Debt to Equity Ratio (DER) does not have a significant effect on Return on Assets (ROA), indicating that the use of leverage has not been able to significantly improve the financial performance of property and real estate companies during the 2020–2024 period. Likewise, Current Ratio (CR) does not have a significant effect on ROA, showing that a high level of liquidity does not necessarily increase company profitability because current assets may not be utilized effectively. Meanwhile, Total Asset Turnover (TATO) has a positive and significant effect on ROA, which indicates that efficient asset utilization is able to improve company profitability. Simultaneously, DER, CR, and TATO have a significant effect on ROA, meaning that leverage, liquidity, and asset management together contribute to the financial performance of property and real estate companies listed on the Indonesia Stock Exchange during the 2020–2024 period.

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