

The Effect of Net Profit Margin, Debt to Asset Ratio and Sales Growth on Firm Value 2021-2024 in the Property and Real Estate Sector on The Indonesia Stock Exchange

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Abstract

This study investigates the effect of net profit margin (NPM), debt to asset ratio (DAR), and sales growth on firm value in property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The property and real estate sector plays a vital role in Indonesia's economic structure and experienced significant dynamics during the post-pandemic recovery phase. Firm value is proxied by Tobin's Q, which reflects market perceptions of corporate performance and growth prospects. This research employs a quantitative approach using secondary data obtained from audited annual financial statements and stock market records. Panel data regression analysis is conducted using SPSS to examine the relationships between financial performance indicators and firm value. The sample is selected through purposive sampling based on specific criteria related to financial stability, listing standards, and data availability. The results show that net profit margin, debt to asset ratio, and sales growth simultaneously have a significant effect on firm value. However, partially, only net profit margin has a significant positive effect on firm value, indicating that profitability is a key determinant of market valuation in this sector. In contrast, debt to asset ratio and sales growth do not have a significant impact on firm value, suggesting that leverage and revenue growth alone are insufficient to enhance firm valuation during the observed period. These findings imply that investors should prioritize profitability indicators, particularly net profit margin, when evaluating property and real estate firms.

Keywords : Debt to asset ratio, firm value, net profit margin, real estate property.

1. Introduction

The property and real estate sector serves as a critical pillar of the Indonesian economy (Gao et al., 2024; Indarto, Widodoatmodjo, & Korespondensi, 2025; Oktavia, Nisfi, & Purdianto, 2025), reflecting national economic health through activities such as property development, sales, rentals, and related services (Qian, Sun, Li, Liu, & Li, 2024). Listed on the Indonesia Stock Exchange (IDX), companies in this sector are highly sensitive to macroeconomic conditions, government policies, interest rates, and consumer demand (Rofi'i, 2026). The period from 2021 to 2024 marked a transition from the severe disruptions caused by the COVID-19 pandemic—characterized by declining demand, project delays, and share price contractions—(Sağlam, 2025) to a phase of gradual recovery, supported by improving economic

conditions, stimulus measures, and rising property demand in certain segments. Despite this rebound, the sector faced persistent challenges, including elevated interest rates, inflationary pressures on construction materials, and uneven recovery across sub-sectors, resulting in volatile stock performance and subdued overall growth for many firms.

Firm value represents investors' assessment of a company's current performance and future growth prospects (Agustar & Nilawati, 2025; Fitriani, Aslam, & Anwar, 2026), often manifested in stock prices and market capitalization. Maximizing firm value is a primary objective for companies (Susilowati, Fadilah, Putri, Andayani, & Kirana, 2024), as it enhances shareholder wealth (Rahman & Wuryaningsih, 2025), strengthens market confidence (Trisnani, Gamayuni, & Nauli, 2026), and signals strong managerial capability and investment potential. In the property and real estate context, firm value is particularly important given the long-term nature of investments and the sector's exposure to cyclical risks. High firm value not only reflects robust financial health but also fosters greater access to capital and investor trust in sustained profitability and expansion opportunities (Ghuri & Zulfikar, 2024; Yaramah & Rahmahwati, 2025).

This study employs Tobin's Q as the primary measure of firm value, calculated as the ratio of the market value of equity plus the book value of debt to the book value of total assets. Tobin's Q captures the market's evaluation of a firm's assets relative to their replacement cost, incorporating both equity and debt perspectives to provide a comprehensive view of overall firm worth. It effectively signals growth opportunities, managerial efficiency in asset utilization, and investor confidence in future value creation, making it a widely accepted proxy in empirical finance research, particularly in emerging markets like Indonesia.

Drawing on Signaling Theory, firms convey information about their prospects to external stakeholders amid information asymmetry between management and investors (Meng, Dato Haji Yahya, Ashhari, & Yu, 2023; OuYang, Xu, Wei, & Liu, 2017). Financial indicators such as profitability and leverage serve as credible signals of operational strength and strategic direction (Billikusuma & Saputro, 2024). Complementing this, the Trade-off Theory posits that firms balance the tax advantages of debt against bankruptcy costs in determining optimal capital structure, influencing firm value through the interplay of leverage benefits and risks.

Against this backdrop, the present study investigates the effects of net profit margin (NPM), debt to asset ratio (DAR), and sales growth on firm value (measured by Tobin's Q) in property and real estate companies listed on the IDX over the 2021–2024 period. By examining these financial determinants during a critical post-pandemic recovery phase, the research aims to provide empirical insights into value drivers in a dynamic and policy-sensitive sector.

2. Research Method

This study adopts a quantitative research design to examine the relationships between financial predictors and firm value in the property and real estate sector. Data were collected from secondary sources, specifically audited annual financial statements and stock market data of listed companies on the Indonesia Stock Exchange (IDX) over the 2021–2024 period. The analysis employs panel data regression techniques, processed using SPSS software, to test hypotheses regarding the effects of net profit margin (NPM), debt to asset ratio (DAR), and sales growth on firm value proxied by Tobin's Q. This approach allows for the examination of cause-and-effect relationships while controlling for time-invariant heterogeneity across firms and temporal dynamics in the post-pandemic recovery phase.

The population comprises all property and real estate companies listed on the IDX during the study period. A purposive sampling technique was applied to select firms meeting predefined criteria aligned with Main Board listing standards and data availability requirements: (a) at least 36 months of recorded operating revenue; (b) positive operating profit in at least the most recent year; (c) availability of audited financial statements for the last three consecutive years; (d) net tangible assets of at least IDR 100 billion; (e) minimum public shareholding requirements (e.g., at least 300 million shares offered to the public, with percentage thresholds varying by equity size: 20% for equity below IDR 500 billion, 15% for IDR 500 billion to IDR 2 trillion, and 10% above IDR 2 trillion); (f) at least 1,000 shareholders; and (g) initial share price of at least IDR 100. These criteria ensure the inclusion of established, financially stable, and actively traded firms, yielding a final sample suitable for robust statistical inference in financial management research.

3. Results and Discussion

3.1 Descriptive Analysis

Table 1. Descriptive Statistics

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
NPM	64	-0.31	1.63	0.2481	0.29484
DAR	64	0.12	0.96	0.4092	0.16447
SG	64	-0.57	2.74	0.2314	0.53750
TobinsQ	64	0.41	6.37	0.9042	0.76927
Valid N (listwise)	64				

Based on the Table 1 above, the firm value (Y) variable shows a minimum value of 0.41 recorded by PT Bekasi Fajar Industrial Estate Tbk. in 2024 and a maximum value of 6.37 achieved by PT Pantai Indah Kapuk Dua Tbk. in 2024. The mean value of 0.9042 indicates that, on average, the sampled companies exhibit a positive firm value, reflecting favorable market assessments. Furthermore, the standard deviation of 0.76927 is lower than the mean, suggesting a relatively low level of dispersion and indicating that firm value across observations tends to be homogeneous.

The net profit margin (X1) variable records a minimum value of -0.31 at PT Bekasi Fajar Industrial Estate Tbk. in 2021 and a maximum value of 1.63 at PT Lippo Karawaci Tbk. in 2024. The average value of 0.2481, accompanied by a standard deviation of 0.29484 that exceeds the mean, indicates a relatively high degree of variability. This condition reflects a heterogeneous distribution of net profit margins among the observed firms, implying differing levels of profitability performance during the study period.

The debt to asset ratio (X2) demonstrates a minimum value of 0.12 at PT Puradelta Lestari Tbk. in 2021 and a maximum value of 0.96 at PT Pantai Indah Kapuk Dua Tbk. in 2021. With a mean value of 0.4092 and a standard deviation of 0.16447, which is lower than the mean, the data indicate a relatively homogeneous distribution. This finding suggests that the leverage levels of the sampled firms do not vary substantially across observations.

Finally, the sales growth variable (X3) shows a minimum value of -0.57 at PT Sentul City Tbk. in 2024 and a maximum value of 2.74 at PT Pantai Indah Kapuk Dua Tbk. in 2023. The mean value of 0.2314, combined with a standard deviation of 0.53750 that is higher than the mean, indicates substantial variation. This reflects a heterogeneous distribution of sales growth, demonstrating that revenue expansion among the sampled companies fluctuates considerably across different periods.

3.2. Normality Test

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

Description	Unstandardized Residual
N	64
Normal Parameters (a,b)	
Mean	0.0000000
Std. Deviation	0.16936152
Most Extreme Differences	
Absolute	0.091
Positive	0.091
Negative	-0.076
Test Statistic	0.091
Asymp. Sig. (2-tailed)	0.200

Based on the results of Table 2 above, the Kolmogorov-Smirnov test shows an Asymptotic Significance value (2-tailed) of 0.200, which is greater than the previously determined value of $\alpha = 0.05$. This indicates that there is sufficient evidence to reject H_0 and accept H_a , indicating that the residual data is normally distributed.

3.3. Discriminant Validity Results

Table 3. Multicollinearity Test Results

Model	Variable	Tolerance	VIF
1	NPM	0.538	1.860
	DAR	0.559	1.789

SG	0.907	1.103
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Based on The Table 3 above, the tolerance value obtained is above 0.10, which is 0.538 for the net profit margin variable (X1), 0.559 for the debt to asset ratio (X2), and 0.907 for the sales growth variable (X3). Meanwhile, the VIF value is less than 10.00, namely 1.860 for the net profit margin (X1), 1.789 for the debt to asset ratio (X2), and 1.103 for the sales growth variable (X3). Thus, it can be concluded that the data is free from multicollinearity symptoms, H0 is accepted while Ha is rejected.

3.4. Heteroscedasticity Test Results

Table 4. The Heteroscedasticity Test Test

Model	Variable	Unstandardized Coefficient (B)	Std. Error	Standardized Coefficient (Beta)	t-value	Sig.
1	(Constant)	0.139	0.065	—	2.154	0.036
	NPM	0.144	0.088	0.300	1.633	0.109
	DAR	-0.094	0.126	-0.135	-0.748	0.458
	SG	0.013	0.078	0.024	0.170	0.866

Based on the Table 4, the significance value obtained from each independent variable is greater than 0.05. The significance value is 0.109 for the net profit margin variable (X1), 0.458 for the debt to asset ratio (X2), and 0.866 for the sales growth variable (X3). Therefore, it can be concluded that the independent variables consisting of net profit margin (X1), debt to asset ratio (X2), and sales growth (X3) do not experience symptoms of heteroscedasticity, H0 is accepted while Ha is rejected.

3.5. Autocorrelation Test Result

Table 5. The Autocorrelation Test Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.527	.278	.230	.17480	1.932

a. Predictors: (Constant), SG, DAR, NPM

b. Dependent Variable: TobinsQ

Based on the Table 5, the Durbin-Watson (DW) value obtained is 1.932. Next, the DW value is compared with the table value du with a significance of 0.05, the number of samples (n) = 50, and the number of independent variables (k) = 3, then the table dU value is obtained as 1.6739. The obtained DW value of 1.932 is greater than the table dU value of 1.6739 and smaller than the 4-dU value of 2.3261. This can indicate that there is no autocorrelation symptom in the study ($dU < d < 4 - dU$) so that H0 is accepted while Ha is rejected.

3.6. Multiple Regression Analysis Result

Table 6. The Multiple Regression Analysis Result

Model	Variable	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta)	t-value	Sig.
1	Constant	0.494	0.114	–	4.315	< 0.001
	NPM	0.581	0.156	0.637	3.729	< 0.001
	DAR	0.391	0.223	0.294	1.751	0.087
	SG	0.072	0.138	0.069	0.524	0.603

a. Dependent Variable: TobinsQ

Based on Table 6, the regression equation can be formulated as follows: $Y = 0.494 + 0.581 \text{ NPM} + 0.391 \text{ DAR} + 0.072 \text{ SG}$. This equation provides a mathematical model for understanding how the independent variables contribute to company value.

Based on the regression equation above, the factors influencing company value (Y) are explained as follows. The constant value of 0.494 indicates that if the Net Profit Margin, Debt to Asset Ratio, and Sales Growth variables are assumed to be constant or unchanged, the firm's value as measured by Tobin's Q would be 0.494.

Furthermore, the Net Profit Margin regression coefficient of 0.581 suggests that for every 1% increase in NPM, the firm's value (Tobin's Q) increases by 0.581, assuming all other variables remain constant. Similarly, the Debt to Asset Ratio coefficient of 0.391 implies that a 1% increase in DAR will result in a 0.391 increase in Tobin's Q, holding other factors constant. Lastly, the Sales Growth coefficient of 0.072 indicates that a 1% increase in SG leads to a 0.072 increase in company value, assuming other variables remain unchanged.

3.6 Hypothesis Testing Results

3.6.1 F Test Result

Table 7. F Test Result

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.540	3	0.180	5.891	0.002
	Residual	1.405	46	0.031		
	Total	1.945	49			

Based on table 7, it is known that the calculated F value is 5.891 and the significance value is $0.002 \leq 0.05$ so that H1 is accepted. Thus, the variables net profit margin (X1), debt to asset ratio (X2), and sales growth (X3) together have a significant effect on the value of companies in the property and real estate sector.

3.6.2 Coefficient of Determination Test Result

Table 8. Coefficient of Determination Test Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.527	0.278	0.230	0.17480	1.932

Based on Table 8, the coefficient of determination calculated from the Adjusted R Square is 0.230. This indicates that approximately 23% of the variation in firm value can be explained by the independent variables included in the regression model, such as net profit margin, debt-to-asset ratio, and sales growth. Meanwhile, approximately 77% of the variation in firm value is explained by other factors not included in the regression model.

3.6.3 F Test Result

Table 9. T Test Result

Variable	Unstandardized Coefficient (B)	Standard Error	Standardized Coefficient (Beta)	t-value	Sig.
Constant	0.494	0.114	–	4.315	< 0.001
NPM	0.581	0.156	0.637	3.729	< 0.001
DAR	0.391	0.223	0.294	1.751	0.087
SG	0.072	0.138	0.069	0.524	0.603

a. Dependent Variable: TobinsQ

The results of the t-test indicate that net profit margin has a significant positive effect on firm value. The net profit margin variable produced a t-value of 3.729 with a significance level of 0.001, which is smaller than the 5% significance threshold (0.050). This finding shows that net profit margin significantly influences firm value in a positive direction. Therefore, the second hypothesis (H2), which states that net profit margin has a significant positive effect on firm value, is accepted and can be considered empirically proven.

In contrast, the debt to asset ratio does not have a significant effect on firm value. The test results show a t-value of 1.751 with a significance level of 0.087, which exceeds the 5% significance level (0.050). This indicates that the debt to asset ratio does not significantly influence firm value. Consequently, the third hypothesis (H3), which proposes that the debt to asset ratio has a significant negative effect on firm value, is rejected and is therefore not empirically supported.

Similarly, the sales growth variable does not have a significant effect on firm value. The statistical test produced a t-value of 0.524 with a significance level of 0.603, which is greater than the 5% significance level (0.050). These results demonstrate that sales growth does not significantly affect firm value. Thus, the fourth hypothesis (H4), which states that sales growth has a significant positive effect on firm value, is rejected and is not proven by the empirical findings.

4. Conclusion

This study examined the determinants of firm value in the Indonesian property and real estate sector over the 2021-2024 period. The findings reveal that net profit margin, debt-to-asset ratio, and sales growth collectively exert a significant influence on corporate value. However, when analyzed individually, only net profit margin demonstrates a significant positive effect on firm value, underscoring its critical role

as a performance metric. In contrast, both the debt-to-asset ratio and sales growth were found to have no significant impact, suggesting that leverage and revenue expansion alone may not directly enhance firm valuation in this specific sector and timeframe.

The findings offer practical implications for investors, who should prioritize net profit margin as a key valuation indicator when assessing property and real estate firms. Given the non-significant results for leverage and sales growth, future research should consider extending the observation period and incorporating additional explanatory variables such as profitability ratios (ROA, ROE), firm size, liquidity, ownership structure, and macroeconomic conditions (e.g., interest rates and inflation). Expanding the analytical framework would provide a more comprehensive understanding of the multifaceted factors driving corporate value in emerging markets.

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