

Research Article

The Influence of Financial Performance on Price to Book Value: Evidence from Banking Companies in Indonesia

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Abstract. This study investigates the influence of financial performance, proxied by Return on Assets (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), and Net Profit Margin (NPM), on Price to Book Value (PBV) in banking companies listed on the Indonesia Stock Exchange during the 2020-2024 period. Employing a quantitative approach, the research applies multiple linear regression analysis to examine the relationship between financial performance indicators and firm value. The population includes all banking companies listed on the exchange, while the sample was determined using purposive sampling based on specific criteria relevant to the study, yielding 29 companies with 145 observations. Secondary data were obtained from annual financial reports published by the companies. The findings reveal that ROA does not significantly affect PBV, suggesting that asset-based profitability was not a primary determinant of firm value during the study period. In contrast, ROE shows a positive and significant effect on PBV, indicating that higher returns to shareholders enhance firm valuation. Meanwhile, DER and NPM both exhibit negative and significant effects on PBV, implying that increased leverage and higher profit margins were paradoxically associated with lower firm value. Furthermore, the simultaneous test confirms that ROA, ROE, DER, and NPM collectively exert a significant influence on PBV. These results highlight that investors assess banking companies by considering a combination of profitability and capital structure indicators rather than relying on a single ratio. The findings contribute to signaling and agency theories in the Indonesian banking context.

Keywords: Debt to Equity Ratio; Net Profit Margin; Price to Book Value; Return on Assets; Return on Equity.

1. Introduction

Firm value is one of the important indicators used by investors to assess a company's performance. Firm value reflects the level of investor interest in investing capital, as it serves as an indicator of management's success in managing and optimizing resources to increase firm value (Sondakh et al., 2019). Firm value can also be interpreted as the fair market value of a company that represents investors' perceptions and assessments of the company's performance and condition (Gidus & Kurniawan, 2025). Maximizing firm value is the primary goal that every company must achieve (Suwandi et al., 2022). Therefore, firm value becomes one of the main indicators used by investors to assess overall company performance (Jamiah, 2025).

One indicator frequently used to measure firm value is Price to Book Value (PBV). Price to Book Value (PBV) is a ratio that shows the comparison between the market price of a share and the company's book value. This ratio is widely known by investors as an important indicator in assessing the fairness of stock prices, particularly for companies that consistently offer stock prices that reflect their fundamental condition. PBV is often used by investors to identify whether a stock is undervalued or overvalued in the capital market (Dharma et al., 2023). The higher the PBV value, the more positive the market's perception of the company's performance and future prospects. This indicates that the company is perceived as capable of creating added value for shareholders (Hidayat, 2019).

A company's Price to Book Value (PBV) can be influenced by various factors, one of which is the company's financial performance. This financial performance can be analyzed through financial ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net

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Profit Margin (NPM), which reflect the company's profitability level, as well as the Debt to Equity Ratio (DER), which indicates the company's capital structure. These financial ratios can serve as signals for investors in assessing the company's ability to generate profits and manage its resources.

A phenomenon occurring in the banking sector shows that improvements in financial performance are not always followed by increases in firm value in the capital market. As reported by *Kontan.co.id*, several digital banks listed on the Indonesia Stock Exchange recorded significant profit growth in early 2025. For instance, Bank Neo Commerce recorded profit growth of up to 903.1%, while Bank Jago experienced a 214.6% year-on-year profit increase. However, this profit growth was not always followed by an increase in the company's stock price. In fact, the stock prices of several digital banks actually declined on a year-to-date (YTD) basis, such as Bank Jago's shares falling by more than 36% and Bank Neo Commerce's shares dropping by approximately 12%.

Furthermore, based on reports from the Financial Services Authority (OJK), Indonesia's banking sector has shown relatively stable performance with profit growth and increased credit disbursement in recent years. However, stock price movements in the banking sector still exhibit fluctuations influenced by global economic conditions, market sentiment, and investor perceptions of the future prospects of the banking industry. This condition indicates that improvements in a company's financial performance do not necessarily directly increase firm value as reflected through the Price to Book Value (PBV) ratio.

Previous research on Price to Book Value has yielded mixed results. Research conducted by Mutiara et al. (2024) found that Return on Assets has a positive and significant effect on Price to Book Value, while Debt to Equity Ratio does not have a significant effect on Price to Book Value. Furthermore, research by Rahmawati & Simamora (2021) showed that Debt to Equity Ratio has a significant effect on Price to Book Value, whereas Net Profit Margin does not have a significant effect on Price to Book Value.

The t-test hypothesis results from research by S. A. Kurniawan & Elfahmi (2025) stated that Return on Assets does not affect Price to Book Value. Meanwhile, research by Oktafiyani & Rolanda (2025) showed that Net Profit Margin has a positive and significant effect on Price to Book Value. Research by Listyawati & Kristiana (2020) showed that Return on Equity has a positive and significant effect on Price to Book Value, while research by Tanjung et al., (2022) found that Return on Equity does not affect Firm Value (PBV). All of the aforementioned previous studies used purposive sampling methods in determining the research sample.

The differing results of these studies indicate that there is still inconsistency in research findings regarding the factors that influence firm value. Therefore, further research on the effect of financial ratios on firm value is still necessary.

2. Literature Review

Signaling Theory

According to Handini & Astawinetu (2020), signaling theory explains that the rise and fall of prices in the market serves as a signal for investors, thereby influencing their investment decisions. A signal is an action taken by company management to provide information or guidance to investors regarding management's view of the company's future prospects (Brigham & Houston, 2019). According to Scott (2015), companies convey their quality and future performance prospects to the market through various policies, including decisions regarding funding structure, dividend distribution, and the application of accounting policies. One form of such a signal is evident in the decision to use debt.

Agency Theory

According to Scott (2015), agency theory explains that the relationship between company owners and managers can give rise to conflicts of interest because both parties have different objectives and there is information asymmetry a condition where information is not equally shared or balanced between the information possessed by managers and other parties, such as investors. According to Purba (2023), Agency Theory is a theory that explains the contractual relationship between company owners (principals) and management (agents) who are authorized to manage the company.

Price to Book Value (PBV)

Price to Book Value (PBV) is a ratio used as an indicator in assessing firm value through the comparison between stock price and book value per share (Raihanah & Hasanudin, 2022)

The higher the stock price, the higher the firm value (Tulenan, 2018). Price to Book Value (PBV) is often used by investors as one of the bases for investment decision-making because it can illustrate whether a company's stock is undervalued or overvalued.

$$PBV = \frac{\text{Harga Per Lembar Saham}}{\text{Nilai Buku Per Lembar saham}} \dots\dots\dots (i)$$

Return On Asset (ROA)

Return on Assets (ROA) is a ratio used to assess a company's ability to generate net profit by utilizing its total assets (Hasibuan et al., 2020). The higher the ROA value, the better the company's ability to generate profits. Return on Assets describes how effectively a company utilizes all its assets to obtain profits.

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \dots\dots\dots (ii)$$

Return On Equitu (ROE)

Return on Equity (ROE) is a ratio that shows the level of profit obtained by a company from its own capital. This ratio is used to assess the extent to which a company is able to utilize its resources to generate profits for shareholders through the equity invested (Handini & Astawinetu, 2020).

$$ROE = \frac{\text{Net Income}}{\text{Total Equity}} \dots\dots\dots (iii)$$

Debt to Equity Ratio (DER)

According to Fitriana (2024), Debt to Equity Ratio (DER) is a ratio used to assess the comparison between total debt and company equity. Debt to Equity Ratio (DER) is a ratio used to measure a company's leverage level (Akadiati et al., 2023). If the DER value is high, the company's risk level is also greater, which can reduce investor interest in investing capital..

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \dots\dots\dots (iv)$$

Net Profit Margin (NPM)

Net Profit Margin is a profitability ratio used to measure the percentage of net profit after tax to sales revenue. The higher the Net Profit Margin value, the better the company's operational performance (Ompusunggu & Wage, 2021). Investors generally use Net Profit Margin (NPM) as an indicator to assess the company's efficiency in managing revenue and expenses. A high NPM value is viewed favorably because it indicates that the company is able to control costs well and generate substantial profits from the revenue obtained (Putra et al., 2024). The higher a company's NPM, the more efficient its resource utilization and the greater the opportunity for increasing firm value in the eyes of investors.

$$NPM = \frac{\text{Net Profit After Tax}}{\text{Operating Revenue}} \dots\dots\dots (v)$$

3. Materials and Method

This research employs a quantitative approach with multiple linear regression analysis. The research population consists of all banking companies listed on the Indonesia Stock Exchange during the 2020-2024 period. The sampling technique used purposive sampling, resulting in 29 companies with a total of 145 observations. The data used are secondary data derived from the companies' annual financial reports published through the Indonesia Stock Exchange website. The dependent variable in this research is Price to Book Value (PBV), while the independent variables are financial performance proxied by Return on Assets (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), and Net Profit Margin (NPM).

Deskriptive Statistical Test

Descriptive statistics are used to provide an overview of the minimum, maximum, mean, and standard deviation values of each research variable. Table 1 shows the results of the descriptive statistical tests. The Return on Assets (ROA) variable, as an indicator of the company's ability to utilize assets to generate profits, has a mean value of 0.8536. This value indicates that, in general, banking companies in the research sample have a good level of ability to generate profits through their assets. The lowest ROA value of 0.73 was obtained by PT Bank Mayapada Internasional Tbk in 2023, while the highest value of 0.92 was achieved by PT Bank BTPN Syariah Tbk in 2022. This difference illustrates the variation in companies' ability to manage assets to obtain profits. In addition, the standard deviation of 0.03904 is

below the mean value, indicating that the ROA data distribution is relatively small and values between observations tend to be uniform.

Table 1. Descriptive Statistical Test Results.

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	145	0.73	0.92	0.8536	0.03904
ROE	145	0.00	0.55	0.0806	0.06895
DER	145	0.08	64.14	5.2998	5.70829
NPM	145	0.00	1.30	0.3412	0.24153
PBV	145	21.24	31.21	26.9543	1.92168
Valid N (listwise)	145				

Source: SPSS Processing Results, 2026.

The Return on Equity (ROE) variable, which reflects the company's ability to generate profits based on its own capital, shows a mean value of 0.0806. This indicates that companies in the research sample, on average, are able to provide a return on equity of 8.06%. The minimum value of 0.00 was found at PT Bank Mayapada Internasional Tbk in 2023, while the maximum value of 0.55 was obtained by PT Bank Multiarta Sentosa Tbk in 2024. This condition shows differences in the effectiveness of companies in utilizing their own capital to obtain profits. The standard deviation of 0.06895, which is lower than the mean value, indicates that the ROE data has a relatively low level of dispersion, so the data characteristics are fairly homogeneous.

For the Debt to Equity Ratio (DER) variable, the mean value obtained was 5.2998, indicating that the average company has total liabilities approximately 5.2998 times greater than its own capital. The lowest DER value of 0.08 was held by PT Krom Bank Indonesia Tbk in 2022, while the highest value of 64.14 was recorded by PT Bank Multiarta Sentosa Tbk in 2024. This difference in values shows that each company has a different funding structure in utilizing debt. The standard deviation of 5.70829 is higher than the mean value, meaning that the DER data variation is quite large and the data distribution is more diverse compared to other variables.

The Net Profit Margin (NPM) variable, used to describe the company's ability to generate net profit from revenue, has a mean value of 0.3412. This value indicates that, in general, companies are able to obtain net profit of 34.12% of total revenue generated. The minimum value of 0.00 was obtained by PT Bank Capital Indonesia Tbk in 2024, while the maximum value of 1.30 was achieved by the same company in 2020. These results show changes in the company's ability to generate net profit during the research period. The standard deviation of 0.24153 remains below the mean value, indicating that the NPM data has a relatively small level of dispersion and tends to be concentrated around its mean.

Furthermore, the Price to Book Value (PBV) variable used as a proxy for firm value has a mean value of 26.9543. This value illustrates that, in general, banking companies in the research received fairly high market valuations compared to their book values. The minimum PBV value of 21.24 was held by PT Bank Danamon Indonesia Tbk in 2021, while the maximum value of 31.21 was obtained by PT Bank Central Asia Tbk in 2024. This condition shows differences in the level of market appreciation for each company. The standard deviation of 1.92168, which is smaller than the mean value, indicates that the PBV data distribution is relatively low, so the variation in firm values between samples is not too large.

Classical Assumption Test

Normality Test

The normality test is used to determine whether the disturbance variables or residuals in the regression model are normally distributed or not. Normality interpretation can also be seen from the significance value: if the value is greater than 0.05, the data is declared normally distributed; if the value is less than 0.05, the data is declared not normally distributed.

Table 2. Normality Test Results.

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			145
Normal Parameters ^{a,b}	Mean		0.0000000
	Std. Deviation		1.45833271
Most	Extreme	Absolute	0.063
Differences		Positive	0.041

	Negative	-0.063
Kolmogorov-Smirnov Z		0.763
Asymp. Sig. (2-tailed)		0.605

Source: SPSS Processing Results, 2026.

Multicollinearity Test

The multicollinearity test is used to determine whether there is a relationship or correlation among independent variables in the regression model. A good regression model should not have correlations among independent variables. If the Tolerance value > 0.10 and the VIF value < 10 , the regression model can be declared free from multicollinearity.

Table 3. Multicollinearity Test Results.

		Coefficients ^a	
Model		Collinearity Statistics	
		Tolerance	VIF
1	ROA	0.287	3.486
	ROE	0.224	4.456
	DER	0.361	2.773
	NPM	0.529	1.890

Source: SPSS Processing Results, 2026

Based on Table 3 above, it is known that all independent variables have Tolerance values greater than 0.10 and VIF values less than 10. Thus, it can be concluded that there is no multicollinearity symptom.

Heteroscedasticity Test

The heteroscedasticity test is conducted to determine whether there is an inequality of residual variance between one observation and another in the regression model. A good regression model should not experience heteroscedasticity. The regression model is declared free from heteroscedasticity if the points are randomly scattered above and below the number 0 on the Y-axis without forming a specific pattern. Conversely, if the points form a regular pattern, it indicates the presence of heteroscedasticity

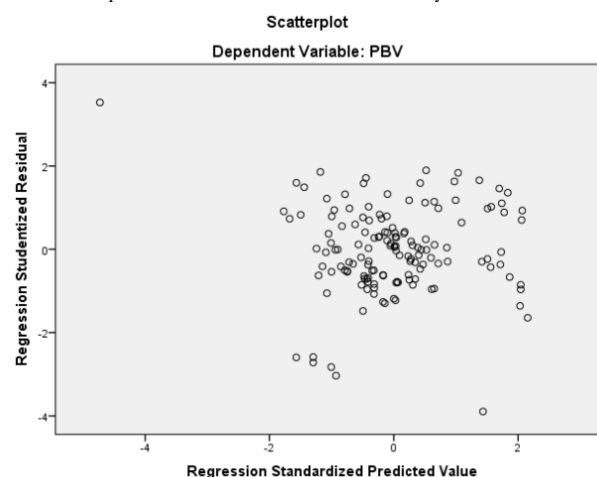


Figure 1. Heteroscedasticity Test Results.

Source: SPSS Processing Results, 2026

Based on the figure above, it can be seen that the points are randomly scattered and do not form a specific pattern on the scatterplot. This indicates that there is no heteroscedasticity symptom in the regression model, so the regression model is suitable for use in this research.

Autocorrelation Test

The autocorrelation test aims to determine whether there is a correlation between residuals in the current observation period (t) and residuals in the previous period ($t-1$) in the linear regression model. A good regression model is one that does not experience autocorrelation. The Durbin-Watson result is 0.817, $dU = 1.7856$, and $4-dU = 2.2144$,

showing that the DW result is between dU and 4-dU ($1.7856 > 0.817 < 2.2144$), concluding that there is autocorrelation symptom. The autocorrelation symptom in this research will be addressed using the Cochrane-Orcutt method. After conducting the autocorrelation test with the Cochrane-Orcutt method, the Durbin-Watson value obtained was 1.835, indicating that DW is between dU and 4-dU ($1.7856 < 1.835 < 2.2144$), which can be concluded that the data does not experience autocorrelation as it has met the criteria

Multiple Regression Analysis

Multiple regression analysis is used to determine the direction and magnitude of the influence of independent variables on the dependent variable, by examining whether changes in independent variables can have a positive or negative effect on the dependent variable.

Table 4. Multiple Regression Analysis Results.

		Coefficients ^a			t	Sig.
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	10.966	2.041		5.372	0.000
	ROA	0.124	6.016	0.003	0.021	0.984
	ROE	18.978	3.493	0.938	5.433	0.000
	DER	-0.157	0.031	-0.731	-5.031	0.000
	NPM	-1.692	0.573	-0.276	-2.951	0.004

Source: SPSS Processing Results, 2026.

Based on the regression test results in the table, the constant (a) value obtained is 10.966, which is the dependent variable (Y) value when all independent variables are zero. Thus, the multiple linear regression equation obtained is as follows:

$$PBV = 10.966 + 0.124 \text{ ROA} + 18.978 \text{ ROE} - 0.157 \text{ DER} - 1.692 \text{ NPM}$$

Based on the multiple linear regression analysis results, the constant value is 10.966. This value indicates that if the variables Return on Assets (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), and Net Profit Margin (NPM) are considered zero or constant, then Price to Book Value (PBV) is estimated at 10.966. Furthermore, the ROA variable has a regression coefficient of 0.124, meaning that each one-unit increase in ROA will increase PBV by 0.124, assuming other independent variables remain constant. The ROE variable has a regression coefficient of 18.978, indicating that each one-unit increase in ROE will increase PBV by 18.978, assuming other variables are constant. Meanwhile, the DER variable has a regression coefficient of -0.157, indicating that each one-unit increase in DER will decrease PBV by 0.157, assuming other independent variables remain constant. Similarly, the NPM variable has a regression coefficient of -1.692, indicating that each one-unit increase in NPM will cause PBV to decrease by 1.692, assuming other independent variables do not change.

Hypothesis Testing

Partial Test (t-test)

The partial test (t-test) aims to determine the influence of each independent variable on the dependent variable at a significance level of 5% ($\alpha = 0.05$). The hypothesis is accepted if the significance value < 0.05 and the t-count $>$ t-table, indicating that the independent variable has a significant effect on the dependent variable. Conversely, the hypothesis is rejected if the significance value > 0.05 and the t-count $<$ t-table, so the independent variable does not have a significant effect on the dependent variable. Based on the sample size of 145 with the formula $df = n - 2$, $df = 143$ is obtained, so the t-table value is 1.976.

Table 5. Partial Test Results (t-test).

		Coefficients ^a	
Model		t	Sig.
	(Constant)	5.372	0.000
	ROA	0.021	0.984
	ROE	5.433	0.000
	DER	-5.031	0.000
	NPM	-2.951	0.004

Source: SPSS Processing Results, 2026.

Based on the partial test results (t-test), it is known that the Return on Assets (ROA) variable has a t-count value of 0.021, smaller than the t-table of 1.976, with a significance value of 0.984 greater than 0.05. These results indicate that Return on Assets does not have a positive significant effect on Price to Book Value, so the first hypothesis in this research stating that Return on Assets has a positive effect on Price to Book Value is rejected.

The Return on Equity (ROE) variable obtained a t-count value of 5.433, greater than the t-table of 1.976, with a significance value of 0.000 less than 0.05. This indicates that Return on Equity has a positive and significant effect on Price to Book Value, so the second hypothesis in this research is accepted.

Furthermore, the Debt to Equity Ratio (DER) variable has a t-count value of -5.031 with an absolute t-count value (5.031) greater than the t-table (1.976) and a significance value of 0.000 less than 0.05, stating that Debt to Equity Ratio has a negative and significant effect on Price to Book Value.

The Net Profit Margin (NPM) variable obtained a t-count value of -2.951 with an absolute t-count value (2.951) greater than the t-table (1.976) and a significance value of 0.004 less than 0.05. It can be concluded that Net Profit Margin has a negative and significant effect on Price to Book Value.

Simultaneous Test (F-test)

The F-test is used to determine whether the independent variables simultaneously or together affect the dependent variable, with the number of independent variables being four variables. Based on the number of independent variables being 4 and the sample size of 145 with the formula $df1 = k$ and $df2 = n - k - 1$, $df1 = 4$ and $df2 = 140$ are obtained, so the F-table value is 2.44.

Table 6. Simultaneous Test Results (F-test).

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.010	4	17.003	13.502	0.000 ^b
	Residual	175.032	139	1.259		
	Total	243.042	143			

Source: SPSS Processing Results, 2026.

Based on the statistical test table, the F value obtained is 13.502. The F-count value of $13.502 > F\text{-table of } 2.44$, so it is concluded that the ROA, ROE, DER, and NPM variables simultaneously or together affect PBV.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) is used to determine the extent to which the regression model can explain the variation in the dependent variable.

Table 7. Coefficient of Determination Test Results.

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.529 ^a	0.280	0.259	1.12215

Source: SPSS Processing Results, 2026.

4. Discussion

The Effect of Return on Assets (ROA) on Price to Book Value (PBV)

The research results show that Return on Assets (ROA) does not have a significant effect on Price to Book Value (PBV) in banking companies listed on the Indonesia Stock Exchange during the 2020-2024 period. This indicates that the company's ability to generate profits through assets has not been a primary consideration for investors in assessing the company. Although several companies, such as PT Bank BTPN Syariah Tbk, PT Bank Central Asia Tbk, PT Allo Bank Indonesia Tbk, PT Bank Mestika Dharma Tbk, and PT Bank Mega Tbk, have high average ROA values, this condition is not always followed by high PBV values. Investors also consider growth prospects, asset quality, risk levels, and banking industry conditions.

The results of this research are in line with research by S. A. Kurniawan & Elfahmi (2025), Nurapiah & Qosim (2020), and Tanjung et al. (2022), which stated that ROA does not have a significant effect on PBV. In contrast, these results differ from research by Febbilia

et al. (2024), Anggraini & Lestariningsih (2023), D. Kurniawan & Pardistya (2024) and Mutiara et al. (2024). These differences are suspected to be influenced by differences in research periods, sample characteristics, and economic conditions that affect investor responses to company profitability.

The findings of this research strengthen signaling theory, which states that information regarding company profitability serves as a signal for investors. However, in banking companies, the signal provided by ROA is not strong enough to increase firm value because investors tend to consider other information that better reflects the company's future prospects. In addition, these research results also support agency theory, which explains that management not only focuses on increasing profits through assets but also on risk management, regulatory compliance, and operational stability.

This research shows that in the banking sector, ROA has not become the main indicator in increasing firm value. Investors tend to consider growth prospects, asset quality, and risk levels more than the company's ability to generate profits from its assets.

The Effect of Return on Equity (ROE) on Price to Book Value (PBV)

The research results show that Return on Equity (ROE) has a positive and significant effect on Price to Book Value (PBV) in banking companies listed on the Indonesia Stock Exchange during the 2020–2024 period. These results indicate that the higher the company's ability to generate profits from its own capital, the higher the investor confidence, thereby increasing firm value. Companies such as PT Bank Mega Tbk, PT Bank Central Asia Tbk, PT Bank Multiarta Sentosa Tbk, PT Bank Mandiri (Persero) Tbk, and PT Bank BTPN Syariah Tbk have high average ROE values, reflecting the effectiveness of companies in managing capital to generate profits.

The results of this research are in line with research by Febbiliana et al. (2024), Listyawati & Kristiana (2020), and D. Kurniawan & Pardistya (2024) which stated that ROE has a significant effect on firm value. However, these results differ from Nurapiah & Qosim (2020), and Tanjung et al. (2022), which found that ROE does not have a significant effect on PBV. These differences are suspected to be influenced by differences in research periods, sample characteristics, and banking industry conditions in each study.

Based on signaling theory, a high ROE provides a positive signal to investors that the company is able to manage capital effectively to generate profits. This information increases investor confidence in the company's prospects, thereby encouraging share demand and impacting the increase in Price to Book Value (PBV). Meanwhile, based on agency theory, a high ROE reflects management's success in optimizing the capital entrusted by shareholders to generate profits. This condition can reduce conflicts of interest between management and shareholders because the company's performance is able to meet investor expectations.

The findings of this research indicate that ROE is one of the indicators that receives attention from investors in assessing banking companies. The company's ability to generate profits from its own capital provides a positive signal regarding company performance, thereby increasing investor confidence and impacting the increase in firm value.

The Effect of Debt to Equity Ratio (DER) on Price to Book Value (PBV)

The research results show that Debt to Equity Ratio (DER) has a negative and significant effect on Price to Book Value (PBV) in banking companies listed on the Indonesia Stock Exchange during the 2020–2024 period. These results indicate that the higher the company's debt level compared to its own capital, the lower the firm value. Based on research data, companies with the highest average DER are PT Bank Multiarta Sentosa Tbk, PT Bank Tabungan Negara (Persero) Tbk, PT Bank Nationalnobu Tbk, PT Bank Capital Indonesia Tbk, and PT Bank Negara Indonesia (Persero) Tbk. The high DER in these companies is not always followed by high PBV, indicating that investors tend to view high debt usage as a risk, thereby reducing firm value.

The results of this research are in line with research by Dewi & Sembiring (2022) and Listyawati & Kristiana (2020), which stated that DER has a negative and significant effect on PBV. However, these results differ from Mutiara et al. (2024) and Nurapiah & Qosim (2020), which found that DER does not have a significant effect on PBV. These differences are suspected to be influenced by differences in research periods, sample characteristics, and economic conditions that affect company funding decisions.

Based on signaling theory, a high DER provides a negative signal to investors because it shows the company's high dependence on debt financing, which can increase financial risk. Meanwhile, based on agency theory, high debt usage has the potential to create conflicts of interest between management and shareholders because funding decisions taken can increase

company risk. The findings of this research indicate that high debt levels serve as a negative signal for investors because they increase the company's financial risk. Therefore, a funding structure dominated by debt tends to reduce investor confidence, thereby impacting the decrease in firm value proxied by Price to Book Value (PBV).

The Effect of Net Profit Margin (NPM) on Price to Book Value (PBV)

The research results show that Net Profit Margin (NPM) has a negative and significant effect on Price to Book Value (PBV) in banking companies listed on the Indonesia Stock Exchange during the 2020–2024 period. These results indicate that an increase in NPM is actually followed by a decrease in firm value. Based on research data, companies with the highest average NPM are PT Bank Danamon Indonesia Tbk, PT Allo Bank Indonesia Tbk, PT Bank BTPN Syariah Tbk, PT Bank Central Asia Tbk, and PT Bank BTPN Tbk. Although these companies have high NPM, they do not always have high PBV. This indicates that investors do not only consider the amount of net profit but also pay attention to growth prospects, asset quality, and the sustainability of company performance.

The results of this research are in line with research by Anggraini & Lestariningsih (2023) and Oktafiyani & Rolanda (2025), which stated that NPM has a significant effect on PBV. However, these results differ from research by D. Kurniawan & Pardistya (2024) and Rahmawati & Simamora (2021), which stated that NPM does not have a significant effect on firm value. These differences are suspected to be influenced by differences in research periods, sample characteristics, and industry conditions that affect investor responses to the company's profitability level.

Based on signaling theory, a high NPM should provide a positive signal to investors because it reflects the company's ability to generate net profit. However, in banking companies, this signal is not necessarily positively responded to by the market because investors also consider income stability, business risk, asset quality, and the company's growth prospects. Meanwhile, based on agency theory, management may strive to increase short-term profits to demonstrate good performance to shareholders. However, investors may assess that such profit increases do not necessarily reflect the company's sustainable fundamental condition, thus not always increasing firm value.

This research shows that in banking companies, a high Net Profit Margin does not necessarily increase firm value. Investors tend to consider growth prospects, performance stability, and company risk more than the amount of net profit generated, so an increase in NPM can be negatively responded to by the market and impact a decrease in Price to Book Value (PBV).

The Effect of Return on Assets, Return on Equity, Debt to Equity Ratio, and Net Profit Margin on Price to Book Value (PBV)

The research results show that Return on Assets (ROA), Return on Equity (ROE), Debt to Equity Ratio (DER), and Net Profit Margin (NPM) simultaneously have a significant effect on Price to Book Value (PBV) in banking companies listed on the Indonesia Stock Exchange during the 2020–2024 period. These results indicate that the combination of profitability ratios and capital structure is able to influence firm value. Thus, investors do not only consider one financial ratio but evaluate the company's overall financial condition before making investment decisions.

The results of this research are in line with research conducted by Sondakh et al. (2019), Dewi & Sembiring (2022), Nurapiah & Qosim (2020), and D. Kurniawan & Pardistya (2024), which stated that profitability and capital structure variables together have a significant effect on Price to Book Value (PBV). The similarity of these results indicates that firm value is influenced by a combination of various financial indicators that reflect the company's overall performance and condition.

Based on signaling theory, the information reflected in ROA, ROE, DER, and NPM provides signals to investors regarding the company's future prospects. The better the company's financial performance, the more positive the investor response to the company, thereby increasing firm value. Meanwhile, agency theory explains that reliable and transparent financial reports are able to reduce information asymmetry between management and investors. This information helps investors assess management's effectiveness in managing assets, capital, debt, and company profits.

This research shows that firm value in the banking sector is not determined by a single financial ratio alone but is influenced by a combination of profitability and capital structure. Therefore, investors tend to use various financial indicators simultaneously to assess company

performance and determine investment decisions that ultimately affect Price to Book Value (PBV).

5. Conclusion

Based on the research results, Return on Assets (ROA) does not have a significant effect on Price to Book Value (PBV). Conversely, Return on Equity (ROE) has a positive and significant effect on PBV, while Debt to Equity Ratio (DER) and Net Profit Margin (NPM) show a significant negative effect on PBV. Simultaneously, it is proven that financial performance proxied by ROA, ROE, DER, and NPM has a significant effect on PBV in banking companies listed on the Indonesia Stock Exchange during the 2020-2024 observation period.

The results of this research provide several implications for both banking management and investors. For banking management, the finding that ROE has a positive and significant effect on Price to Book Value (PBV) indicates the importance of efforts to improve efficiency in the use of equity to generate profits. Optimal capital management strategies can increase market confidence and strengthen firm value. Conversely, the significant negative effect of DER and NPM on PBV indicates that high leverage levels and large profit margins are not always perceived positively by investors. Therefore, management needs to maintain a healthy capital structure and balance profitability with financial risk.

For investors, the results of this research confirm that the assessment of banking companies should not only focus on a single financial ratio but should consider a combination of financial performance indicators. ROE can be used as one of the main references in assessing a company's prospects, while DER and NPM need to be considered as risk factors that can suppress firm value. Thus, investment decisions will be more rational and based on a comprehensive understanding of the banking financial condition.

This research contributes to the development of signaling theory and agency theory in the Indonesian banking context. The finding that Return on Equity (ROE) has a positive and significant effect on Price to Book Value (PBV) supports signaling theory, where profits generated from equity become an important indicator sent by the company to investors as a positive signal regarding the company's prospects. Conversely, the significant negative effect of Debt to Equity Ratio (DER) and Net Profit Margin (NPM) on PBV indicates agency dynamics, where management decisions related to capital structure and profitability strategies can create conflicts of interest between managers and shareholders, thus being perceived as risk by the market.

In addition, the results of this research confirm that investors do not only respond to a single financial ratio but to a combination of indicators that reflect the balance between profitability and financial risk. This enriches the literature on the application of signaling and agency theories by emphasizing the importance of multidimensional analysis in assessing firm value. Thus, this research can serve as a reference for future studies that wish to test the consistency of the application of both theories in the banking sector and other financial sectors.

Future researchers can add other variables beyond financial ratios, such as interest rates, inflation, exchange rates, and macroeconomic factors that have the potential to affect banking Price to Book Value (PBV). In addition, non-financial aspects such as the implementation of Good Corporate Governance (GCG), Environmental, Social, and Governance (ESG), and the level of banking service digitalization can also be considered to provide a more comprehensive picture. Future research can also expand the object of study by comparing other financial sectors, such as multifinance or fintech companies, so that the results are more generalizable. From a methodological perspective, the use of panel data approaches, structural equation modeling (SEM), or machine learning-based analysis can provide stronger analytical depth. Future researchers may also conduct comparative studies across countries, particularly in the ASEAN region, to enrich the perspective on how financial variables and capital structure affect PBV in different contexts.

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