

Price to Book Value as a Moderator of Profitability Signals and Stock Prices: Evidence from Indonesia's Industrial Sector

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Abstract

To capture what genuinely steers stock values, this study dives into how ROA and ROE shape share prices in the industrial market, while tracking how Price-to-Book Value (PBV) moderates these connections. The scope centers on companies within the IDXINDUST Index on the Indonesia Stock Exchange over the 2022–2024 timeframe. Employing an explanatory quantitative method, the project draws on secondary data from a purposive sample of 42 firms, resulting in 126 panel data points. Data computation relied on panel regression models and MRA executed via EViews 13. Interestingly, the statistical output indicates that ROA plays no real role in shifting stock prices, whereas ROE shows a clear upward influence. PBV also emerged as a significant moderating force it tones down the impact of ROA but strongly reinforces the positive ties between ROE and stock values. These dynamics clearly demonstrate that modern investors do not evaluate profitability in a vacuum; instead, they integrate market valuation deeply into their investment choices.

Keywords; *Moderated Regression Analysis; Price to Book Value (PBV); Return on Asset (ROA); Stock Price*

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1. Introduction

Past academic literature has yielded highly inconsistent and fragmented conclusions regarding the true extent to which a company's profitability drives its equity performance. A prominent example is the study by Carrillo-Labelle et al., (2026), which demonstrated that the impact of core profitability metrics, specifically Return on Assets (ROA) and Return on Equity (ROE), on stock prices remains fundamentally inconclusive. Empirical records are heavily divided, with prior researchers documenting a chaotic mix of positive, negative, and entirely negligible relationships (Handayani & Rahyuda, 2025). Although certain scholars, like Yurfani & Hermanto (2023) managed to prove that Price-to-Book Value (PBV) can amplify the connection between corporate earnings and market

prices, their analytical scope was strictly limited to real estate and property firms.

Consequently, this narrow focus exposes a critical, unaddressed research gap: current literature fails to explain how market valuation multiples interact with internal accounting profitability during phases of severe macroeconomic distress, particularly within highly capital-intensive sectors (Sitorus et al., 2023). Historically, empirical studies have evaluated profitability metrics in an absolute vacuum. This isolated approach systematically ignores how shifting market sentiment and fluctuating valuation premiums can alter or distort the signaling strength of corporate earnings during volatile economic cycles (Handayani & Rahyuda, 2025).

To fill this evident empirical void, the current study centers its analysis on the industrial sector (IDXINDUST) listed on the Indonesia Stock Exchange. Selecting the IDXINDUST sector is a highly strategic decision. As the backbone of domestic manufacturing and a primary catalyst for national economic growth, this specific sector was heavily battered by intense operational headwinds throughout the 2022–2024 cycle (Huo & Wang, 2026). During this turbulent period, companies had to withstand punishing inflationary pressures, aggressive BI rate hikes, and sharp rupiah exchange rate fluctuations, all of which heavily distorted core production costs and squeezed baseline profit margins (Kurniawan, 2024). Therefore, scrutinizing this sector under such conditions provides an ideal, real-world testing ground. It allows us to evaluate whether market investors still place premium value on asset and equity efficiency when corporations are actively navigating dense macroeconomic uncertainty (Mustaqim, 2023).

From a theoretical standpoint, this study extends the utility of signaling theory. It achieves this by redefining how macroeconomic constraints and market valuation ratios (PBV) operate as contextual filters that either amplify or dampen the transmission of internal financial signals to the broader public market (Jamaluddin et al., 2021). On a practical level, this research establishes a vital, data-driven decision-making framework for multiple stakeholders. For institutional and individual investors, it offers clear empirical guidance on whether to prioritize raw accounting profit metrics or premium market valuations when building equity portfolios under restrictive monetary regimes (Handayani & Rahyuda, 2025). Simultaneously, for corporate executives and regulatory bodies, these insights shed light on how public sentiment values capital deployment (Sitorus et al., 2023). This knowledge can directly help firms optimize their financial disclosures to stabilize stock prices, while equipping market authorities with the necessary data to monitor industrial sector resilience

during external economic shocks (Novita et al., 2022).

Types of research

This empirical inquiry adopts a quantitative research design integrated with an explanatory analytical approach. The choice of a quantitative framework is fundamentally dictated by the study's objective to examine and evaluate structural relationships and predictive influences among numerical variables through standardized statistical methodology. Furthermore, an explanatory research design is deployed to systematically delineate the causal pathways running from the independent parameters, specifically Return on Assets (ROA) and Return on Equity (ROE), toward the dependent outcome of stock market prices. Within this causal network, Price-to-Book Value (PBV) is positioned as a contextual moderating element. By operationalizing this specific methodological framework, this study aims to secure robust empirical evidence regarding how internal corporate profitability maps onto the equity valuations of firms listed under the IDX index on the Indonesia Stock Exchange (IDX).

Population and Research Sample

The empirical population established for this investigation comprises all corporate entities categorized under the IDX-IC IDXINDUST index and actively traded on the Indonesia Stock Exchange (IDX) throughout the 2022–2024 fiscal window. Companies within this specific industrial index were selected because they exhibit highly standardized stock characteristics, characterized by robust trading liquidity and substantial market capitalization, thereby offering a highly representative and relevant reflection of capital market dynamics for contemporary investors.

To extract a rigorous analytical sample from this baseline population, a purposive sampling approach was employed, enforcing specific, predetermined parameters to ensure the final cohort closely aligns with the underlying research core. The explicit qualification and exclusion criteria are defined as follows: corporations must maintain an active listing status within the industrial index (IDXINDUST) on the IDX during the 2022–2024 period; companies must demonstrate consistent and uninterrupted inclusion within the index across the studied years; entities are required to publish fully audited and comprehensive annual financial reports for the entire 2022–2024 cycle; firms must possess complete, continuous data streams for all targeted variables, specifically ROA, ROE, PBV, and stock quotes; and corporations must not have faced any delisting procedures initiated by the exchange authorities during the observation timeline.

Table 1. Sample Selection

<i>Criteria</i>	<i>Total</i>
Companies listed in the IDXINDUST index	67
Companies that do not possess complete financial statements	3
Companies that do not meet the research criteria	22
Total Research Sample	42

Operationalization of Variables and Metric Formulas

To facilitate empirical replication and structural clarity, the exact definitions and mathematical formulas applied to measure each targeted corporate metric are operationalized below:

Independent Parameters (X):

Return on Assets (X_1): An internal accounting metric assessing a corporation's capacity to convert its aggregate asset deployment into operational profitability. It is formalized as:

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Return on Equity (X_2): A fundamental efficiency ratio evaluating the net economic return generated relative to the capital contributed by equity shareholders. It is formalized as:

$$ROE = \frac{Net\ Income}{Total\ Equity}$$

Moderating Parameter (Z):

Price-to-Book Value (Z): A market-centric valuation multiple comparing the current open-market equity price against the baseline accounting net worth of the corporation. It is formalized as:

$$PBV = \frac{Stock\ Price\ per\ Share}{Book\ Value\ per\ Share}$$

Where the underlying Book Value per Share is computed via the following equation:

$$Book\ Value\ per\ Share = \frac{Total\ Equity}{Total\ Shares\ Outstanding}$$

Dependent Parameter (Y):

Stock Price (Y): The primary market-driven dependent outcome representing public valuation. This variable is captured using the standardized fiscal closing price recorded on the final trading day of each

year (December 31) throughout the 2022–2024 cycle.

Stock Price = Closing Market Price as of December 31

Statistical Framework and Moderated Regression Analysis (MRA)

The assembled balanced data panel was statistically analyzed via panel data regression procedures utilizing EViews 13 software. To accurately capture both the baseline direct relationships and the multiplicative impact of the market valuation multiple, the data was mapped against a formal Moderated Regression Analysis (MRA) framework. The mathematical expressions governing this analysis are organized into two distinct models:

Model 1 (Baseline Direct Effect Equation):

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 Z_{it} + \epsilon_{it}$$

Model 2 (Comprehensive Moderated Interaction Equation):

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 Z_{it} + \beta_4 (X_{1it} \times Z_{it}) + \beta_5 (X_{2it} \times Z_{it}) + \epsilon_{it}$$

2. Results and Discussion

Descriptive Statistical Analysis

Descriptive statistical analysis is employed to provide a comprehensive overview and systematic breakdown of the fundamental characteristics of the research data

Table 2. Descriptive Statistics Results

	<i>Y</i>	<i>C</i>	<i>X1</i>	<i>X2</i>	<i>X1Z</i>	<i>X2Z</i>
Mean	5.342381	1.000000	0.025397	0.038730	0.027778	55.16071
Median	5.410000	1.000000	0.020000	0.040000	0.010000	2.570000
Maximum	8.680000	1.000000	0.350000	0.320000	0.900000	1994.430
Minimum	0.010000	1.000000	-	-	-	-
			0.180000	0.300000	1.870000	2295.260
Std. Dev.	1.536015	0.000000	0.071135	0.114773	0.233467	328.5247
Skewness	-	NA	0.577852	-	-	-
	0.154932			0.436188	3.766373	0.571602
Kurtosis	3.524656	NA	6.356927	3.784801	37.99519	32.97703
Jarque-Bera	1.949217	NA	66.17422	7.229007	6727.381	4724.628
Probability	0.377340	NA	0.000000	0.026930	0.000000	0.000000
Sum	673.1400	126.0000	3.200000	4.880000	3.500000	6950.250
Sum Sq. Dev.	294.9177	0.000000	0.632530	1.646597	6.813378	13491056
Observations	126	126	126	126	126	126

Source: Output EViews 13

To break down the core properties of the research data across 126 panel observations, the study utilizes descriptive statistics to capture the mean, minimum and maximum ranges, standard deviation, and general distribution patterns of each variable. This specific dataset spans Stock Price (Y), Return on Assets (ROA/ X_1), Return on Equity (ROE/ X_2), as well as their combined interaction terms with Price-to-Book Value, namely ROA $\times$ PBV (X_1Z) and ROE $\times$ PBV (X_2Z).

The dependent variable, Stock Price (Y), ranges from a minimum of 0.01 to a maximum of 8.68, with a calculated average of 5.34. Given its standard deviation of 1.54, the variance remains relatively tight around the mean, pointing to a highly uniform data distribution. Furthermore, the Jarque–Bera probability value for the stock price exceeds the 5% significance threshold, confirming that it follows a normal distribution.

In contrast, the explanatory profitability metrics paint a different picture regarding distribution normality. The ROA variable exhibits a mean of 0.025 (ranging from -0.18 to 0.35) alongside a narrow standard deviation of 0.071, which suggests limited dispersion among the observations. Similarly, the ROE variable ranges between -0.30 and 0.32, yielding an average of 0.039 and a relatively low standard deviation of 0.115. Despite their low volatility, both ROA and ROE fail the normality assumption, as their Jarque–Bera probability values fall strictly below the 5% significance level.

A look at the interaction terms reveals a stark divergence in data behavior. The first interaction variable, ROA $\times$ PBV (X_1Z), records an average value of 0.028, spanning from a minimum of -1.87 to a maximum of 0.90; its standard deviation of 0.233 suggests a moderately wide dispersion around the mean. On the other hand, the ROE $\times$ PBV (X_2Z) interaction term displays massive volatility, with values swinging aggressively from -2295.26 to 1994.43, resulting in a mean of 55.16 and a substantial standard deviation of 328.52. This massive spread indicates deep diversity within the sample. Structurally, the negative skewness reveals a slight lean to the left, while the high kurtosis points to a leptokurtic (fat-tailed) distribution. Unsurprisingly, Jarque–Bera tests confirm that neither interaction variable satisfies the standard normality criteria.

Ultimately, these descriptive metrics show that only the Stock Price (Y) variable is normally distributed on its own, whereas ROA, ROE, and both interaction terms exhibit non-normal distributions. Crucially, this non-normality does not compromise the validity of the panel data regression model. In regression frameworks, the normality assumption targets the distribution of the model's residuals rather than the standalone variables.

Because the subsequent residual diagnostic tests confirm that the error terms are normally distributed, the estimated regression model remains robust and entirely appropriate for formal inferential analysis (Dogan et al., 2026).

Chow Test

Chow test digunakan untuk menentukan model estimasi terbaik antara Common Effect Model (CEM) dan Fixed Effect Model (FEM) dengan mengevaluasi nilai probabilitas F-statistic.

Table 3. Chow Test

<i>Effects Test</i>	<i>Statistic</i>	<i>d.f.</i>	<i>Prob.</i>
Cross-section F	11.654684	(41.80)	0.0000
Cross-section Chi-square	244.698204	41	0.0000

Source: Output EViews 13

Following the initial model selection, a Hausman test (correlated random effects test) was executed to decide between the remaining panel frameworks. Output from the test revealed a Chi-Square statistic of 8.563748 with an observed probability value of 0.0730. Since this resulting p-value clears the typical 5% significance benchmark, we lack the statistical ground to reject the null hypothesis (H_0). Consequently, the alternative hypothesis (H_1) is cast aside, establishing that the Random Effect Model (REM) serves as a more suitable analytical tool for these data points than the Fixed Effect Model (FEM).

Hausman Test

The Hausman test compares the Fixed Effect Model (FEM) against the Random Effect Model (REM) by evaluating whether the divergence in coefficient estimates between the two frameworks is statistically significant.

Table 4. Hausman Test

<i>Test Summary</i>	<i>Chi-Sq. Statistic</i>	<i>Chi-Sq. d.f.</i>	<i>Prob.</i>
Cross-section random	8.563748	4	0.0730

(source: Output EViews 13)

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Lagrange Multiplier (LM) Test

The Lagrange multiplier test is used to determine whether the Common Effect Model or the Random Effect Model is more appropriate. This test is conducted to determine whether the random effect model is better than the common effect model.

Table 5. Lagrange Multiplier (LM) Test

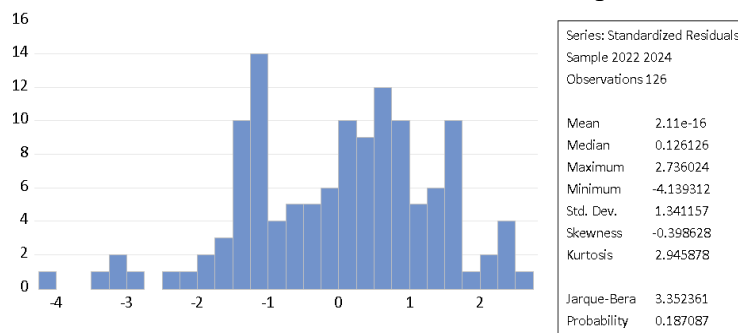
	<i>Cross-section</i>	<i>Test Hypothesis Time</i>	<i>Both</i>
Breusch-Pagan	65.99425	0.974656	66.96890
	(0.0000)	(0.3235)	(0.0000)

Source: Output EViews 13

The Cross-section Breusch-Pagan statistic is 65.99425 with a probability value of 0.0000 based on the Lagrange Multiplier (LM) Test using the Breusch-Pagan technique. Given that the observed p-value falls strictly short of the 5% alpha level ($0.0000 < 0.05$), we reject the null hypothesis (H_0) in favor of the alternative hypothesis (H_1). Consequently, the Random Effect Model (REM) is preferred over the Common Effect Model (CEM) as the more suitable analytical framework for this study (Ghozali, 2021).

Residual Normality Test

Prior to executing the formal hypothesis testing, it is methodologically imperative to conduct a normality test to ensure that the residual distribution of the econometric model adheres to standard classical assumptions.



Source: Output EViews 13

Figure 1. Residual Normality Test

To ensure the integrity of the regression model, a Jarque-Bera normality test was applied to the residuals. The test yielded a Jarque-Bera statistic of 3.352361 with an associated probability value of 0.187087. Since this p-value comfortably exceeds the standard 5% significance threshold, the null hypothesis (H_0) is accepted, confirming that the regression residuals follow a normal distribution.

This statistical conclusion is strongly supported by the shape of the residual distribution. The skewness value of -0.398628 indicates a slight, minor negative skew, suggesting a highly symmetric distribution. Furthermore, the kurtosis value of 2.945878 is remarkably close to the theoretical benchmark of 3 for a perfectly normal distribution. Visually, the residual histogram exhibits a classic, well-defined bell-shaped curve, further validating these metrics. According to (Handayania et al., 2022) a Jarque–Bera probability value greater than 0.05 verifies that the error terms are normally distributed. Consequently, the regression framework satisfies the critical assumption of normality, making it fully robust for subsequent inferential analysis.

Hypothesis Testing

T-Test

The partial t-test is employed to isolate and assess the unique predictive power of each independent variable on the dependent outcome. This statistical test verifies whether individual explanatory indicators exert a distinct, statistically significant influence within the overall regression framework.

Table 6. T-test Results

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	5.108369	0.193667	26.37709	0.0000
X1	1.608722	1.687880	0.953102	0.3424
X2	3.795780	1.147851	3.306858	0.0012
X1Z	-5.808979	0.668546	-8.688971	0.0000
X2Z	0.003762	0.000425	8.859182	0.0000

Source: Output EViews 13

Based on the partial t-test results, Return on Assets (ROA) does not appear to be a driving factor for stock prices within the IDXINDUST sector during the 2022–2024 period. The variable returned a probability value of 0.3424, which fails to reach the 5% significance threshold. Consequently, the null hypothesis (H_0) is accepted; despite yielding a positive regression coefficient of 1.608722, this upward trend lacks the statistical weight to meaningfully impact stock valuations. Conversely, Return on Equity (ROE) demonstrates a highly pronounced influence on equity prices. With a p-value of 0.0012 falling well below the 0.05 alpha level, the null hypothesis (H_0) is rejected. Its positive coefficient of 3.795780 confirms that stronger equity returns directly spark a significant lift in share prices.

When looking at the interaction terms, Price-to-Book Value (PBV) emerges as a vital moderating force. For the first interaction, ROA×PBV (X_1Z), the test yielded a probability value of 0.0000. This indicates that PBV

heavily moderates the relationship, though its negative coefficient of -5.808979 reveals a dampening effect, meaning higher market valuation actually weakens the direct impact of ROA on stock prices. On the flip side, the ROE×PBV (X_2Z) interaction also posted a significant p-value of 0.0000, but with a contrasting positive coefficient of 0.003762. This statistical outcome proves that PBV acts as an amplifier, further strengthening the positive momentum that ROE exerts on stock values.

F-Test

The simultaneous F-test is utilized to evaluate whether the entire set of independent variables collectively drives variations in the dependent outcome. This statistical procedure essentially measures the overall goodness of fit, confirming the model's capacity to explain the structural relationships within the empirical dataset.

Table 7. F Test	
<i>Statistic</i>	<i>Value</i>
F-statistic	21.41017
Prob(F-statistic)	0.000000

Source: Output EViews 13

Output from the joint significance test reveals a substantial combined impact, yielding an F-statistic of 21.41017 alongside a probability value of 0.000000. Given that this p-value falls strictly below the 5% alpha level, we reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1). This dynamic proves that ROA, ROE, and their paired interaction blocks with PBV (ROA×PBV and ROE×PBV) jointly drive the stock price movements of IDXINDUST companies on the Indonesia Stock Exchange between 2022 and 2024. These statistical measures conclusively demonstrate that the applied regression model is robust and well-equipped to capture how independent variables dictate corporate equity values.

Coefficient of Determination Test (R^2)

The coefficient of determination (R^2) quantifies the proportion of variance in the dependent variable explained by the independent predictors. A higher R^2 value signifies a more robust model fit with greater overall explanatory power.

Table 8. Coefficient of Determination Test (R^2)	
<i>Statistic</i>	<i>Value</i>
R-squared	0.414443
Adjusted R-squared	0.395085

Source: Output EViews 13

The estimation results yield an R-squared value of 0.414443, indicating that approximately 41.44% of the volatility in stock prices can be explained by the collective movements of ROA, ROE, and their interaction terms with PBV. The remaining 58.56% of the variance is driven by external factors not captured within the scope of this model. When adjusting for the number of independent variables, the adjusted R-squared value stands at 0.395085, proving that the framework still robustly explains 39.51% of the share price fluctuations. As noted by Widarjono (2018), the coefficient of determination serves as a critical gauge to measure just how much of the dependent variable's shifts can be mathematically traced back to the explanatory variables in a regression model.

Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) is utilized to evaluate whether Price-to-Book Value (PBV) acts as a significant moderating filter that alters the predictive influence of ROA and ROE on equity prices, either by amplifying or dampening it.

Table 9. Moderated Regression Analysis (MRA)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	5.108369	0.193667	26.37709	0.0000
X1	1.608722	1.687880	0.953102	0.3424
X2	3.795780	1.147851	3.306858	0.0012
X1Z	-5.808979	0.668546	-8.688971	0.0000
X2Z	0.003762	0.000425	8.859182	0.0000

Source: Output EViews 13

Based on the Moderated Regression Analysis (MRA) utilizing the Random Effect Model (REM) approach, Return on Assets (ROA) is clearly not a dominant driver behind stock price movements. This is supported by its observed probability value of 0.3424, which falls short of the required 5% significance level. Consequently, we accept the null hypothesis (H_0), establishing that shifts in ROA do not lead to any noticeable variation in stock values. On the other hand, Return on Equity (ROE) displays a remarkably strong grip on equity pricing. Since its p-value of 0.0012 sits well below the 0.05 margin, the null hypothesis (H_0) is successfully rejected. Coupled with a positive regression coefficient of 3.795780, these findings demonstrate that maximizing returns on shareholder equity directly fuels a substantial increase in stock prices.

When looking at the interaction terms, Price-to-Book Value (PBV) proves to be a vital moderating force, though it acts differently on each profitability metric. For the first interaction, ROA×PBV (X_1Z), the analysis yielded a significant probability value of 0.0000. However, its negative

coefficient of -5.808979 reveals a dampening effect; in other words, a higher market valuation tends to weaken or override the direct influence of ROA on stock prices. Conversely, the ROE×PBV (X_2Z) interaction also posted a significant p-value of 0.0000, but with a positive coefficient of 0.003762. This statistical outcome proves that PBV acts as an amplifier, where higher market valuation further strengthens the positive momentum that ROE exerts on stock values.

Ultimately, these empirical findings confirm that PBV functions successfully as a moderating variable within the profitability-stock price dynamic. This aligns with the methodological framework outlined by (Handayania et al., 2022) which states that a moderator is deemed effective when its interaction term achieves statistical significance. Furthermore, as noted, the integration of these multiplicative interaction terms within an MRA framework is the definitive way to capture how a third variable alters the baseline relationship between independent and dependent variables.

The Effect of Return on Assets (ROA) on Stock Prices Analysis of Return on Assets (ROA) on Stock Prices

Empirical findings indicate that ROA failed to significantly drive stock prices for companies within the IDXINDUST Index during the 2022–2024 period. This suggests that market participants do not solely rely on asset efficiency when pricing equities. Instead, investors typically weigh a broader spectrum of catalysts, including macroeconomic indicators, sector-specific growth potential, risk profiles, and shifting market sentiment before determining a stock's worth (Pangestu & Wijayanto, 2020).

From the perspective of signaling theory, while profitability metrics are designed to flag a firm's future financial health, this information is rarely absorbed in a vacuum. In the industrial sector, investors heavily scrutinize long-term viability and external headwinds, which often delays how quickly ROA trends are reflected in share prices (Ashari, 2025). Between 2022 and 2024, industrial firms grappled with aggressive interest rate hikes, inflationary pressures, and global economic volatility, making the market far less responsive to baseline ROA data (Oktaviani et al., 2024).

The outcome aligns with Chen et al., (2025), who observed that ROA-driven profitability does not automatically translate into immediate stock price movements. Conversely, it diverges from (Tahtamoni et al., 2025) who identified a direct positive link between profitability and investor confidence. Such contradictions ultimately underscore that the true impact of ROA is highly contingent on prevailing economic conditions and unique industry dynamics.

The Effect of Return on Equity (ROE) on Stock Prices

The empirical results indicate that ROE exerts a highly significant impact on stock prices. This finding demonstrates that market participants view a company's ability to generate returns from shareholders' capital as a cornerstone of its financial success. When equity returns rise, they inherently boost investor confidence regarding the firm's growth potential, which subsequently fuels buying demand and drives share prices upward (Puspitasari et al., 2025).

This outcome is consistent with signaling theory, which states that a company's excellent financial success tells investors about its potential for future expansion. One of the most important metrics in making investment decisions is ROE, which shows how well management uses shareholders' money to produce profits.

This mechanism strongly aligns with signaling theory, which posits that superior financial performance serves as a positive market signal about a company's future trajectory. Within this framework, ROE acts as a critical benchmark for investment choices, directly reflecting management's efficiency in deploying equity to maximize profits (Dogan et al., 2026). Furthermore, these findings reinforce the conclusions of Leonardo et al., (2022), who observed that robust profitability is essential for lifting corporate value and shaping investor behavior. Consequently, firms that consistently report a higher ROE are structurally better positioned to trigger favorable market reactions and experience steady stock price appreciation.

The Moderating Role of Price to Book Value (PBV) on the Relationship between ROA and Stock Prices

The statistical output demonstrates that PBV heavily moderates the relationship between ROA and stock prices in a negative direction. This dampening effect indicates that as a company's PBV rises, the direct influence of asset profitability on its share price begins to fade (Indarto & Farizki, 2025). For highly valued firms with elevated PBV ratios, investors frequently prioritize market valuation and growth expectations over raw, asset-based accounting profits. Through the lens of signaling theory, PBV serves as a barometer of market sentiment regarding a firm's long-term expandability. When a company commands a premium market valuation, investors tend to anchor their pricing decisions on this market prestige rather than on traditional backward-looking metrics like Return on Assets (ROA) (Gultom & Anggraeni, 2024). Consequently, the explanatory power of ROA over stock movements becomes significantly diluted in these scenarios (Mausuly & Prasetyowati, 2022). This outcome aligns with

(Yurfani & Hermanto, 2023) who established that corporate value can systematically alter or moderate how baseline profitability metrics translate into stock market performance.

The Moderating Role of Price to Book Value (PBV) on the Relationship between ROE and Stock Prices

Interestingly, the influence of ROE on stock prices becomes much stronger when Price to Book Value (PBV) is high. This implies that the market reacts far better to companies that blend high profitability with strong market valuations, ultimately driving stock prices upward (Monita, 2022). According to Signaling Theory, this duo of solid financials and premium valuation sends a healthy signal regarding future growth. This builds investor confidence in the company's long-term earnings potential, triggering higher market demand for its shares. This outcome mirrors the study by (Leonardo et al., 2022), which highlighted how corporate value fuels investor confidence. It also backs the stance of those who found that PBV bridges and enhances the connection between profit metrics and stock performance.

Simultaneous Effect of ROA, ROE, and PBV on Stock Prices

The empirical data indicates that ROA, ROE, and the interplay between profitability and PBV jointly shape the stock prices of IDX industrial firms. What this means is that investors look at both internal financial health and market valuation when pricing these stocks. Granted, stock prices are bound to react to outside forces not covered in this research, such as macroeconomic conditions, inflation, interest rate tweaks, forex fluctuations, and broader market moods. Even so, the model used here offers a solid and sufficient framework for explaining why these stock prices fluctuate (Tahawa & Wijaya, 2025).

3. Conclusion

Between 2022 and 2024, asset utilization efficiency (ROA) was largely ignored by investors pricing stocks in the IDX Industrials sector, yielding no noticeable impact on stock returns. Instead, the market favored ROE, which significantly boosted stock prices as higher returns on equity naturally made investors more optimistic. The study also highlights PBV as a crucial moderating variable. Specifically, a high PBV weakens the connection between ROA and stock performance but strengthens the relationship between ROE and stock prices. Looking at the bigger picture, the volatility of industrial stock prices stems from the joint forces of ROA, ROE, and how profitability crosses paths with PBV. This shows that savvy

investors base their decisions on a mix of bottom-line profits and market valuations, despite the persistent influence of macroeconomic factors not captured in this model.

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