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Stock Prices in the Banking Sector on the Indonesia Stock Exchange: The Role of Profitability, Liquidity, and Solvency Ratios, 2020–2025

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ABSTRACT

Purpose: This study examines the effects of profitability, liquidity, and solvency on the stock prices of banking companies listed on the Indonesia Stock Exchange during 2020–2025. It tests whether Return on Assets (ROA), Loan to Deposit Ratio (LDR), and Capital Adequacy Ratio (CAR) significantly influence banking stock prices.

Research Method: A quantitative associative design with multiple linear regression was employed. Annual financial statements and stock-price data were collected from 31 banks selected through purposive sampling, producing 186 observations after extreme values were removed using the z-score criterion. Stock prices were transformed into natural logarithms, while ROA, LDR, and CAR remained in ratio form. The data were analyzed using SPSS 26.

Results and Discussion: ROA positively and significantly affects stock prices (B = 76.973; p = 0.000), indicating that investors value efficient asset utilization. LDR has no significant effect (B = 0.065; p = 0.847), whereas CAR has a significant negative effect (B = −2.324; p = 0.000), suggesting that excessive capital may indicate inefficient capital utilization. The model explains 37.9% of stock-price variation.

Implications: Bank management should strengthen profitability and utilize capital efficiently. Future studies should apply robust panel-data methods and include macroeconomic and bank-specific variables.

Originality: This study provides post-pandemic evidence that banking solvency may be interpreted negatively when capital accumulation is not accompanied by productive expansion.

Keywords: profitability; liquidity; solvency; stock price; banking sector.

1. Introduction

The 2020–2025 period was one of both pressure and recovery for Indonesia's banking sector. The COVID-19 pandemic in early 2020 weighed on economic activity and created uncertainty in the capital markets, including for financial sector stocks on the Indonesia Stock Exchange. Historical data shows that the IHSG fell sharply in March 2020, reaching a low of 3,937. Around the same time, several major state-owned bank stocks, such as Bank Mandiri, BRI, and BNI, experienced corrections of more than 40% in the second quarter of 2020. After the initial crisis phase subsided, a recovery in the banking sector began to emerge from 2021 to 2025, although the pace varied among banks. Data from the Financial Services Authority (2024) shows that commercial banks' total assets increased from Rp7,779

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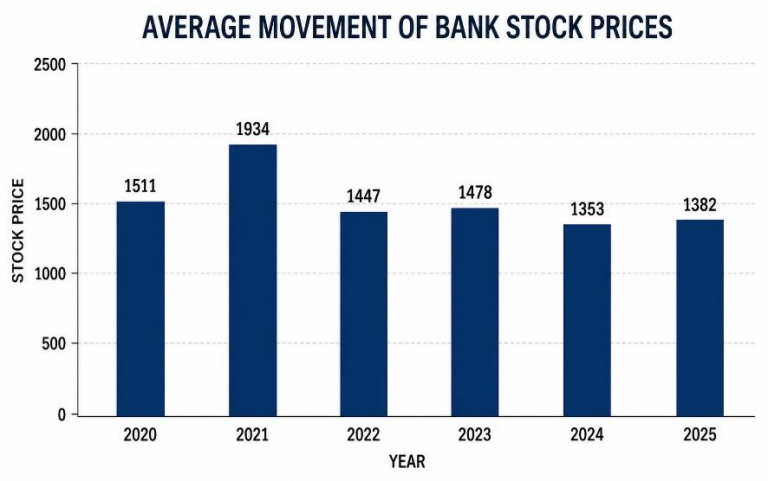
trillion at the end of 2020 to Rp12,437 trillion as of September 2024. This rise in assets reflects the industry's resilience, but the continued volatility in stock prices indicates that investors continue to assess fundamental quality, rather than just asset growth and size.

Figure 1. Average movements in banking stock prices during the 2020–2025 period



Source: *Processed data, 2026*

The graph of average bank stock prices shows a somewhat volatile trend from 2020 to 2025. In 2020, the average value stood at 1,511. This figure reflects the initial pressures of the pandemic, when market uncertainty rose, economic activity weakened, and investors became more cautious in evaluating banking issuers. These conditions align with Bales & Burghof (2022), who explain that pandemic waves and government policy responses can affect the returns on bank stocks across various countries, making banking stocks sensitive to sentiment surrounding the global health crisis.

The year 2021 saw an increase in the average stock price to 1,934, marking the highest point during the observation period. This increase can be attributed to improved market expectations regarding economic recovery, the easing of restrictions, policy stimulus, and a resurgence in investor confidence in the banking sector's prospects. However, this strength did not persist consistently. In 2022, the average stock price fell again to 1,447. This decline indicates that following the rebound phase, investors began reassessing the banks' fundamentals, particularly profitability, liquidity, asset quality, and capital adequacy (Abou-el-sood, 2025).

During 2023–2025, stock price movements more closely reflected the post-pandemic adjustment process. The average stock price rose slightly to 1,478 in 2023, fell to 1,353 in 2024, and then rose slightly to 1,382 in 2025. This pattern suggests that the market has not fully interpreted the banking sector's recovery as a sustained upward trend in stock prices. Investors are responding not only to the general economic recovery but also to the fundamental conditions of individual banks. Sharma & Bhardwaj (2022) emphasize that accounting and regulatory variables may be related to bank stock prices; therefore, the analysis of banking stock prices needs to be linked to fundamental performance, not merely to macroeconomic conditions. Generally, the average movement of banking stock prices from 2020 to 2025 can be divided into three phases. The first phase was the pandemic-induced pressure in 2020, when market uncertainty increased, and investors became more cautious in evaluating banks (Bales & Burghof, 2022). The second phase was the initial recovery in 2021, marked by rising stock prices.

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The third phase is the adaptation period from 2022 to 2025, during which stock prices will once again fluctuate as the market reassesses banks' prospects based on profitability, liquidity, solvency, and ongoing economic risks (Sharma & Bhardwaj, 2023). These conditions reinforce the use of stock prices as the dependent variable, as stock prices reflect the market's response to banks' ability to survive and adapt following the pandemic.

The banking sector plays a strategic role in the national financial system by serving as an intermediary between capital providers and those in need of productive financing (Chasanah, 2018). In Indonesia, state-owned banks, national private banks, and regional development banks mobilize public funds while channeling credit to the real sector. This role makes the banking sector's performance a key focus for investors, particularly since the sector is subject to strict regulation and oversight. The stability and performance of publicly listed banks can influence investor perceptions and help shape the dynamics of banking stock prices in the Indonesian capital market (Sumaryati & Prawitasari, 2022).

When evaluating bank stocks, investors generally look beyond profit size. How banks generate profits, their ability to manage third-party funds, and the adequacy of capital to mitigate risks are also key considerations. ROA is used to indicate how efficiently a bank's assets generate profits. The market can interpret an increase in ROA as an indication that assets are being managed productively. However, findings from previous studies remain mixed; some indicate a strong effect, while others find no significant relationship. These differing results provide a rationale for re-examining the role of ROA during the period immediately surrounding the pandemic and the economic recovery phase. Chasanah (2018) found that profitability, as measured by ROA, has a significant impact on firm value, making this ratio a relevant indicator monitored by the market.

The LDR is used to describe a bank's intermediation capacity as well as its liquidity position. This ratio compares loans extended to third-party funds mobilized. An LDR that is too low may indicate suboptimal intermediation, while an LDR that is too high may raise concerns regarding liquidity pressures. During the pandemic, some banks experienced an increase in their LDR, yet their profits weakened due to non-performing loans and restructuring policies. Umbu *et al.,* (2026) state that the LDR plays a role in explaining the stock prices of state-owned banks. Therefore, the LDR warrants analysis as a risk indicator that investors may consider in the post-pandemic period. In addition to profitability and liquidity, capital adequacy is also a critical factor. The CAR reflects a bank's capacity to absorb risk associated with risk-weighted assets. A substantial capital base can provide a buffer when risks rise; however, under certain market conditions, an excessively high CAR may be interpreted as a sign that capital is not being utilized productively. Sharma & Bhardwaj (2022) explain that accounting and regulatory variables can influence bank stock prices. Thus, the CAR is not only understood as a measure of safety but also as a reflection of risk and expansion strategies. Based on this discussion, this study examines the effects of ROA, LDR, and CAR on the stock prices of banks listed on the IDX during 2020–2025.

The 2020–2025 period was selected because it encompasses the health crisis, the recovery of economic activity, and shifts in investor expectations regarding the banking sector. Nabil & Elalfy (2022) demonstrate that fear-driven sentiment during the COVID-19 pandemic impacted bank performance in emerging markets. In such situations, information regarding earnings, credit, and capital policies becomes increasingly important to the market. OJK data also indicates that the number of commercial banks in 2024 will reach 107, and bank credit will grow by an average of 8.5% per year during 2020–

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2024. Changes in bank stock prices during this period provide an empirical basis for examining how fundamental factors influence investor assessments of the banking sector.

The remainder of this paper is organized as follows. Section 2 provides a literature review and hypothesis development. Section 3 presents the research method and design. Section 4 provides the results and discussion. Section 5 presents Concluding Remarks and Recommendations.

2. Literature Review and Hypothesis Development

2.1 *Profitability and Stock Price*

Profitability is one of the early signals the market uses to assess a bank's ability to generate value from its assets. An increase in ROA not only indicates higher profits but also reflects management's effectiveness in utilizing productive assets. Zarkasi & Puspita (2021) and Sara *et al.,* (2025) use ROA as a bank performance indicator. From the perspective of Signaling Theory, profit information can foster positive perceptions because it provides clues about a company's prospects. The higher the ROA, the greater a bank's ability to generate profits, which can boost investor confidence and drive up stock prices. Findings by Akbar (2019), Widyakto *et al.,* (2023), and Sara *et al.,* (2025) indicate that ROA has a positive effect on banking stock prices. Furthermore, Sharma & Bhardwaj (2023) explain that accounting and regulatory variables influence bank stock prices, making fundamental banking indicators crucial information that investors consider when making investment decisions. Based on this, the first hypothesis states that ROA has a positive and significant effect on stock prices.

H1: *ROA has a positive and significant effect on the stock prices of banking companies listed on the IDX during the 2020–2025 period.*

2.2 *Liquidity and Stock Prices*

According to Signaling Theory, the financial information disclosed by a company can serve as a signal for investors to assess the company's prospects, performance quality, and risks. In the banking context, liquidity ratios can be used by investors as a signal to assess a bank's ability to maintain a balance between credit disbursement and the availability of funds. Al-Sartawi & Reyad (2018) explain that the disclosure of financial information can be understood through Signaling Theory because such information helps external parties assess a company's condition. Therefore, the LDR, as a liquidity indicator, serves as critical information for investors to evaluate a bank's risk and financial stability. The LDR illustrates how a bank balances credit extension with the availability of funds. When this ratio rises too high, the market may interpret it as a sign that the bank's liquidity buffer is narrowing. Although credit can increase interest income, it also carries liquidity and credit risks. Findings by Sara *et al.,* (2025), Azilah *et al.,* (2025), and Zarkasi & Puspita (2021) indicate a negative relationship between the LDR and stock prices. Based on these considerations, the second hypothesis states that the LDR has a significant negative effect on stock prices.

H2: *LDR has a significant negative effect on the stock prices of banking companies listed on the IDX during the 2020–2025 period.*

2.3 *Solvency and Stock Prices*

According to Signaling Theory, the financial information disclosed by a company can serve as a signal for investors in assessing the company's quality, stability, and prospects (Al-Sartawi & Reyad, 2018). In

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the banking context, investors can use the capital adequacy ratio to assess a bank's ability to maintain sufficient capital and manage the risk of losses. Therefore, the Capital Adequacy Ratio (CAR), as a solvency indicator, provides crucial information for investors to assess a bank's financial health and resilience. The CAR indicates a bank's capital resilience in the face of loss risks. Theoretically, adequate capital assures that a bank has a sufficient buffer when risks increase; Zarkas & Puspita (2021) identify the CAR as an indicator of a bank's health, while Akbar (2019) found a positive relationship between the CAR and the stock prices of state-owned banks. Long-term analyses of the Indonesian banking sector also indicate that the CAR plays a role in stock price movements (Price, 2018). Thus, the third hypothesis states that the CAR has a positive and significant effect on stock prices.

H3: *CAR has a positive and significant effect on the stock prices of banking companies listed on the IDX during the 2020–2025 period.*

3. Research Method

3.1 *Research Design*

This research design employs an associative quantitative approach using multiple linear regression. This approach was chosen because the study uses financial ratios and stock prices to test relationships among variables in data with both a temporal dimension and an entity dimension (banks). The analysis was conducted using SPSS version 26 to estimate regression coefficients, determine parameter significance, and evaluate the model's classical assumptions. Sharma & Bhardwaj (2023) explain that a quantitative approach is appropriate when variables are measured numerically and analyzed using statistical procedures.

3.2 *Population and Sample*

The units analyzed are banks listed on the Indonesia Stock Exchange from 2020 to 2025. The banking sector was chosen because it plays a significant role in the financial system and is one of the sectors actively monitored by investors (Pamungkas *et al.,* 2023). The study population consists of 45 banks. The sample was selected purposefully, taking into account the completeness of the required data, in accordance with the principle of sample selection based on specific criteria (Etikan, 2019).

Table 1. Sample Criteria

No	Sample Criteria	Number of Companies
1	Banking companies listed on the Indonesia Stock Exchange (IDX) that remained active from 2020 to 2025	46
2	Complete annual financial reports for the 2020–2025 period	45
3	The company did not experience any disruptions to its operations during 2020–2025	43
4	Final observations that fall within the normal range (z-score < 3)	31

Source: *Researcher's data, 2026*

Applying these criteria yielded 186 observations from 31 banks after handling outliers using the z-score test. The final dataset was derived from banks that provided complete information on financial ratios and stock prices during the study period. Of the 43 banks that met the initial criteria, 12 were identified as having extreme values (outliers), including ARTO, BACA, AMAR, BBYB, BANK, AGRO, BTPS,

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PNBS, BKSW, BBKP, BEKS, and SDRA. Therefore, they were excluded from the regression analysis to ensure that abnormal observations did not distort the model estimates.

3.3 *Operational Definitions of Variables*

Stock price is used as the dependent variable, while ROA, LDR, and CAR are treated as independent variables. Stock price is measured in natural logarithms (LN), while the independent variables are used in their original form. The definitions, measures, and data sources for each variable are summarized in Table 2.

Table 2. Operational Definitions of Variables

Variable	Definition	Formulas / Units of Measurement	Data Sources
Stock Price (Y)	Annual closing price expressed as a natural logarithm (LN)	LN (Year-End Closing Price)	IDX / Yahoo Finance
ROA (X1)	A measure of profitability that shows net income relative to a bank's assets	ROA = Net Income / Total Assets	IDX Financial Statements
LDR (X2) – Liquidity	A liquidity metric that compares extended credit to third-party funds	LDR = Total Loans / Total Third-Party Funds	IDX Financial Statements
CAR (X3) – Solvency	A measure of capital that indicates a bank's ability to absorb the risk of loss	CAR = Capital / ATMR	IDX Financial Statements

Sources: *Zarkasi Puspita (2021); Sara et al., (2025); Azilah et al., (2025); Chasanah (2018).*

3.4 *Data Transformation*

Before running the regression, stock prices (the dependent variable) were transformed into natural logarithms (LN). This step was necessary because stock prices have a fairly wide range and contain extreme values. The logarithmic transformation of the dependent variable helps make the data distribution more symmetrical, reduces the influence of outliers, and makes it easier to interpret the relationships within the model. Gujarati & Porter (2009) explain that applying a logarithm to the dependent variable results in a semi-log model, which interprets the regression coefficients as the percentage change in stock price resulting from a one-unit change in the independent variable. The independent variables (ROA, LDR, and CAR) remain in their original form (ratios) so that the interpretation of the coefficients is more intuitive in the context of banking financial ratios.

3.5 *Data Analysis Techniques*

The analysis began with an exploration of the data profile using descriptive statistics, including the mean, standard deviation, and minimum and maximum values, to obtain an initial overview of the variable distribution. Next, a series of evaluations of the classical assumptions of multiple linear regression were conducted, including a test of residual normality using the Kolmogorov-Smirnov test, a test for heteroscedasticity using the Glejser test and scatterplot analysis, a test for multicollinearity by examining the Variance Inflation Factor (VIF) and tolerance values, and a test for autocorrelation using the Durbin-Watson statistic.

Hypothesis testing was conducted in two stages. First, an F-test (simultaneous) was performed to identify the significance of the combined effect of the three independent variables on the dependent variable. Second, a t-test (partial) was used to identify the significance of each predictor individually.

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The coefficient of determination (R^2) was used to measure the proportion of stock price variation explained by the model. The tests were conducted at a 95% confidence level (alpha 5%). A variable is considered to have a significant effect if its probability value is below the 0.05 threshold or if its t-statistic exceeds the critical value in the t-table. Conversely, if the significance value exceeds 0.05, it can be concluded that the empirical evidence is not yet strong enough to support the existence of that effect.

3.6 *Regression Model*

$$ln(HSit) = \alpha + \beta 1ROAit + \beta 2LDRit + \beta 3CARit + \varepsilon it$$

In the estimation equation, the symbol ln(HSit) represents the natural logarithm of the stock price of the i-th bank in year t. The parameter α serves as a constant, while β1, β2, and β3 denote, respectively, the coefficients for each financial ratio. The term εit represents the error term or residual in the model. The independent variables—ROA, LDR, and CAR—are included in the estimation on their original ratio scales without logarithmic transformation. The testing criteria are based on a 95% confidence level (α = 0.05). A variable is categorized as having a significant effect if its probability value is below the 0.05 threshold or if its t-statistic exceeds the critical value in the t-table. Conversely, if the significance value exceeds 0.05, it can be concluded that the empirical evidence is not yet strong enough to support the existence of that effect.

4. Results and Discussion

4.1 Analysis Results

4.1.1 *Descriptive Statistics*

Table 3 provides an initial overview of the research data. All variables are presented on their original scales, except for stock prices, which are expressed in LN. The average LN stock price is 6.704 with a standard deviation of 1.398, indicating variations in stock prices across banks and periods. ROA has a mean of 0.0108 (1.08%), with a minimum value of -0.0261 and a maximum of 0.0414. This indicates that most banks in the sample still report positive profitability, although some banks experienced minor losses.

Table 3. Descriptive Statistics for the Research Variables

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	186	-0,02614	0.04140	0.0107671	0.01082000
LDR	186	0.27500	1.63188	0.8693001	0.24406025
CAR	186	0.10100	1.06410	0.3084699	0.15912505
STOCK PRICES_LN	186	3.87120	9.17730	6.7040677	1.39838911
Valid N (listwise)	186				

Source: *Processed data, 2026*

The average LDR of 0.869, or 86.9%, with a standard deviation of 0.244, indicates variations in credit distribution strategies among banks. Meanwhile, the average CAR is 0.308, or 30.8%, with a maximum value of 1.064, meaning that some banks have capital adequacy ratios well above the regulatory minimum requirement of 8%.

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4.2 Normality Test

The normality of the residuals was tested using the Kolmogorov-Smirnov test. The test results showed an Asymp. Sig. (2-tailed) value of 0.087. Since this value is above 0.05, the residuals can be considered to satisfy the assumption of normality. Thus, the regression model passes the residual normality test.

Table 4. Results of the Normality Test

		Unstandardized Residual
N		186
Normal Parameters	Mean	0.0000000
	Std. Deviation	1.09291566
Most Extreme Differences	Absolute	0.061
	Positive	0.061
	Negative	-0.059
Test Statistic		0.061
Asymp. Sig. (2-tailed)		0.087

Source: *Processed data, 2026*

4.3 Heteroscedasticity Test

Heteroscedasticity was examined using the Glejser test and a scatterplot. In the Glejser test, the probability for ROA was 0.000, which is less than the 5% significance level. These results indicate a relationship between ROA and the absolute value of the residuals, suggesting that the model shows signs of heteroscedasticity. Conversely, the LDR probability of 0.584 and the CAR probability of 0.680 are both above 0.05. Thus, based on the Glejser test, the LDR and CAR do not indicate heteroscedasticity.

Table 5. Results of the Heteroscedasticity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.137	0.190		5.982	0.000
	ROA	-21.692	4.465	-0.342	-4.859	0.000
	LDR	-0.109	0.199	-0.039	-0.548	0.584
	CAR	0.127	0.306	0.029	0.414	0.680

Source: *Processed data, 2026*

The scatterplot results between the Regression Standardized Predicted Value and the Regression Standardized Residual show that the residual points are scattered around the zero line on the Y-axis. The distribution pattern does not form any specific shape, such as a funnel, a wave, or a pattern that gradually widens. Rajh-Weber *et al.,* (2026) explain that heteroscedasticity can be assessed by examining the residuals against the fitted values and the absence of a systematic pattern in the distribution, which indicates relatively homogeneous variation in the residuals. Thus, a visual inspection of the scatterplot does not reveal any clear pattern of heteroscedasticity. However, since the Glejser test indicates a significant ROA for absolute residuals (sig. 0.000), the possibility of heteroscedasticity must still be considered. This study applied a log-natural (LN) transformation to stock prices and filtered out extreme values using the z-score as an initial step to reduce the effects of data scale and outliers.

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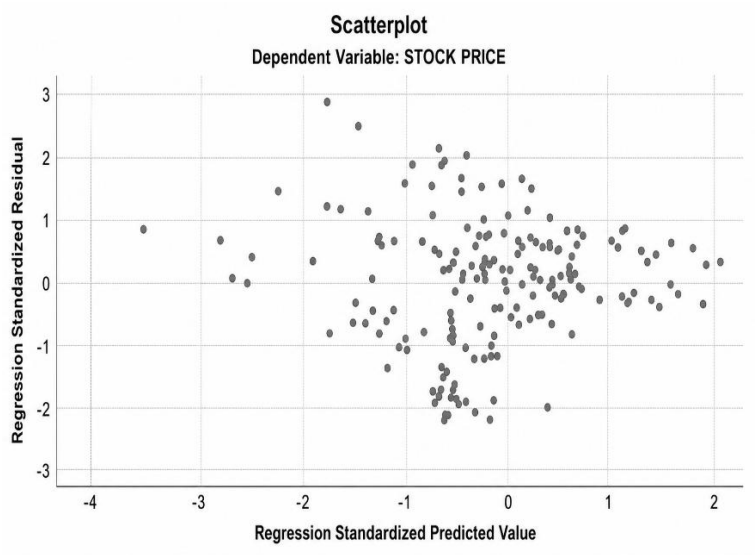
Nevertheless, the Glejser results indicate that the potential for heteroscedasticity has not been eliminated. Therefore, the regression results must be interpreted with caution. Future research may use robust standard errors or Weighted Least Squares (WLS) to ensure that standard error estimates are more resilient to variations in residuals (Karafiath, 2014).

Figure 2. Results of the Heteroscedasticity Test



Source: *Processed data, 2026*

4.4 *Multicollinearity Test*

The test results show that ROA has a tolerance of 0.979 and a VIF of 1.022. LDR has a tolerance of 0.966 and a VIF of 1.035, while CAR has a tolerance of 0.964 and a VIF of 1.037. All tolerance values are above 0.10, and all VIF values are below 10. Based on these criteria, the model does not exhibit multicollinearity among the independent variables.

Table 6. Results of the Multicollinearity Test

Model		Tolerance	VIF
1	(Constant)		
	ROA	0.979	1.022
	LDR	0.966	1.035
	CAR	0.964	1.037

Source: *Processed data, 2026*

4.5 *Autocorrelation Test*

An autocorrelation test was conducted using the Durbin-Watson statistic. The Durbin-Watson statistic obtained was 0.717.

Table 7. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.624	0.389	0.379	1.10188639	0.717

Source: *Processed data, 2026*

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This value is far from 2 and suggests the presence of positive autocorrelation. Yuan *et al.,* (2022) explain that the Durbin-Watson statistic is commonly used to detect serial correlation in residuals, including in aggregated banking data. Based on these results, the regression model still shows indications of positive autocorrelation. This condition is worth noting because the research data is a combination of observations from several banks over several years, so dependence between observations from the same entity may occur (Bansal & Singh, 2018).

4.6 *Test of the Coefficient of Determination*

The Adjusted R-Square value in Table 8 is 0.379. This means that ROA, LDR, and CAR account for 37.9% of the variation in stock prices. The remaining 62.1% is influenced by other factors not included in the model, such as interest rates, inflation, market sentiment, asset quality, bank size, dividend policy, or issuer-specific information. Given this value, the model's explanatory power regarding stock prices can be categorized as moderate.

Table 8. Coefficient of Determination Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.624	0.389	0.379	1.10188639

Source: *Processed data, 2026*

4.7 *F-Test (Simultaneous)*

The simultaneous test yielded an F-value of 38.652 with a probability of 0.000. Since the probability is below 5%, ROA, LDR, and CAR were collectively found to have a significant effect on stock prices. These results indicate that the regression model is suitable for analyzing the relationship between banking financial ratios and stock prices.

Table 9. Results of the F-Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	140.790	3	46.930	38.652	0.000
	Residual	220.976	182	1.214		
	Total	361.766	185			

Source: *Processed data, 2026*

4.8 *t-Test (Partial)*

The results of the partial test show that the constant is 6.536 with a probability of 0.000. This means that when ROA, LDR, and CAR are assumed to be zero, the base value of the stock price in the form of LN is 6.536. Furthermore, ROA has a coefficient of 76.973, a t-value of 10.171, and a probability of 0.000. Since the probability is below 0.05, ROA is proven to have a positive and significant effect on stock price. In other words, an increase in ROA is followed by a tendency for the bank's stock price to rise. The LDR variable shows a coefficient of 0.065, a t-value of 0.193, and a probability of 0.847. Since the probability exceeds 0.05, LDR is not shown to have a significant effect on stock prices. This indicates that changes in LDR do not significantly explain variations in the bank's stock price. Meanwhile, the CAR variable yields a coefficient of -2.324, a t-value of -4.483, and a probability of 0.000. Since the probability is below

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0.05, CAR is found to have a negative and significant effect on stock prices. This means that an increase in CAR in this model is associated with a tendency for bank stock prices to decline.

Table 10. Results of the t-test

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	6.536	0.322		20.283	0.000
	ROA	76.973	7.568	0.596	10.171	0.000
	LDR	0.065	0.338	0.011	0.193	0.847
	CAR	-2.324	0.518	-0.264	-4.483	0.000

Source: *Processed data, 2026*

4.2 Discussion

4.2.1 *The Effect of ROA on Stock Price*

The regression results show that ROA has a positive and significant effect on stock price. The ROA coefficient is 76.973 with a significance level of 0.000, so the first hypothesis is accepted. Since the model uses a semi-logarithmic form, this coefficient indicates that a one-unit increase in ROA (in decimal form) is associated with an increase in stock price of approximately 76.97%. This finding suggests that throughout 2020–2025, investors viewed profitability as valuable information. A higher ROA signals that management is capable of managing assets efficiently to generate profits and create value in the subsequent period.

These findings are consistent with several previous studies. Wuryani & Handayani (2021) found that ROA makes a positive and significant contribution to explaining banking stock prices on the Indonesia Stock Exchange. In an international context, Aayale (2022) also demonstrated that ROA, as a proxy for profitability, can explain stock price movements of banks in emerging markets. Nadyayani & Suarjaya (2021) and Choiriya *et al.,* (2020) further confirm that a bank's ability to generate profits from its assets is one of the factors the market considers when valuing stocks. From the perspective of Signaling Theory, an increase in ROA can be interpreted as a positive signal for shareholders because it indicates the effective use of productive assets (Spence, 1973). In the post-pandemic era, when economic uncertainty persists, healthy profitability helps investors distinguish banks with strong fundamentals from those more vulnerable to external pressures (Alzwi & Rohuma, 2025).

Several factors can explain the positive relationship between ROA and stock prices. First, during the post-pandemic recovery phase, an increase in ROA may reflect improvements in credit quality and operational efficiency, and is thus viewed as a sign of fundamental recovery. Second, profitability provides banks with the capacity to maintain resilience against risks and sustain their ability to pay dividends. Third, in emerging markets such as Indonesia, information asymmetry remains relatively high so that a consistent ROA can strengthen investor confidence in the quality of a bank's management (Alzwi & Rohuma, 2025). Thus, these results indicate that the Indonesian capital market continues to respond to profitability information even though the study period encompassed the global health crisis.

4.2.2 *The Effect of LDR on Stock Prices*

The LDR does not show a significant effect on stock prices. The LDR coefficient is 0.065 with a p-value of 0.847, so the second hypothesis is not rejected. These results indicate that changes in the LDR during

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2020–2025 have not been a primary factor for investors in evaluating banking stocks. While the coefficient is positive, it is not statistically strong enough to explain changes in stock prices. This may be because the LDR merely reflects the ratio of loans to third-party funds but does not capture credit quality, borrowers' repayment capacity, or the bank's effectiveness in managing liquidity risk. During the pandemic and recovery period, loan restructuring policies also meant that the LDR did not always accurately reflect actual liquidity conditions. Investors tend to weigh other information such as asset quality, credit risk, profitability, capital adequacy, and earnings prospects. Riahi (2019) states that a bank's liquidity risk is related to non-performing loans and loan loss provisions; therefore, the LDR cannot be interpreted in isolation from credit quality. Sharma & Bhardwaj (2023) also demonstrate that bank stock prices are influenced by various accounting and regulatory variables, meaning the LDR is not the sole basis for investor responses. For large banks in the sample—such as BBCA, BBRI, BMRI, and BBNI—changes in the LDR are not always immediately followed by changes in stock prices, as the market also considers profitability, asset quality, and capital policies.

These findings are consistent with those of Riyadi (2014), who found that the LDR has a positive but insignificant relationship with banking stock prices. Dasuki *et al.,* (2025) also obtained similar results, namely that the LDR is not significant because its role as a measure of liquidity and credit distribution is influenced by macroeconomic conditions as well as other fundamental indicators considered by investors. Thus, in this study, the LDR has not been proven to be a major factor determining bank stock prices during 2020–2025.

4.2.3 *The Effect of CAR on Stock Prices*

The CAR was found to have a significant negative effect on stock prices. The CAR coefficient was -2.324 with a significance level of 0.000; therefore, the third hypothesis was rejected because the direction of the effect did not align with the initial assumption. In theory, a high CAR should signal a positive outcome because it indicates the availability of capital to absorb risk. However, the results of this study show that from 2020 to 2025, investors did not always view a high CAR as favorable information. The average CAR of the banks in the sample was relatively high and well above the regulatory minimum requirement. In such a situation, an excessively high CAR may be perceived as a sign that the bank is being overly cautious in managing its capital.

This negative perception may stem from the possibility that capital has not been optimally utilized for credit expansion, productive investments, or profit growth. While substantial capital does demonstrate financial strength, without growth in revenue and profitability, the market may view it as unproductive capital. Setianingsih & Silaban (2023) explain that an excessively high CAR may indicate an accumulation of idle funds that could potentially weigh on financial performance and corporate value. In the banking context, investors focus not only on the amount of capital but also on its effectiveness in generating profits and increasing value for shareholders.

At BBRI, for example, Abi Daud (2023) found that the CAR has a significant negative effect on stock prices. This finding suggests that high capital adequacy does not always result in a positive response if the market considers other factors—such as profitability, credit prospects, interest rates, asset quality, and the ability to generate returns—to be more decisive. These research results are also consistent with Putu *et al.,* (2016), who found a negative effect of the CAR on banking stock prices on the IDX. Furthermore, Sharma & Bhardwaj (2023) state that accounting and regulatory variables,

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including the CAR, are related to bank stock prices, although the direction of the effect may vary depending on market conditions and the characteristics of the banks analyzed.

Thus, the negative effect of the CAR indicates that investors during the 2020–2025 period do not view capital adequacy solely as a measure of safety. The market also assesses whether that capital is being used effectively. An excessively high CAR can be interpreted as a signal of conservatism and low expansionary aggressiveness, thereby potentially putting downward pressure on bank stock prices.

5. Concluding Remarks and Recommendation

This study shows that fundamental ratios are collectively associated with the stock prices of banks listed on the Indonesia Stock Exchange during 2020–2025. The F-test result is significant (F = 38.652; sig. = 0.000), indicating that ROA, LDR, and CAR simultaneously influence stock prices. Partially, ROA has a positive and significant effect with a coefficient of 76.973 (sig. = 0.000). This finding suggests that the market responds to profitability as an indicator of efficiency in asset management. CAR has a negative and significant effect with a coefficient of -2.324 (sig. 0.000), indicating that excessively high capital adequacy may be interpreted by the market as a sign of excessive caution in expansion. The LDR had no significant effect (sig. 0.847), suggesting that liquidity has not been proven to be a major factor in stock price movements during the study period. The Adjusted R-Square value of 37.9% indicates that the model has moderate explanatory power. Nevertheless, the research results should be interpreted with caution due to indications of positive autocorrelation (DW = 0.717) and potential heteroscedasticity based on the Glejser test. Therefore, the resulting coefficients are best understood as a representation of partial relationships rather than as a predictive model entirely free from violations of classical assumptions.

Theoretically, this study enriches the banking finance literature by demonstrating that the relationship between fundamental ratios and stock prices does not always move in the same direction, particularly during periods of economic crisis and recovery. The positive effect of ROA supports Signaling Theory, as the market interprets strong profitability as a sign of a bank's ability to generate profits and maintain its business prospects. The non-significant LDR indicates that liquidity signals have not yet become information to which investors respond directly. However, this ratio remains important for assessing the balance between credit disbursement and available funds. Bank management still needs to maintain credit quality, the stability of third-party funds, and risk management. On the other hand, the negative effect of CAR suggests that the market may interpret solvency in a more complex manner. Excessively high capital is not always viewed positively if it is perceived as reflecting underutilization of growth opportunities. In practical terms, these results underscore the importance of healthy profitability, prudent liquidity management, and efficient use of capital for expansion. For regulators, these findings highlight the need to align capital and liquidity policies with capital market dynamics to avoid creating negative investor perceptions.

This study has several limitations. In terms of variables, the model uses only three financial ratios: ROA, LDR, and CAR. Other factors that could potentially influence stock prices—such as Net Interest Margin (NIM), Non-Performing Loans (NPL), Return on Equity (ROE), benchmark interest rates, inflation, and investor sentiment—were not included in the analysis. Furthermore, the 2020–2025 period was marked by the COVID-19 pandemic and the economic recovery process. These conditions mean that the study's findings may not be fully generalizable to more normal economic periods. In terms of methodology, the main limitation lies in the indication of positive autocorrelation, as evidenced by a

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Durbin-Watson value of 0.717. This value is far from 2 and indicates a serial correlation in the residual model. (Yuan *et al.*, 2022) explain that autocorrelation in aggregated banking data can reduce estimation efficiency, making the OLS standard error less reliable even though the coefficients remain unbiased. Furthermore, the Glejser test indicates that ROA is significantly correlated with the absolute residuals (sig. 0.000), suggesting potential heteroscedasticity. This condition means that statistical inferences based on conventional standard errors must be interpreted with caution. Therefore, the results of this study should be viewed as preliminary estimates that need to be validated using more robust methods, such as GMM or the Fixed Effects Model with more reliable standard errors. Another limitation relates to the sample scope, as the study only included banks listed on the IDX with complete data after outlier handling. Commercial banks not listed on the capital market were excluded from the analysis. Furthermore, the use of year-end closing prices does not fully reflect price changes over shorter time frames, such as monthly or daily data, which may be more sensitive to changes in financial ratios. Investors should not rely solely on ROA, LDR, and CAR as the basis for investment decisions regarding banking stocks. The macroeconomic context, asset quality, long-term performance prospects, and issuer-specific information must also be considered. Investors should also be wary of an increase in the CAR that is not accompanied by credit growth or business expansion, as such conditions may indicate overly conservative use of capital. Future research is encouraged to employ estimation approaches better suited for data with autocorrelation, such as the Generalized Method of Moments (GMM) or the Fixed Effects Model with robust standard errors, to minimize the methodological limitations of this study.

Statement of Use of Generative AI

During the preparation of this work, the author used generative artificial intelligence tools to support the scientific writing process. Grammarly was used to check grammar, refine writing style, and improve clarity in scientific writing. All interpretations, analyses, and conclusions presented in this study are the sole responsibility of the author.

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