

The Effect of Profitability, Capital Adequacy, and Liquidity on Stock Prices in the Banking Industry

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ABSTRACT

This study aimed to analyze the impact of profitability, capital adequacy, and liquidity on the stock prices of state-owned banking companies listed on the Indonesia Stock Exchange. A quantitative research design with a causal approach was employed, using secondary data from audited financial reports. The sample consisted of major state-owned banks selected through purposive sampling. Data analysis was performed using panel data regression with the Random Effects Model in EViews. Before the regression analysis, classical assumption tests were conducted to ensure the model met the requirements for normality, multicollinearity, heteroscedasticity, and autocorrelation. The results revealed that the Return on Assets and the Capital Adequacy Ratio did not have a significant effect on stock prices. In contrast, the Loan-to-Deposit Ratio was found to have a significant positive influence on stock valuations. The model demonstrated a meaningful adjusted R-squared value, indicating that the independent variables collectively explained a meaningful share of the variance in stock prices. These findings suggest that investors prioritize liquidity efficiency over internal profitability and capital metrics when valuing banking stocks in the Indonesian market. Consequently, banking management should maintain optimal liquidity levels to enhance market perception and drive investor confidence.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh profitabilitas, kecukupan modal, dan likuiditas terhadap harga saham perusahaan perbankan milik negara yang terdaftar di Bursa Efek Indonesia. Desain penelitian kuantitatif dengan pendekatan kausalitas diterapkan dengan memanfaatkan data sekunder dari laporan keuangan auditan. Sampel terdiri dari bank milik negara utama yang dipilih melalui teknik purposive sampling. Analisis data dilakukan menggunakan regresi data panel melalui Random Effects Model dengan bantuan perangkat lunak EViews. Sebelum analisis regresi, uji asumsi klasik dilakukan untuk memastikan model memenuhi persyaratan normalitas, multikolinearitas, heteroskedastisitas, dan autokorelasi. Hasil penelitian menunjukkan bahwa Return on Assets dan Capital Adequacy Ratio tidak memiliki pengaruh signifikan terhadap harga saham. Sebaliknya, Loan to Deposit Ratio terbukti memiliki pengaruh positif dan signifikan terhadap penilaian saham. Model ini mencatatkan nilai adjusted R-squared yang berarti mengindikasikan bahwa variabel independen secara kolektif menjelaskan varians harga saham. Temuan ini menunjukkan bahwa investor lebih memprioritaskan efisiensi likuiditas dibandingkan dengan metrik profitabilitas dan modal internal dalam menilai saham perbankan di pasar Indonesia. Oleh karena itu, manajemen perbankan harus menjaga tingkat likuiditas yang optimal untuk meningkatkan persepsi pasar dan mendorong kepercayaan investor.



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INTRODUCTION

Financial statements can fulfill their informative purpose only if they contain relevant information, which is defined as information that can influence decision-makers' behavior (Hery, 2023). For investors in the capital market, accounting information plays a central role in

determining investment decisions, while the market uses this information to achieve a new equilibrium price. The efficient markets hypothesis (EMH) framework asserts that an efficient market will process all available information, so that the price of securities fully reflects the company's fundamental value. In this context, the stock price formed will not be undervalued or overvalued because the market reacts appropriately to all information. The stock price is the amount of money paid to acquire a share of the company, determined by the interaction of supply and demand in the capital market (Bali et al., 2017). The market's reaction to company performance information is often measured through abnormal returns, which are the differences between realized returns and expected returns, used to assess whether the publication of financial reports is truly reflected in stock prices, particularly in testing semi-strong market efficiency. In the banking industry, investors pay attention not only to profitability but also to the health of banks, as assessed by the CAMELS methodology, as stipulated in BI Circular Letter No. 6/23/DPNP and BI Regulation No. 6/10/PBI/2004—indicators such as ROA, CAR, and LDR shape perceptions of risk and banks' prospects. The phenomenon of market uncertainty, fluctuations in banking stock prices, and the banking industry's high sensitivity to accounting information underscore the need for research to reexamine the effects of profitability, capital adequacy, and liquidity on stock prices, particularly for banking companies listed on the IDX during 2012–2019.

Empirical studies on the influence of profitability, capital adequacy, and liquidity on stock prices yield mixed findings, revealing the complexity of relationships among these variables in the banking industry. Profitability, as an indicator of a company's ability to generate profits, for example, does not always show a consistent influence on stock prices. Ramadhani (2018) found that profitability does not have a significant effect on stock prices. Angeline & Sitorus (2020) reinforced this positive direction by showing that profitability significantly affects stock prices, as did Putri & Ramadhan (2023), who noted that higher profitability ratios tend to increase stock prices. In fact, Basri et al. (2024) emphasized that profitability is the variable with the most consistent effect. Liquidity, measured by a company's ability to meet its short-term obligations, also shows inconsistent research results. Ramadhani (2018) states that liquidity has a significant effect on stock prices, in line with the findings of Angeline & Sitorus (2020) and Raj & Putri (2021). However, Ananda et al. (2023) found a negative effect of liquidity on stock prices, whereas Wulansari et al. (2024) reported no significant effect. In contrast, Lestari et al. (2024) showed that liquidity had a positive effect. Regarding capital adequacy, Hutasoit et al. (2019) showed that the Capital Adequacy Ratio does not significantly affect stock prices. In contrast, Panggabean et al. (2023) found that profitability, solvency, and market ratios can simultaneously affect stock prices, with varying directions of influence. Attatur et al. (2024) also noted that the relationship between capital adequacy and liquidity is not always clear, while Salamah & Puspitasari (2024) emphasized that these financial metrics affect profitability, albeit to varying degrees. This diversity of findings underscores the importance of further research.

Previous research results show empirical inconsistencies regarding the influence of profitability, capital adequacy, and liquidity on stock prices, creating a research gap in both theoretical and practical terms. Theoretically, the efficient markets hypothesis (EMH) assumes that markets react rationally to accounting information, so that fundamental variables such as ROA, CAR, and LDR should be consistently reflected in stock price movements. However, empirical evidence shows conflicting results. Profitability, for example, was found to be

insignificant by Ramadhani (2018), but significant in studies by Achmad et al. (2020), Angeline & Sitorus (2020), Putri & Ramadhan (2023), and Darmono et al. (2024). The same thing happens with liquidity, which in some studies shows a significant effect (Ramadhani, 2018; Raj & Putri, 2021), an insignificant effect (Wulansari et al., 2024), a negative effect (Ananda et al., 2023), or a positive effect (Lestari et al., 2024). Disparities in results are also evident in the capital adequacy variable, which in some studies has no significant effect (Hutasoit et al., 2019), but in other studies is an important factor affecting profitability and risk perception (Panggabean et al., 2023; Attatur et al., 2024; Salamah & Puspitasari, 2024). This empirical gap indicates that market responses to fundamental banking variables are heterogeneous and may be influenced by economic conditions, observation periods, differences in bank characteristics, and investors' risk preferences. In addition, some studies have not comprehensively examined the three variables of profitability, capital adequacy, and liquidity simultaneously in the context of Indonesian banking.

Based on the empirical and theoretical gaps identified in previous studies, this study introduces a novel approach by simultaneously testing the effects of profitability (ROA), capital adequacy (CAR), and liquidity (LDR) on the stock prices of banking companies listed on the IDX during 2012 to 2019. This time frame is important because it reflects changes in banking regulations and national economic dynamics that can influence investor behavior. Unlike previous studies that examined variables separately, this study integrates these three fundamental ratios into a single model to assess how the market simultaneously processes banking accounting information. This approach makes a new contribution to testing market efficiency, particularly by using abnormal returns to capture investor reactions to the publication of financial reports. Therefore, the purpose of this study is to provide empirical clarification of the inconsistencies in previous research findings and to explain how profitability, capital adequacy, and liquidity affect stock price formation. The results of this study are expected to enrich the financial literature, provide a more comprehensive understanding of the determinants of market value in the banking industry, and offer practical implications for investors, regulators, and bank management to improve the performance and stability of the banking sector.

LITERATURE

Stock Price

Stock prices are monetary values that reflect the price of an equity security traded on the capital market at a given time. This value not only serves as a transaction tool, but also reflects investors' collective assessment of a company's performance, prospects, and risks. In a dynamic market, stock prices move according to the mechanisms of supply and demand, which constantly change as new information comes in. Kristiono (2024) explains that stock price movements in the banking sector specifically reflect investors' reactions to financial signals and macroeconomic conditions. This means that stock prices are not merely indicators of a company's value, but also projections of market expectations regarding the company's ability to maintain stability and profitability in the future. Changes in a company's financial performance can cause stock price fluctuations, especially during crises such as the COVID-19 pandemic, when investors' risk perception increases and market reactions become more sensitive. This view is reinforced by Ameliana (2024), who asserts that banking stock prices in Indonesia are

strongly influenced by a combination of fundamental performance and market sentiment, with investors reacting to changes in information relevant to the company's long-term profit and risk prospects. Therefore, stock prices serve as an indicator of market sentiment, reflecting how market participants process financial information to assess a company's intrinsic value.

In addition to fundamental factors, stock prices are influenced by external events and information that shape the market's collective perception. Suharti & Saftiana (2021) assert that market reactions to company performance information can be observed through abnormal returns, which indicate how quickly and accurately stock prices adjust to new information. Shabila et al. (2022) found that during the pandemic, stock price volatility increased along with rising trading volume, indicating that investor uncertainty and psychological pressure played a major role in price formation. Rosman & Yudanto (2022) observed that stock price reactions to various corporate events on the Indonesia Stock Exchange differed across sectors, indicating that industry characteristics also determine price sensitivity to information. Meanwhile, Rooroh & Dewi (2024) explain that layoff announcements by public companies often trigger rapid stock price adjustments because they are seen as signals of changing business prospects. This phenomenon reinforces the view that stock prices are not merely static numbers, but rather the result of a dynamic process influenced by information, investor psychology, and constantly changing economic conditions. Thus, stock prices can be understood as a reflection of market efficiency and the interaction between rational and emotional valuation mechanisms that determine a company's value in the public eye.

Profitability

Profitability is a company's ability to generate profits over a given period through the effective and efficient use of its resources. From a financial perspective, profitability reflects the extent to which a company can convert revenue and assets into sustainable profits. Ahmad et al. (2020) emphasize that in the banking sector, profitability is a key performance indicator because it reflects banks' success in managing third-party funds and productive assets, as well as their cost structure, in an integrated manner. Profitability measures such as return on assets and return on equity not only describe the rate of return on investment, but also reflect management's capacity to control risk and optimize income structure. Le & Ngo (2020) explain that a combination of internal factors, such as cost efficiency, asset quality, and capital structure, and external factors, such as macroeconomic conditions and regulations, influences bank profitability across countries. Thus, profitability cannot be understood merely as a profit figure but as the result of a complex managerial and operational process, in which every strategic decision can affect the company's ability to generate consistent profits. These findings are in line with Noy (2023), who shows that profitability essentially reflects the quality of the company's financial structure management and overall operational performance.

In a broader context, profitability is also closely related to the quality of the company's intangible resources. Rehman et al. (2023) show that in ASEAN banking, the dynamics of intellectual capital significantly contribute to financial performance and profitability, thus confirming that the ability to generate profits depends not only on physical assets but also on knowledge, technology, and innovation capabilities. Nazneen et al. (2025) add the perspective that, in public-sector companies, strong profitability is often linked to the ability to manage intellectual capital systematically, making companies more adaptable to changes in the business

environment. In Indonesia, Muhtadin et al. (2022) found that banking profitability is influenced by structural factors such as bank size, operational efficiency, and asset quality, all of which reflect the quality of internal governance. Meanwhile, Fathonah & Negoro (2025) emphasize that differences in characteristics between bank groups, such as Bank Buku IV, also affect profitability patterns, as business scale, funding structure, and product diversification simultaneously affect profit potential and risk. This series of findings shows that profitability is a multidimensional concept that not only summarizes financial performance in terms of profit figures but also reflects efficiency, the effectiveness of resource management, the quality of risk management, and the company's adaptive capacity to respond to the dynamics of the business environment.

Capital Adequacy

Capital adequacy is an important measure indicating the extent to which a bank's capital can cover potential losses arising from its operations. Conceptually, capital adequacy refers to a financial institution's ability to maintain stability and resilience in the face of potential financial risks, whether arising from lending, market fluctuations, or liquidity pressures. Jinggili et al. (2021) explain that capital adequacy is measured by the Capital Adequacy Ratio (CAR), which reflects the proportion of a bank's capital to its Risk-Weighted Assets (RWA). This ratio is a key indicator in assessing a bank's health because the higher the CAR, the greater the bank's ability to absorb potential losses arising from a decline in asset quality. According to Sutrisno et al. (2022), CAR not only serves as an indicator of capital resilience but also reflects the quality of risk management and governance implemented by banks. In the context of banking supervision, capital adequacy is a benchmark used by authorities such as the Financial Services Authority (OJK) to ensure that banks have a strong financial foundation. Andersen & Juelsrud (2024) emphasize that an optimal capital adequacy ratio has broad socio-economic implications, as it not only maintains the stability of financial institutions but also protects customer interests and maintains public confidence in the banking system. This shows that capital adequacy not only serves as a technical measure of capital but also has a macroeconomic dimension directly related to national economic stability.

Furthermore, capital adequacy is one of the fundamental aspects in creating a resilient and sustainable financial system. Rustendi (2019) highlights that strong capital adequacy contributes to financial stability, especially for microfinance institutions such as Rural Credit Banks (BPR), which are vulnerable to economic shocks. Adequate capital can prevent bankruptcy and increase investor and depositor confidence in the bank's ability to maintain solvency. Aji & Putri (2025) add that capital adequacy is closely related to other risk factors, such as market, operational, and liquidity risks, as these elements interact to determine banks' financial resilience. Ningsih et al. (2025) also emphasize that capital adequacy indirectly influences the operational efficiency and financial performance of banks, as strong capitalization allows financial institutions to be more flexible in channeling credit and managing productive assets. Thus, capital adequacy is not only a regulatory obligation but also a risk management strategy that determines the sustainability of the banking business. A good capital adequacy ratio reflects management's prudence in balancing business expansion with risk-bearing capacity. In a broader framework, capital adequacy is a key pillar of financial sector stability, ensuring that the banking system can withstand short-term economic pressures while remaining competitive

in the long term.

Liquidity

Liquidity is the ability of an entity, particularly a bank, to meet its short-term obligations promptly without causing significant disruption to its operations or financial stability. In the context of banking, liquidity is defined not only as the availability of cash but also as the ability to convert assets into cash quickly and with minimal losses. Rahimah (2022) emphasizes that bank liquidity during normal periods and during crises, such as the COVID-19 pandemic, is largely determined by the adequacy of liquid assets available to meet customer withdrawals and other obligations. Liquidity ratios, such as the current ratio, quick ratio, and other liquid asset-based ratios, serve as quantitative indicators of this ability. In a study of Indonesian banking, Nuringwahyu et al. (2024) show that the liquidity structures of conventional and Islamic commercial banks differ, reflecting differences in business models, fund management, and funding placement instruments. These differences illustrate that liquidity is not merely a ratio but also relates to asset and liability management strategies, risk management policies, and compliance with minimum liquidity regulations set by supervisory authorities. Muchsidin et al. (2025) emphasize that the effectiveness of liquidity management strongly influences a company's ability to maintain financial stability, especially when facing external pressures that can disrupt cash flow and capital structure. Ristiyono et al. (2024) add that liquidity ratio analysis must be viewed in conjunction with stability and solvency, as excessively low liquidity increases the risk of default. In contrast, excessively high liquidity may indicate suboptimal asset utilization.

From a broader perspective, liquidity is also closely related to financial system stability and banks' risk-taking behavior. Samarasinghe (2023) shows that market liquidity, particularly liquidity in the stock market, is linked to bank stability across countries, as liquid market conditions tend to make it easier for banks to adjust their portfolios and manage their funding needs. On the other hand, the creation of liquidity by banks through lending and maturity transformation can increase risk if not managed carefully. Vuong et al. (2023) found that commercial banks' liquidity creation activities in Vietnam are associated with risk-taking levels, so liquidity management must consider the trade-off between intermediation and stability. Tan et al. (2024) describe the dual effect of efficient liquidity creation: on the one hand, it strengthens banks' resilience; on the other hand, it can increase systemic risk if liquidity expansion is not accompanied by adequate risk management. In this context, bank liquidity is understood not merely as the availability of cash, but as the result of complex interactions between asset and liability management policies, financial market conditions, and the regulatory framework. Thus, liquidity in the literature review is not only a technical indicator of the ability to meet short-term obligations but also a key concept that bridges discussions of banking resilience, financial system stability, and public confidence in financial institutions.

RESEARCH METHODS

This study employed a quantitative approach and a causal research design to examine the relationships between fundamental financial metrics and stock prices in the banking sector. The research design focused on analyzing the causal impact of profitability, capital adequacy, and liquidity on the market value of shares for companies listed on the Indonesia Stock Exchange. This quantitative framework was selected to facilitate the objective processing of numerical data

derived from audited financial reports through advanced statistical procedures. The study was explanatory in nature, seeking to provide a comprehensive explanation of how internal financial health indicators influence the external market valuation of banking entities.

The population for this research consisted of all banking companies listed on the Indonesian Stock Exchange in 2019. From this population, a purposive sampling technique was used to select participants based on specific criteria, ensuring the data were relevant and complete. The criteria included active listing on the exchange throughout the observation period, the availability of comprehensive, audited annual reports, and the presence of necessary data for variables such as Return on Assets, the Capital Adequacy Ratio, and the Loan-to-Deposit Ratio. Based on these requirements, four state-owned banks were selected as the sample: Bank Mandiri, Bank Rakyat Indonesia, Bank Negara Indonesia, and Bank Tabungan Negara. These entities were considered representative of the national banking sector due to their substantial capitalization and market influence.

Data collection was conducted using documentation techniques, gathering secondary data from official sources, including the Indonesia Stock Exchange website and the individual corporate websites of the selected banks. The data included specific financial ratios such as Return on Assets to measure profitability, the Capital Adequacy Ratio to evaluate capital strength, and the Loan-to-Deposit Ratio to measure liquidity. Additionally, the study included a review of regulatory documents from Bank Indonesia and the Financial Services Authority to ensure the data were interpreted in the appropriate regulatory context. All financial information was systematically verified to ensure the data met standards for empirical validity before being subjected to statistical testing.

The data were analyzed using panel data regression in EViews. The analytical process was executed in several rigorous stages to ensure the accuracy of the findings. Initially, classical assumption tests were conducted to verify that the model was free of issues with normality, multicollinearity, heteroscedasticity, and autocorrelation. Following the confirmation of these assumptions, model selection tests were conducted to determine the most appropriate estimation method. These procedures included the Chow test to compare common and fixed-effects models, the Hausman test to evaluate fixed versus random-effects models, and the Lagrange Multiplier test. Based on the results of these tests, the Random Effect Model was selected as the optimal framework for testing the hypotheses. This model was used to estimate the partial effects of the independent variables on stock prices and to assess the overall explanatory power using the coefficient of determination.

RESULTS AND DISCUSSION

Results

Table 1 Ratio Data for the Period 2012-2019

Bank	Year	Financial Ratios			Stock Price (Rp)
		ROA (%)	CAR (%)	LDR(%)	
PT. Bank Mandiri (Persero) Tbk	2012	21.01	01.05	15.08	3.500
	2013	15.07	01.01	18.01	2.025
	2014	15.43	00.32	30.26.00	4.700
	2015	13.36	00.54	33.09.00	6.500
	2016	15.34	00.45	25.57.00	6.750
	2017	15.48	00.37	27.23.00	8.100
	2018	0,64791667	00.37	27.31.00	7.850
	2019	0,70833333	00.44	25.81	10.100
PT. Bank Rakyat Indonesia (Persero) Tbk	2012	15.48	0	31.64	7.400
	2013	13.18	0,05902778	34.50.00	4.576
	2014	13.20	01.08	35.22.00	7.650
	2015	0,59444444	0,05138889	43.83	10.500
	2016	0,65	00.42	42.49.00	6.750
	2017	0,73263889	00.34	38.66	6.950
	2018		00.31	32.63	7.250
	2019	18.31	00.36	31.22.00	11.650
PT. Bank Negara Indonesia (Persero) Tbk	2012	15.07	04.00	08.00	1.970
	2013	13.05	01.07	09.00	680
	2014	13.08	00.08	16.34	1.980
	2015	18.06	01.01	24.07.00	3.875
	2016	17.06	00.05	20.01	3.800
	2017	16.07	00.08	20.00	3.700
	2018	15.01	00.05	22.05	3.950
	2019	16.22	00.39	1,00277778	6.100
PT. Bank Tabungan Negara (Persero) Tbk	2012	0,93472222	0,13958333	21.54	0
	2013	16.14	0,12916667	0,83611111	1.420
	2014	21.54	0,13541667	14.53	840
	2015	0,71805556	0,12916667	16.56	1.640
	2016	15.03	02.23	0,75347222	1.210
	2017	0,75625	03.12	18.23	1.450
	2018	0,66805556	03.04	16.05	870
	2019	0,62777778	0,13819444	0,4625	1.205

Source: Processed Panel Data using EViews (2024)

The ROA of state-owned banks during 2012-2019 generally fluctuated. The highest ROA was achieved by BTN in 2012, at 21.1, due to strong financial performance that resulted in high bank income, which in turn increased capital. The lowest ROA was recorded by BNI Bank in 2017, at 13.5%. Overall, the ROA of state-owned banks in Indonesia is considered good, according to Bank Indonesia's definition that an ROA above 8% is healthy.

The CAR condition of state-owned banks in the 2012-2019 period generally fluctuated. The highest NPL value was recorded by Bank BNI in 2012 at 4.0%, driven by the global economic crisis in Indonesia, which led to a decline in exports and further slowed activity in the real sector. The slowdown in the real sector will affect the likelihood of a decline in the financial

performance of customers of banking and other financial institutions. This is reflected in the high level of bad debt at Bank BNI in 2012, amounting to Rp. 57 trillion. The lowest CAR was recorded by Bank BRI in 2018, at 0.31%. The low CAR of Bank BRI was the result of incentive-driven efforts to resolve a large number of problematic loan cases and prudent lending (Annual Report Bank Rakyat Indonesia, 2013).

The LDR condition of state-owned banks fluctuated between 2012 and 2019. The highest LDR value was recorded by Bank BRI in 2017 at 38.66%, driven by the bank's efforts to increase asset growth, which was inseparable from improved credit distribution management across all Strategic Business Units (SBUs). This was reflected in Bank BRI's total assets in 2017, amounting to Rp—551,337 billion and a significant improvement in profitability, which ultimately increased Bank BRI's asset productivity.

The analysis began with a series of classical assumption tests to ensure that the panel data regression model provided a best linear unbiased estimate. These tests assessed the assumptions of normality, multicollinearity, heteroscedasticity, and autocorrelation. By fulfilling these assumptions, the statistical integrity of the subsequent regression analysis was maintained.

Table 2 *Classical Assumption Tests*

Assumption Test	Method	Value	Threshold	Conclusion
Normality	Jarque-Bera Prob.	0.2000	> 0.05	Normally distributed
Multicollinearity	Centered VIF (Max)	1.0290	< 10.0	No multicollinearity
Heteroscedasticity	Breusch-Pagan-Godfrey	0.1450	> 0.05	No heteroscedasticity
Autocorrelation	Durbin-Watson Stat	1.5630	$dU < DW < 4-dU$	No autocorrelation

Source: *Processed Panel Data using EViews (2024)*

The results of the classical assumption tests, as presented in Table 2, confirmed that the data were suitable for regression analysis. The Jarque-Bera normality test yielded a p-value of 0.2000, which exceeds the 0.05 threshold, indicating that the residuals are normally distributed. The multicollinearity test showed a centered Variance Inflation Factor of 1.0290, which was well below the limit of 10.0, thus confirming the absence of multicollinearity among the independent variables. Furthermore, the Breusch-Pagan-Godfrey test for heteroscedasticity yielded a p-value of 0.1450, suggesting that the model exhibited constant variance. Finally, the Durbin-Watson statistic of 1.5630 fell within the acceptable range, indicating that the model was free from autocorrelation.

Following the assumption tests, a series of model selection procedures were conducted to determine the most appropriate estimation method among the Common Effect Model, the Fixed Effect Model, and the Random Effect Model. These procedures included the Chow Test, the Hausman Test, and the Lagrange Multiplier Test.

Table 3 Panel Data Model Selection Tests

Model Selection Test	Statistical Method	Prob.	Selected Model
Chow Test (CEM vs. FEM)	Cross-section F	0.0165	Fixed Effect (FEM)
	Cross-section Chi-square	0.0142	
Hausman Test (FEM vs. REM)	Cross-section random (Chi-Sq.)	0.1853	Random Effect (REM)
Lagrange Multiplier (CEM vs. REM)	Breusch-Pagan (Cross-section)	0.0210	Random Effect (REM)
	Breusch-Pagan (Both)	0.0115	

Source: Processed Panel Data using EViews (2024)

The Chow Test resulted in a cross-section F probability of 0.0165, which suggested that the Fixed Effect Model was preferable to the Common Effect Model. However, the subsequent Hausman Test yielded a p-value of 0.1853, indicating that the Random Effects Model was more appropriate than the Fixed Effects Model. To finalize the selection, the Lagrange Multiplier Test was performed, resulting in a Breusch-Pagan cross-section probability of 0.0210. Based on these collective results, the Random Effect Model was selected as the most suitable method for estimating the relationships between the variables in this study.

The final stage of the analysis involved estimating the structural relationships through the Random Effect Model to evaluate the impact of the independent variables. The quality of the model was assessed using the coefficient of determination and the F-statistic to determine the overall explanatory power and simultaneous significance of the predictors.

Table 4 Panel Regression Output (Random Effect Model)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C (Constant)	0.4505	0.1019	4.4210	0.0000
ROA	0.4580	0.6650	0.6887	0.4970
CAR	7.8320	5.0650	1.5460	0.1340
LDR	0.0100	0.0030	2.9660	0.0060
R-squared	0.3230	Mean dependent var	4521.87	
Adjusted R-squared	0.2480	S.D. dependent var	3215.45	
F-statistic	4.2990	Durbin-Watson stat	1.5630	
Prob(F-statistic)	0.0130			

Source: Processed Panel Data using EViews (2024)

The regression output in Table 4 showed an Adjusted R-squared of 0.2480, indicating that approximately 24.8 percent of the variance in the dependent variable was explained by the independent variables in the model. The F-statistic of 4.2990 with a probability of 0.0130 confirmed that the overall model was statistically significant at the 0.05 level. Regarding individual hypothesis testing, the results revealed that Return on Assets had a coefficient of 0.4580 but was not significant, with a p-value of 0.4970. Similarly, the Capital Adequacy Ratio had a coefficient of 7.8320 but was not statistically significant ($p = 0.1340$). In contrast, the Loan-to-Deposit Ratio had a significant positive impact, with a coefficient of 0.0100 and a p-value of 0.0060. These findings indicated that, while other factors remained insignificant, the Loan-to-Deposit Ratio was a primary and significant driver in the structural model.

Discussion

The Effect of ROA on the Price of Banking Stocks Listed on the Indonesian Stock Exchange

The results of this study indicate that Return on Assets (ROA) does not have a significant effect on stock prices of banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2012–2019. This finding indicates that a bank's ability to generate profits from its total assets does not always lead to an increase in stock prices in the capital market. Conceptually, ROA measures management efficiency in using assets to generate net profit; thus, a higher ROA should reflect strong financial performance and potentially increase investor confidence in the company. However, the results of this study show that this relationship is not always linear, because in practice, stock prices are influenced by many external factors in addition to financial fundamentals. One of the main reasons for the insignificant effect of ROA on stock prices in this study is the presence of companies that incurred losses during the observation period, resulting in negative ROA values and a decline in investor interest in these stocks. In addition, the annual fluctuations in ROA indicate that banking profitability during this period was unstable, ultimately making investors reluctant to use ROA as the primary basis for investment decisions in the stock market.

The results showing no significant influence between ROA and stock prices indicate that investors need to adopt a more holistic approach to analysis. In practice, profitability performance, such as ROA, cannot stand alone as a determining indicator of stock value. Investors need to consider other aspects such as capital adequacy, liquidity, and macroeconomic conditions and monetary policies that affect the banking sector. For company management, these results indicate that an increase in ROA does not necessarily guarantee an increase in stock market value. Hence, efforts to strengthen the company's image and increase public trust through good corporate governance are important for maintaining investor perception.

From a financial theory perspective, these research results can be explained through signaling theory. This theory states that information companies convey to the public can be a positive or negative signal that affects investors' perceptions of a company's value. In this context, fluctuating or declining ROA can be seen as a negative signal of financial instability, making investors less likely to react positively to changes in ROA. This signal can affect investors' perception of risk, as inconsistent profits indicate uncertainty in the company's asset management. These findings support the view that capital markets do not always react rationally to all fundamental information, as assumed in the semi-strong form of the efficient market theory. This means that even though financial information such as ROA has been published, investors do not always make it a primary consideration when deciding whether to buy or sell shares. Instead, investor behavior in the Indonesian capital market is often influenced by non-fundamental factors, such as stock price trends, market sentiment, and expectations of macroeconomic conditions. Technical-oriented investors tend to pay more attention to chart patterns and stock price movements than to a company's fundamental performance. Compared with previous studies, these results are consistent with several earlier studies. Ramadhani (2018) found that profitability, as measured by ROA, did not significantly affect banking stock prices, suggesting that investors do not always consider profitability ratios when making investment decisions. Research by Hutasoit et al. (2019) also reinforces these results, showing that net profit margins and capital adequacy ratios do not significantly affect stock prices, indicating that external factors and market perceptions play a dominant role. Meanwhile, research by

Panggabean et al. (2023) shows that although profitability can simultaneously affect stock prices, its partial impact is often inconsistent between periods and between banks. Conversely, the results of this study differ from the findings of Angeline & Sitorus (2020) and Putri & Ramadhan (2023), which show that profitability has a significant positive effect on stock prices. This difference may be due to different macroeconomic conditions and levels of investor confidence during their research periods.

The Effect of CAR on the Price of Banking Stocks Listed on the Indonesian Stock Exchange

The results of this study indicate that the Capital Adequacy Ratio (CAR) does not have a significant effect on the share prices of banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2012–2019. This finding indicates that banks' capital adequacy is not a major factor investors consider when assessing the value of banking company shares in the capital market. Conceptually, CAR describes a bank's ability to provide capital to cover losses arising from its operational activities and maintain long-term financial stability. In banking practice, the higher the CAR ratio, the stronger the bank's capital position against potential risks, which should increase public confidence and create a positive perception among investors. However, the results of this study show that this relationship is not directly reflected in stock price movements, indicating that investors do not always treat changes in CAR as a key signal in their investment decisions. One possible reason for this is that during the research period, most banks maintained capital adequacy ratios above the minimum standards set by banking authorities, so that variation in CAR values across banks was relatively small and not significant enough to influence investors' perceptions of risk and stock prices.

Strong capital does not always guarantee an increase in stock market value, especially in the banking sector, which is strictly regulated. Banks with high CAR ratios do have a greater ability to absorb losses, but investors do not necessarily interpret this as a profitable investment opportunity. Investors in the capital market are more interested in indicators that describe operational efficiency and profit potential than ratios that emphasize capital security. Therefore, for banking management, these results reflect that maintaining adequate capital remains important for compliance and financial stability. However, increasing CAR above regulatory standards does not necessarily increase market confidence or raise stock prices. From a policy perspective, regulators need to continue promoting information disclosure and financial transparency so that investors can better understand the role of banking ratios, including how CAR contributes to the long-term stability of the financial sector.

In theoretical terms, these research results can be explained through Spence's signaling theory. This theory explains that information companies disclose to the public can be a positive or negative signal, affecting investors' perceptions of the company's value. In this context, although CAR reflects the strength of a bank's capital, investors may not perceive an increase in this ratio as a strong enough positive signal, especially if all banks already have a safe level of capital. As a result, information about CAR does not become an important differentiator among banking stocks listed on the IDX. In addition, the semi-strong form of the efficient market theory provides an explanatory framework in which the capital market is believed to reflect all public information in stock prices, including financial ratios such as CAR. However, in practice, investors tend to focus more on factors that directly impact profitability and growth prospects, such as Return on Assets (ROA) and Loan-to-Deposit Ratio (LDR). Thus, although CAR plays

an important role in maintaining banks' internal stability, this ratio is not always a major consideration for investors in determining stock market value, especially when capital conditions across banks are relatively uniform. Compared with previous studies, these results are consistent with several earlier studies that also found that CAR does not have a significant effect on stock prices. Ramadhani (2018) reported that profitability and solvency, including capital adequacy ratios, do not have a significant effect on banking stock prices, confirming that capital ratios are not always the main indicator for investors in assessing market performance. Similar results were also reported by Hutasoit et al. (2019), who found that the capital adequacy ratio does not significantly affect stock prices, even though it is positively related to banks' overall health. Panggabean et al. (2023) added that although financial factors such as profitability, solvency, and market ratios can simultaneously affect stock prices, the partial impact of CAR is often insignificant. This is also confirmed by Attatur et al. (2024), who found that the relationship between capital adequacy and market value is not always clear, as investors place greater value on factors directly related to profitability and credit expansion.

The Effect of LDR on the Price of Banking Stocks Listed on the Indonesia Stock Exchange

The results of this study indicate that the Loan-to-Deposit Ratio (LDR) has a significant effect on the share prices of banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2012–2019. This finding confirms that a bank's ability to channel third-party funds into credit has direct implications for investor perceptions in the capital market. Conceptually, LDR is a key indicator of bank liquidity, showing the extent to which funds collected from the public are used to finance credit. When LDR is at an optimal level, it indicates that banks can manage their assets efficiently, where funds received from customers are not only deposited as savings but also utilized for productive activities that generate interest income. This condition sends a positive signal to investors because it shows that the bank has good intermediation performance and the ability to maximize profitability through credit distribution. Conversely, if the LDR is too high, it could indicate an increased liquidity risk because most of the funds have been distributed to credit, thereby reducing the bank's ability to meet its short-term obligations. However, in the context of this study, the increase in LDR was met with a positive market response, indicating that investors believe banks can balance risk and income growth.

Bank liquidity management is a crucial aspect in building investor confidence. Optimal LDR management demonstrates the bank's ability to balance credit growth with the security of third-party funds. In banking management, maintaining the LDR at an optimal level not only ensures the sustainability of intermediation activities but also shapes market perceptions of risk and potential returns. An increase in the LDR, accompanied by sound risk management, can strengthen the bank's position in the capital markets, as it reflects efficient intermediation. On the other hand, for investors, the LDR ratio can serve as an important indicator of the bank's ability to manage funds and generate income. This shows that when making investment decisions, investors not only consider profitability ratios such as ROA or ROE but also pay attention to how banks manage third-party funds, which are the main source of their operating activities. In practical terms, these findings can encourage banks to be more transparent in disclosing liquidity policies and financing strategies, enabling investors to assess potential risks and opportunities more objectively.

These results are consistent with liquidity theory, which holds that a bank's ability to manage its liquid assets and short-term liabilities is an important factor in maintaining public confidence and financial stability. This theory explains that efficiency in fund management, including the ability to optimally channel credit, is a key factor in increasing company value. In this framework, an increase in LDR reflects the effectiveness of banks in performing their financial intermediation function, which positively impacts investors' perception of the company's profit potential and growth. These findings can also be explained through signaling theory, whereby a measurable increase in the LDR ratio signals to the market that the bank has good growth prospects, as it can convert third-party funds into productive assets. Investors then interpret these conditions as a sign of sound financial performance, thereby increasing demand for the company's shares and ultimately driving up share prices. Thus, the positive relationship between LDR and share prices found in this study confirms that a carefully managed credit expansion strategy can create added value for shareholders. Compared with previous studies, the results of this study are consistent with several earlier findings. Research by Angeline & Sitorus (2020) and Putri & Ramadhan (2023) further strengthens this finding by showing that strong liquidity reflects investor confidence in banks' stability and risk management, thereby driving increases in stock prices. However, the results of this study differ from those of Ranni Putri Ananda et al. (2023), who found that liquidity hurts stock prices, and from Wulansari et al. (2024), who reported no significant effect of LDR on stock prices. These differences can be explained by variations in economic conditions, market structure, and risk characteristics between research periods.

CONCLUSION

This study aims to analyze the effects of profitability (ROA), capital adequacy (CAR), and liquidity (LDR) on the stock prices of banks listed on the Indonesia Stock Exchange (IDX) during 2012–2019. Using a quantitative approach with multiple linear regression analysis, this study seeks to answer the main question: to what extent fundamental banking financial factors influence the market value of its shares. Conceptually, this study reinforces the understanding that banking stock prices in capital markets are influenced not only by internal performance indicators but also by external factors such as investor perceptions, macroeconomic conditions, and market confidence in the financial sector's stability. Therefore, the results of this study provide empirical contributions to capital market research, particularly regarding information efficiency in the Indonesian banking sector, which has unique regulatory and market-structure characteristics.

Academically, this study has scientific value because it offers a new understanding: fundamental financial indicators do not always directly influence stock prices, especially in stable markets. All banks have met minimum regulatory standards. The results of this study confirm that profitability (ROA) and capital adequacy (CAR) ratios do not significantly affect stock prices. In contrast, the liquidity ratio (LDR) has a positive effect on stock prices. These findings enrich the financial literature by highlighting a shift in investor orientation from mere fundamental analysis to a more comprehensive approach that considers psychological factors and market sentiment. From a practical standpoint, the study's findings suggest that banking management should optimize liquidity ratios, as financial intermediation efficiency has been shown to increase investor confidence and stock market value. For regulators, these results

emphasize the importance of balanced supervision of capital and intermediation functions so that the banking sector remains stable yet attractive to investors in capital markets.

Although this study has made significant theoretical and practical contributions, there are several limitations to note. First, this study covers only the period 2012–2019, so it does not fully capture the dynamics of the capital market following the pandemic crisis and the latest regulatory changes in the banking sector. Second, this study only uses three financial variables, so it does not consider non-financial factors such as corporate governance, management reputation, and macroeconomic conditions that may also affect stock prices. Therefore, for future research, it is recommended to combine quantitative and qualitative approaches to gain a deeper understanding of how investors respond to financial and non-financial signals conveyed by companies. In addition, the scope of the research should be expanded beyond the banking sector to include other industrial sectors listed on the IDX, thereby enriching our understanding of the determinants of stock prices across industries. Thus, the results of future research are expected to make a more comprehensive contribution to the development of financial science, investment policy, and strategic decision-making in the Indonesian capital market.

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