

The Impact of Fundamental and Technical Factors on Bank Stock Prices in Indonesia

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ABSTRACT

Purpose: This study aims to analyze the influence of fundamental and technical factors on the stock prices of banking companies listed on the Indonesia Stock Exchange during the 2020–2022 period. The study addresses the need for investors and company management to understand better the determinants of stock value in the banking sector.

Research Method: This research employs a quantitative approach using secondary data. The population consists of 47 banking companies listed on the Indonesia Stock Exchange during the observation period. Data were analyzed using classical assumption tests, multiple linear regression, the coefficient of determination, the correlation coefficient, and hypothesis testing using simultaneous and partial tests.

Results and Discussion: The findings show that the current ratio, return on assets, and debt-to-asset ratio have a positive and significant effect on banking stock prices. Total asset turnover has a negative but insignificant effect. From the technical factor perspective, interest rates have a positive and significant effect on stock prices, while inflation has a negative and significant effect. These results indicate that both internal financial performance and external macroeconomic conditions influence banking stock valuation.

Implications: The findings provide practical guidance for investors in making investment decisions and for banking management in improving financial performance.

Originality: This study integrates fundamental financial ratios and macroeconomic technical indicators to explain banking stock price movements in Indonesia.

Keywords: fundamental analysis; technical analysis; stock price.

1. Introduction

In modern economic life, money plays a fundamental role as the primary medium of exchange in all transactional activities. At the macro level, money is a crucial parameter in a country's economy because it encompasses all economic activities, ranging from production and distribution to the consumption of goods and services—all of which are closely tied to the role of money (Simmons *et al.*, 2021). Societal economic activities, such as buying and selling, renting, international trade, and other forms of transactions, are fundamentally inseparable from money's function as a legitimate and widely accepted medium of exchange (Jouzi *et al.*, 2024). The development of economic systems demonstrates that



money was created to address the limitations of the barter system, which required direct value agreements between transacting parties. In this context, governments and central banks utilize monetary instruments as part of economic policy, particularly within the financial and banking sectors, which play a strategic role in maintaining economic stability. At the micro level, a company's primary objective is to achieve profit as a fundamental indicator of business performance. This corporate performance is reflected in the capital market through stock prices, which are formed by the interaction of supply and demand for shares at a specific point in time. Stock prices also reflect investors' perceptions of a company's value and prospects, where high prices indicate a positive outlook, while low prices reflect a less favorable perception (Faizah & Priyadi, 2023). Empirical evidence in the banking sector on the Indonesia Stock Exchange shows an average decline in stock prices during the 2020–2022 period of -2.06%, with a decline from 2,370.0645 in 2020 to 2,272.9355 in 2022, and the largest annual decline of -3.61% in 2022. This situation indicates significant market uncertainty and dynamics, thereby requiring investors to conduct more comprehensive analysis.

Various empirical studies show that stock price movements are influenced by a combination of fundamental and technical factors, with varied yet still significant impacts. Beyaz *et al.*, (2018) found that fundamental analysis indicators outperform technical analysis in stock price forecasting, and that combining both indicators can reduce prediction error to less than 5%. This finding aligns with Agustin (2019), who concluded that investors achieve optimal returns when simultaneously integrating fundamental and technical analysis into their investment decision-making. In the literature, the most commonly used fundamental indicators include Earnings Per Share (EPS), Return on Equity (ROE), and Price-to-Book Value (PBV). In contrast, technical indicators generally include trading volume, previous stock prices, and market indices as representations of market sentiment. However, the results of previous studies are not always consistent. Suyanto *et al.*, (2021) and another study indicate that no single approach can guarantee fully accurate stock price predictions, thereby underscoring the importance of comprehensive, multifactorial analysis.

Studies by Turnip (2022) and another study indicate that fundamental factors such as EPS, ROE, and PBV have a statistically significant influence on stock prices, while technical factors such as trading volume still play a role, albeit with a lower level of consistency. Similar findings were also reported by Ardana *et al.*, (2024), who observed variations in the influence of technical indicators across companies. This empirical evidence spans various sectors, including banking, insurance, property, real estate, transportation, energy, chemicals, and the food industry, with sample sizes ranging from 11 to 25 companies. Most studies, such as those conducted by Irpand & Prasetyanta (2020), Amalia & Ardillah (2022), Olivia & Ovami (2021), Saputri *et al.*, (2020), Dewi & Rangkuti (2020), and Nurliandini *et al.*, (2021), found that fundamental and technical factors simultaneously have a significant impact on stock prices, although the partial effects of each variable vary. More specifically, Dini *et al.*, (2021) demonstrated that earnings per share and dividends per share significantly influence stock prices, whereas trading volume does not, further underscoring the complexity of the relationship between fundamental and technical factors and stock price formation in the capital market.

Although various previous studies have provided empirical evidence regarding the influence of fundamental and technical factors on stock prices, there remain a number of research gaps that are relevant both empirically and theoretically. Empirically, research results show findings that are not yet fully consistent, particularly regarding the strength and stability of the influence of each technical indicator, such as trading volume and past stock prices. Some studies have found significant effects,

while others have shown weak or insignificant effects, leading to uncertainty in generalizing the findings. Furthermore, most previous studies have used cross-sectoral research subjects such as property, real estate, transportation, energy, chemicals, and the food industry, with varying observation periods; consequently, the sectoral and temporal contexts often differ and may potentially influence research outcomes. From a theoretical perspective, prior studies tend to address fundamental and technical factors in isolation or emphasize only one approach as the primary basis for explaining stock price formation. However, capital market literature indicates that stock prices result from a complex interaction between a company's internal performance and market behavior dynamics. Furthermore, research specifically examining the integration of these two approaches within the banking sector—which possesses unique characteristics such as high regulatory intensity, sensitivity to monetary policy, and a strategic role in the national financial system—remains limited. Another gap lies in the limited research examining the period from 2020 to 2022—a period marked by economic uncertainty, market pressures, and significant stock price fluctuations. These conditions indicate that further research is still needed to broaden and deepen the understanding of the relevance of fundamental and technical factors in explaining stock price behavior within a sectoral context and over a more specific time period. Based on the previously identified empirical and theoretical gaps, the novelty of this study lies in the effort to simultaneously integrate fundamental and technical factor analysis in explaining the stock price formation of banking companies that went public on the Indonesia Stock Exchange during the 2020–2022 period. This study focuses primarily on the banking sector, taking into account its specific characteristics as a highly regulated industry that is sensitive to monetary policy dynamics and macroeconomic conditions. Additionally, the study period, which encompasses a phase of economic uncertainty, provides an empirical context distinct from most previous studies. By examining fundamental indicators such as Earnings Per Share, Return on Equity, and Price-to-Book Ratio alongside technical indicators such as trading volume and stock price movements, this study aims to provide a more comprehensive understanding of the factors influencing banking stock prices. In line with these objectives, this study aims to empirically analyze the influence of fundamental factors on the stock prices of publicly listed banks on the Indonesia Stock Exchange and to examine the influence of technical factors on banking stock prices during the period from 2020 to 2022. The results of this study are expected to advance capital market theory and provide practical implications for investors and stakeholders in formulating more rational, information-based investment strategies.

The remainder of this paper is organized as follows. Section 2 provides a literature review and hypothesis development. Section 3 presents research methodology. Section 4 provides empirical results and discussion. Section 5 presents the conclusion.

2. Literature Review and Hypothesis Development

2.1 Efficient Market Hypothesis

The Efficient Market Hypothesis (EMH) is a fundamental concept in financial theory that states that financial asset prices in capital markets fully, quickly, and rationally reflect all available information at any given time. Within this framework, stock prices not only represent a company's intrinsic value but also incorporate market participants' collective expectations regarding all relevant public and private information. Thus, changes in stock prices are viewed as a direct response to the influx of new information into the market, rather than as a result of historical patterns that can be systematically

exploited. This understanding places information efficiency at the core of capital market mechanisms. Contemporary empirical studies show that market efficiency is not a static condition, but rather a dynamic phenomenon that is heavily influenced by market structure and information characteristics. Bock & Geissel (2024), for example, demonstrate that stock market efficiency in Europe has evolved over time, with efficiency levels rising or falling in tandem with technological advancements, regulations, and market integration. From this perspective, the EMH is no longer understood as a binary concept of efficient versus inefficient, but rather as a spectrum reflecting varying degrees of efficiency across markets and time periods. Information dynamics also play a key role in the formation of price efficiency. Zhang & Wang (2024) assert that the presence of rumors in the stock market can affect price efficiency, as rumors function as a form of unverified information that market participants still respond to. These findings demonstrate that while markets strive for efficiency, the process of information absorption is often influenced by investors' behavioral and psychological factors. Developments in EMH research also indicate that the concept of market efficiency is increasingly being tested across instruments and market types. Özcan & Iftikhar (2024) tested the validity of the EMH in the cryptocurrency market and found that market efficiency in digital instruments does not always align with that of traditional stock markets, primarily due to the more decentralized and volatile nature of the information. Similar results were also reported by Souza & Carvalho (2023), who emphasized variations in efficiency across exchanges, even within the same asset class, thereby reinforcing the view that market efficiency is contextual. These findings expand the scope of the EMH from conventional stock markets to more complex modern financial markets. However, recent literature also indicates growing criticism of the EMH's basic assumptions. Nyakurukwa & Seetharam (2023) review various alternative theories that challenge the EMH's assumptions of perfect information and full rationality, emphasizing the role of market frictions, investors' cognitive limitations, and information asymmetry. This approach is enriched by the research of Ali *et al.*, (2023), which demonstrates the existence of asymmetric market efficiency in the Eurozone, where markets respond differently to information under bullish and bearish conditions. This indicates that market efficiency can be asymmetric and dependent on macroeconomic conditions. Furthermore, advancements in analytical technology and artificial intelligence are driving a reevaluation of the EMH. Pagliaro (2025) highlights that artificial intelligence's ability to process big data and detect complex patterns challenges the EMH's classical assumption regarding the impossibility of systematic prediction. Nevertheless, Pagliaro emphasizes that these findings do not necessarily invalidate the EMH, but rather point to the need for a reinterpretation of the concept of market efficiency in the context of the digital age.

2.2 Stock Price

A stock price is the market value of a share determined through trading mechanisms in the capital market. It reflects investors' collective assessment of a company's prospects, risks, and performance at a given time. A stock price is not merely a trading figure but a dynamic indicator of market expectations regarding future cash flows, corporate stability, and the broader economic environment. In modern financial literature, stock prices are viewed as the result of a complex interaction between information, investor behavior, and market structure, as demonstrated in the context of the Indonesian banking stock market by Ameliana (2024), who asserts that a combination of internal company factors and external market conditions influences stock price movements. Ahmed & Sleem (2023) assert that stock price behavior is influenced by distinct short- and long-term determinants, with macroeconomic factors,



industry conditions, and market sentiment simultaneously shaping price dynamics. This perspective indicates that stock prices are not a static reflection of a company's value but rather a continuous adjustment process in response to new information. Access to public information also plays a crucial role in stock price formation. Du *et al.*, (2024) demonstrate that transparency and access to public data influence stock price synchronization, meaning a company's stock price tends to move in tandem with the market when available information is widely accessible. This finding reinforces the understanding that stock prices reflect the level of information transparency and the efficiency of information dissemination in the market. On the other hand, developments in analytical methodologies indicate that stock prices also contain patterns and structures that can be analyzed quantitatively. Ifleh & El Kabbouri (2023) suggest that stock price indices can be predicted with higher accuracy by combining deep learning approaches and market indicators, indicating that stock prices capture the historical dynamics and market responses to various information signals. In addition to reflecting internal company information and market structure, stock prices are also highly sensitive to external factors and environmental uncertainty. Gil-Alana *et al.*, (2025), in a cross-country study in Africa, demonstrated that stock price dynamics differ significantly across markets, depending on each country's level of economic stability, financial market depth, and institutional framework. This underscores that stock prices are context-dependent and inseparable from macroeconomic and institutional conditions. Political uncertainty has also been shown to have significant implications for stock prices. Makrychoriti & Pyrgiotakis (2024) found that political risk at the firm level increases the probability of sharp stock price declines, suggesting that stock prices function as a mechanism for transmitting non-economic risks into a firm's market value. In the context of market information, analysts' role is also an inseparable factor in stock price dynamics. Bouaddi *et al.*, (2023) demonstrate that analyst coverage influences the probability of both stock price surges and crashes, as analysts interpret and disseminate information to investors. Stock prices, in this regard, reflect the information-interpretation process mediated by market actors. Furthermore, external factors such as exchange rates also influence stock price movements, particularly in markets integrated with international trade. El-Diftar (2023) demonstrates that exchange rate fluctuations significantly affect stock market performance and prices, as changes in exchange rates affect corporate competitiveness, production costs, and capital flows. Taken together, these findings demonstrate that stock prices are a multidimensional construct that reflects the interplay among information, risk, and market expectations.

2.3 Fundamental Analysis

Fundamental analysis is an approach to evaluating stock value that focuses on assessing economic conditions, industry trends, and, most importantly, a company's financial performance to determine a stock's intrinsic value. This approach is based on the assumption that a stock's market price may deviate from its intrinsic value in the short term but will eventually converge toward a value that reflects the company's actual performance and prospects. In this context, fundamental analysis utilizes accounting and financial information as the primary basis for investment decision-making. Barnett & Sergi (2023) explain that fundamental analysis involves using various concepts, ratios, and risk measures to assess a company's ability to generate sustainable cash flow, manage risk, and create long-term value for shareholders. This approach treats financial statements as the primary source of information, using profitability, liquidity, solvency, and efficiency ratios to assess a company's financial health comprehensively. Olbert (2024) notes that in professional practice, financial analysts widely rely on



fundamental valuation methods such as discounted cash flow (DCF) and valuation multiples tailored to industry-sector characteristics, underscoring that fundamental analysis is contextual and inseparable from a company's business structure. Thus, fundamental analysis serves not only as a tool for evaluating financial figures but also as a conceptual framework for understanding how a company's strategy, industry position, and economic conditions are reflected in stock value. This view is reinforced by Indra *et al.*, (2024), who emphasize that fundamental factors such as revenue, book value, and profitability play a central role in explaining differences in stock values across companies. However, in practice, market anomalies cause temporary deviations from these fundamental values. Fundamental analysis remains relevant and is even becoming increasingly adaptive in the face of modern market complexities. Sharma *et al.*, (2022) assert that accounting performance and the regulatory environment significantly influence stock valuation, particularly in the banking sector, indicating that fundamental analysis also reflects a company's response to policies and governance, in line with Kalsum's (2023) findings, which show that a company's financial indicators and business strategies are the primary determinants in shaping shareholder value and market perception. In this context, financial ratios are viewed not only as indicators of historical performance but also as signals of a company's ability to adapt to changes in the business environment. Agusta *et al.*, (2024) add that fundamental analysis plays a crucial role in identifying undervalued stocks, thereby providing a stronger foundation before predicting future stock price movements or returns. The ratio-based approach remains a cornerstone of fundamental analysis, as demonstrated by Rahmawati *et al.*, (2022), who used ratios such as the debt-to-equity ratio, return on assets, and current ratio to assess the relationship between corporate performance and stock returns. These findings indicate that fundamental analysis provides a systematic, data-driven framework for evaluating corporate value. With technological advancements, this approach has also been integrated with modern analytical methods. Phan & Chang (2024) demonstrate that fundamental data, including profitability ratios and intrinsic value estimates, can be used in machine learning models to predict stock trends without compromising the essence of fundamental analysis. This integration demonstrates that fundamental analysis is not static but continues to evolve, combining classical financial assessment with methodological innovation.

2.4 Technical Analysis

Technical analysis is an approach to financial market analysis that aims to predict asset price movements by studying historical price patterns, trading volume, and other market indicators, on the assumption that this information is already reflected in prices and that market behavior tends to repeat itself. Within this framework, technical analysis does not focus on a company's fundamental conditions but rather on the dynamics of price movements, which serve as an aggregate representation of the psychology and collective behavior of market participants. Mostafavi & Hooman (2025) explain that technical analysis is built on a set of key indicators, including trend, momentum, volatility, and volume indicators, each designed to capture specific aspects of market behavior. These indicators are used to identify trend direction, price movement strength, and potential market reversal points. This approach is based on the assumption that prices move in identifiable patterns that can be utilized for decision-making. Shi (2025) emphasizes that technical indicators are not only relevant at the individual stock level but also provide explanatory power for aggregate market returns, indicating that technical analysis can capture systemic signals reflected in broader price dynamics. In this context, technical analysis is understood as a method that extracts implicit information from market data, rather than merely a speculative tool. Along with

advancements in computational technology, technical analysis has also undergone methodological enrichment. Ji *et al.*, (2022) demonstrate that the effectiveness of technical indicators can be enhanced through adaptive feature selection processes and data cleansing techniques, such as wavelet denoising, thereby making the resulting price signals more stable and informative. Technical analysis is increasingly positioned as an analytical approach capable of adapting to the complexities of modern markets. Wang *et al.*, (2024) demonstrate that integrating technical indicators with other factors, such as ownership structure and news information, can improve the quality of predictive models, indicating that technical indicators contain important information regarding market responses to various external signals. This aligns with the findings of Pasulu *et al.*, (2026), who emphasize that the use of big data and advanced analytical techniques enables the extraction of latent patterns from complex data streams, thereby improving the quality of inference and prediction. Nevertheless, the core of technical analysis lies in interpreting price and volume patterns as direct manifestations of buying and selling activity. An evaluation of the predictive capabilities of technical analysis is also a focus of critical research. The study by Kaur *et al.*, (2025) confirms that the prognostic potential of technical analysis is highly dependent on market context, time horizon, and indicator selection, meaning that technical analysis cannot be understood as a uniform approach for all conditions. Jin *et al.*, (2023) empirically compared technical-based trading rules with buy-and-hold strategies and found that under certain market conditions, technical rules can deliver superior performance, although this advantage is not universal. This reinforces the view that technical analysis works by exploiting short- to medium-term patterns arising from investor behavior and market imperfections. From a broader perspective, Darwish *et al.*, (2025) position technical analysis as a crucial foundation in the evolution of stock market forecasting methods, ranging from traditional approaches to modern hybrid models.

3. Research Method

This study is a quantitative study using secondary data. The scope of this study focuses on corporate financial ratios as a measure of corporate performance, as well as interest rates and inflation, in relation to publicly listed banking companies. The data were accessed via the website www.idx.co.id, using the annual reports of banking companies listed on the Indonesia Stock Exchange for the period 2020–2022. This study was conducted on banking companies through a sample selection at the Investment Gallery of the Faculty of Economics and Business, University of Muslim Indonesia, located at Jalan Urip Sumoharjo Km 05, Makassar, South Sulawesi, which provides financial data on banking companies listed on the Indonesia Stock Exchange (IDX). The population in this study consists of all banking companies listed on the Indonesia Stock Exchange from 2020 to 2022, totaling 47 companies. The sampling technique employed was saturation sampling (census), in which the entire population served as the sample.

The data used in this study are quantitative and derived from annual reports (Annual Report) that contain the financial statements of banking companies listed on the Indonesia Stock Exchange. The data source for this study is secondary data on banking companies listed on the Indonesia Stock Exchange for the 2019–2022 period, available online at <http://www.idx.co.id>. The data collection techniques used in this study are documentation, specifically field research and literature review. Data analysis in this study began with classical assumption tests to ensure that the regression model met statistical requirements. A normality test was conducted using the Kolmogorov–Smirnov test to assess

whether the residuals were normally distributed; a significance level above 0.05 indicates normality (Ghozali, 2018). Next, a linearity test was conducted to assess the linear relationship between the independent and dependent variables, with a linearity significance level of <0.05 (Ghozali, 2018). The heteroscedasticity test was conducted using the Glejser test, with the null hypothesis that heteroscedasticity is absent if the significance value for each independent variable is greater than 0.05 (Ghozali, 2018). The autocorrelation test was performed using the Durbin–Watson test. At the same time, multicollinearity was assessed using the Variance Inflation Factor (VIF), with a VIF < 10 indicating the absence of multicollinearity (Ghozali, 2018).

Table 1. Sample Selection Criteria

No.	Sample Selection Criteria	Number of Companies
1.	Companies in the banking sector listed on the Indonesia Stock Exchange (IDX) during the 2020–2022 period	47
2.	Banks that went bankrupt between 2020 and 2022	(1)
3.	A banking company listed on the Indonesia Stock Exchange that did not publish its financial statements for 2020	(0)
4.	Banking companies listed on the Indonesia Stock Exchange that incurred losses during the 2020–2022 period	(14)
5.	Companies that did not publish their stock summaries in 2020	(1)
6.	Research Sample	31

The multiple linear regression equation is as follows:

$$Y = X + b_1X_{1.1} + b_2X_{1.2} + b_3X_{1.3} + b_4X_{1.4} + b_5X_{2.1} + b_6X_{2.2} + e \quad (1)$$

Information:

- Y = Stock Price
- X1.1 = Return on Asset
- X1.2 = Current Ratio
- X1.3 = Debt to Asset Ratio
- X1.4 = Total Asset Turnover
- X2.1 = Interest Rate
- X2.2 = Inflation Rate
- b1, b2 = Regression Coefficient
- e = Standard Error

4. Results and Discussion

4.1 Analysis Results

4.1.1 Descriptive Analysis of Research Variables

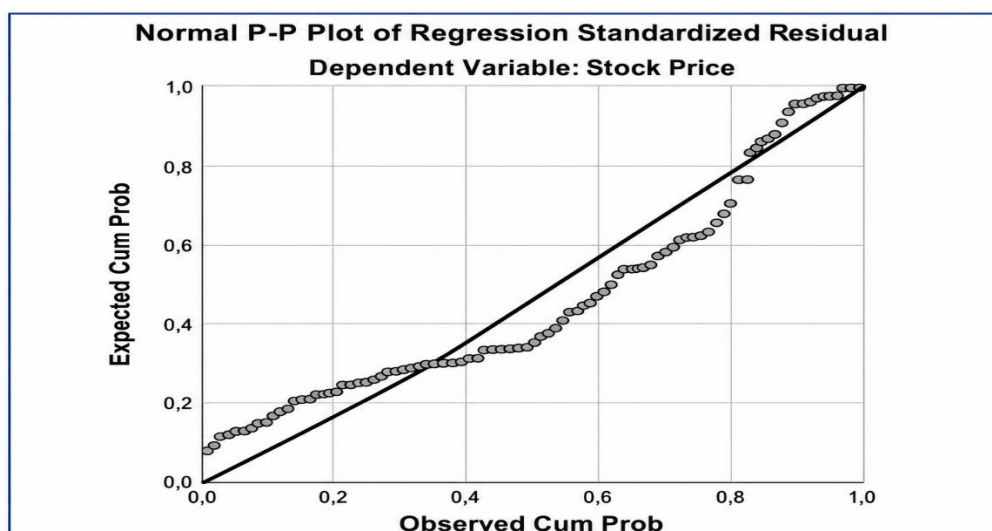
- *Current Ratio*

The independent variable is the current ratio; during the 2020–2022 period, the current ratio had its lowest average of 1.0213 in 2021, and its highest average of 1.4616 in 2022. In 2021, the current ratio decreased by -12.31%, and in 2022, it increased by 43.12%.

- **Return on Asset**
The independent variable is return on assets; during the 2020–2022 period, return on assets had a lowest average value of 0.0139 in 2020, while the highest average value was 0.0197 in 2022. In 2021, return on assets increased by 29.50%; in 2022, by 9.44%.
- **Debt to Asset Ratio**
The independent variable is the debt-to-asset ratio; during the 2020–2022 period, the debt-to-asset ratio had its lowest average of 0.6678 in 2022, and its highest average of 0.7295 in 2020. In 2021, the debt-to-asset ratio decreased by 6.18%; in 2022, it decreased by 2.43%.
- **Total Asset Turnover**
The independent variable is the total asset turnover ratio. During the 2020–2022 period, the total asset turnover ratio had its lowest average of 0.0847 in 2021 and its highest of 0.1015 in 2022. In 2021, the total asset turnover ratio decreased by -6.31%, and in 2022, it increased by 19.84%.
- **Interest Rate**
The independent variable is the interest rate; during the 2020–2022 period, the total asset turnover ratio had its lowest average of 0.0694 in 2021, and its highest average of 0.0813 in 2022. In 2021, interest rates decreased by -12.27%, and in 2022, they increased by 17.15%.
- **Inflation**
The independent variable is inflation; during the 2020–2022 period, inflation had its lowest average of 0.0336 in 2020 and its highest of 0.0467 in 2022. In 2021, inflation increased by 10.12%; in 2022, by 26.22%.
- **Stock Price**
The dependent variable is the stock price. During the 2020–2022 period, the stock price had a lowest average value of 2,272.9355 in 2022, while the highest average value was 2,370.0645 in 2020. In 2021, the stock price decreased by -0.50%, and in 2022, it decreased by -3.61%.

4.1.2 Results of the Classical Assumptions Test

4.1.2.1 Results of the Normality Test



Source: Compiled data, 2024

Figure 1. Results of the Normality Test

Figure 1 shows that the data points are scattered around the diagonal line, and their distribution aligns with it. This indicates that the regression model is appropriate for use because it satisfies the assumption of normality.

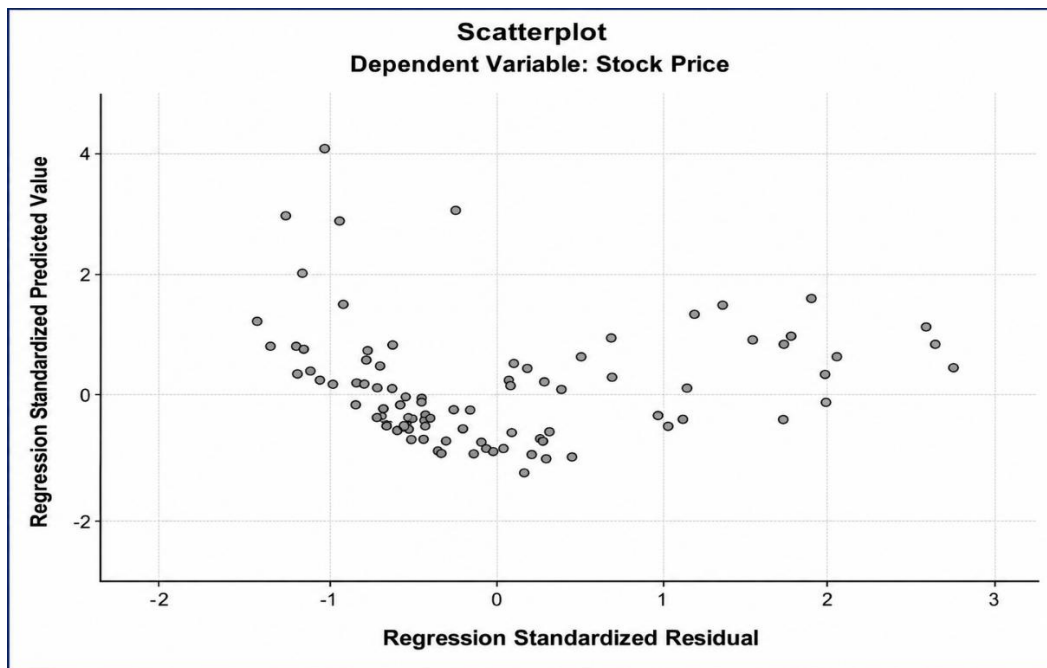
4.1.2.2 Results of the Multicollinearity Test

The fundamental variables (X1)—Current Ratio, Return on Assets, Debt-to-Asset Ratio, and Total Asset Turnover—and the technical variables (X2)—interest rates and inflation—have tolerance values above 0.1 and VIF values less than 10. This indicates that there is no multicollinearity in the regression model, so that the data can be used in this study.

4.1.2.3 Autocorrelation Test Results

The Durbin-Watson coefficient is 0.624. Since the DW value falls within the range of $-3 < DW < +3$ ($-3 < 0.624 < +3$), it can be concluded that in the regression between the fundamental variables (X1)—measured by Current Ratio, Return on Assets, and Debt-to-Asset Ratio— Total Asset Turnover and technical variables (X2)—measured by interest rates and inflation—and stock prices, there is no autocorrelation.

4.1.2.4 Heteroscedasticity Test



Source: Compiled data, 2024

Figure 2. Results of the Heteroscedasticity Test

As shown in Figure 2, the scatterplot indicates that the data points are scattered along the Y-axis and do not form a clear pattern. This indicates that there is no heteroscedasticity in the regression model. Hence, the regression model is suitable for predicting stock prices using the influencing variables: Fundamental (X1), measured by Current Ratio, Return on Assets, Debt-to-Asset Ratio, and Total Asset Turnover; and Technical (X2), measured by interest rates and inflation.

4.1.2.5 Linearity Test

Table 2. Linearity Test Results

	Sum of Squares	df	Mean Square	F	Sig.
Between (Combined) Groups	354036725.679	50	7080734.514	1.393	.136
Linearity	68355667.468	1	68355667.468	13.451	.001
Deviation from Linearity	285681058.211	49	5830225.678	1.147	.326
Within Groups	213429675.053	42	5081658.930		
Total	567466400.731	92			

Source: Compiled data, 2024

The results of the analysis in Table 2 show that the F-value for the deviation from linearity is 0.136 with a p-value of 0.326. Therefore, it is concluded that the p-value is greater than or equal to the significance level ($0.326 \geq 0.05$), so the null hypothesis is rejected. This means that the two variables are linearly related.

4.1.3 Hypothesis Test Results

4.1.3.1 Multiple Linear Regression Analysis

Table 3. Regression Equation Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	113.812	1141.901		.100	.921
Interest Rate	12457.882	5635.753	.220	2.211	.030
Inflation	-35474.772	15522.653	-.214	-2.285	.025
Current Ratio	439.455	200.087	.230	2.196	.031
Return On Asset	45572.410	13809.284	.345	3.300	.001
Debt To Asset Ratio	1948.102	972.916	.229	2.002	.048
Total Asset Turnover	-196.813	2067.331	-.010	-.095	.924

a. Dependent Variable: Stock Price

Source: Compiled data, 2024

Based on Table 3, the regression equation derived from this regression test is:

$$Y = 113.812 + 439.455 X1.1 + 45572.410 X1.2 + 1948.102 X1.3 - 196.813 X1.4 + 12457.882 X2.1 - 35474.772 X2.4$$

- The results of the regression equation and the interpretation of the multiple regression analysis are as follows: The constant term (a) is positive, at 113.812, meaning that if the Fundamental variables (X1)—measured by Current Ratio, Return on Assets, Debt-to-Asset Ratio, and Total Asset Turnover—and the Technical variables (X2)—measured by interest rates and inflation—are equal to zero (0), then the stock price decreases;
- The regression coefficient for the Current Ratio variable (X1.1) is 439.455, meaning that company size has a positive effect on stock price. This implies that the value of the dependent variable (Y)

will increase by 439.455 if the value of the independent variable X1.1 increases by one unit. In contrast, all other independent variables remain constant. The higher the current ratio, the higher the company's stock price.

- The regression coefficient for the Return on Assets variable (X1.2) is 45.573.410, meaning that return on assets has a positive effect on stock price. This means that the value of variable Y will increase by 45,573.410 if variable X1.2 increases by one unit while the other independent variables remain constant. The higher the return on assets, the higher the company's stock price.
- The regression coefficient for the Debt-to-Asset Ratio (X1.3) is 1.948.102, indicating that the debt-to-asset ratio has a positive effect on stock price. This means that the value of the dependent variable Y will increase by 1.948.102 if the value of the independent variable X1.3 increases by one unit. In contrast, all other independent variables remain constant. The higher the debt-to-asset ratio, the higher the company's stock price.
- The regression coefficient for the Total Asset Turnover variable (X1.4) is -196.813, meaning that total asset turnover has a negative effect on stock price. This means that the value of the Y variable will decrease by 196.813 if the X1.4 variable decreases by 1 unit, while the other independent variables remain constant. The lower the Total Asset Turnover, the higher the company's stock price.
- The regression coefficient for the Interest Rate variable (X2.1) is 12,457.882, indicating that interest rates have a positive effect on stock prices. This means that the value of the Y variable will increase by 12,457.882 if the X2.1 variable increases by one unit, while all other independent variables remain constant. The higher the interest rate, the higher the company's stock price.
- The regression coefficient for the inflation variable (X2.2) is -35.474.772, indicating that inflation has a negative effect on stock prices. This means that the value of the Y variable will decrease by 35.474.772 if the value of the X2.2 variable decreases by one unit, while all other independent variables remain constant. The lower the inflation rate, the higher the company's stock price.

4.1.3.2 Results of the Partial Test (t-Test)

- *Testing the First Hypothesis (H1)*
The results of the t-test for the Current Ratio variable yielded a t-value of 2.196 and a p-value of 0.031, which is < 0.05 . This means that H1 is accepted, and thus it can be concluded that the current ratio has a positive and significant effect on stock prices.
- *Testing the Second Hypothesis (H2)*
The results of the t-test for the Return on Assets variable yielded a t-value of 3.300 with a p-value of $0.001 < 0.05$. This means H2 is accepted, and thus it can be concluded that return on assets has a positive and significant effect on stock prices.
- *Testing the Third Hypothesis (H3)*
The results of the t-test for the Debt-to-Asset Ratio variable yielded a t-value of 2.002 and a p-value of 0.048, which is < 0.05 . This means H3 is accepted, and thus it can be concluded that the debt-to-asset ratio has a positive and significant effect on stock prices.
- *Testing the Fourth Hypothesis (H4)*
The results of the t-test for the Total Asset Turnover variable yielded a t-value of -0.95 and a p-value of 0.924, which is > 0.05 . This means H4 is rejected, and thus it can be concluded that Total Asset Turnover has a negative but insignificant effect on stock prices.

▪ *Testing the Fifth Hypothesis (H5)*

The results of the t-test for the interest rate variable yielded a t-value of 2.211 and a p-value of 0.030, which is < 0.05. This means H5 is accepted, and thus it can be concluded that interest rates have a positive and significant effect on stock prices.

▪ *Testing the Sixth Hypothesis (H6)*

The results of the t-test for the inflation variable yielded a t-value of -2.285 and a p-value of 0.025, which is < 0.05. This means that H6 is accepted, and thus it can be concluded that inflation has a significant negative effect on stock prices.

4.1.3.3 Coefficient of Determination (R2)

Based on Table 4, the R² value is 0.548, indicating a strong relationship between stock price and the two independent variables, as it falls within the 0.5–0.8 range. Meanwhile, the R-squared value of 0.301, or 30.1%, indicates that stock price can be explained by the fundamental variables (X1)—measured by the current ratio, return on assets, debt-to-asset ratio, and total asset turnover—and the technical variables (X2)—measured by interest rates and inflation. This accounts for 30.1%, while other factors outside the research model influence the remaining 69.9%.

Table 4. Results of the R² Coefficient of Determination Test

Model Summary ^b				
Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.548 ^a	.301	.252	2147.976

a. Predictors: (Constant), Total Asset Turnover, Inflation, Interest Rates, Return on Asset, Current Ratio, Debt to Asset Ratio

b. Dependent Variable: Stock Price

Source: Compiled data, 2024

4.1.3.4 Results of the Simultaneous F-Test (F-Test)

Table 5. Results of the F-test

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	170679579.440	6	28446596.573	6.166	.000 ^b
	Residual	396786821.291	86	4613800.248		
	Total	567466400.731	92			

a. Dependent Variable: Stock Price

b. Predictors: (Constant), Total Asset Turnover, Inflation, Interest Rates, Return On Asset, Current Ratio, Debt To Asset Ratio

Source: Compiled data, 2024

Based on Table 5, with $\alpha = 5\%$, the p-value is less than α ($0.000 < 0.05$). The test results in Table 1 show that the calculated F-value of 4.542 exceeds the critical F-value of 6.166, and the significance value of 0.000 is less than 0.05. This means that the fundamental variables (X1)—measured by the current ratio, return on assets, debt-to-asset ratio, and total asset turnover—and the technical variables (X2)—measured by interest rates and inflation—collectively have a significant effect on stock prices.

4.2 Discussion

4.2.1 The Effect of the Fundamental Factor (X_1), Measured by the Current Ratio, on Stock Prices

The results of the study show that the current ratio has a positive and significant effect on stock prices. This finding indicates that the better a company's liquidity, the higher the market's valuation of its stock. The current ratio reflects a company's ability to meet its short-term obligations using its current assets. When a company is in a liquid state, the market assesses its financial risk as relatively low, thereby ensuring the continuity of its operational activities. This condition creates a positive perception among investors because the company is viewed as having sufficient financial flexibility to conduct its business activities without liquidity pressure. This perception drives investor interest in purchasing the company's shares, ultimately leading to higher stock prices. Thus, the findings of this study reinforce that liquidity is not merely an indicator of short-term payment capacity but also a crucial signal for the market in assessing a company's financial health.

Conceptually, liquidity ratios, particularly the current ratio, describe the ease with which a company's current assets can be converted into cash to meet obligations that are due in the near term. Hidayat (2018) emphasizes that liquidity ratios indicate a company's ability to meet its financial obligations on time, as well as the degree of certainty regarding the amount of cash that can be obtained without significant depreciation. A high current ratio indicates that a company's current assets are sufficient to cover short-term liabilities, providing a greater financial safety margin. In the context of the capital market, this condition provides a rational basis for investors to assess whether the company is in a stable financial position and capable of weathering business uncertainties. Therefore, an increase in the current ratio is perceived as an indication of effective working capital management, which in turn contributes to enhanced market confidence in the company's stock. The findings of this study are also consistent with Signaling Theory, which holds that financial information published by a company serves as a signal to investors for assessing the company's condition and prospects. A high current ratio can be viewed as a positive signal regarding management's ability to maintain liquidity and manage short-term liabilities prudently. The market responds to this positive signal through increased investment interest, as investors tend to avoid companies with high liquidity risk. The implications of these findings suggest that management needs to pay attention to policies regarding the management of current assets and short-term liabilities, not only for internal operational purposes but also as a strategy to convey positive signals to the market. The results of this study are consistent with the findings of previous research conducted by Dewi & Rangkuti (2020) and Nurliandini *et al.*, (2021), which concluded that the current ratio has a strong positive relationship with stock prices. Both studies showed that an increase follows an increase in the current ratio in stock prices, while a decrease in the current ratio tends to be met with a negative market response. This alignment of results indicates empirical consistency regarding the important role of liquidity in shaping investor perceptions.

4.2.1 The Effect of the Fundamental Variable (X_1)—Measured as Return on Assets—on Stock Prices

The results of the study show that Return on Assets has a positive and significant effect on stock prices. This finding indicates that the market responds positively to a company's increased ability to utilize its assets to generate profits. Return on Assets reflects managerial efficiency in managing the company's resources; thus, the more effectively assets are used to generate profits, the stronger the market's perception of the company's performance quality. This situation fosters investor confidence that the

company has strong prospects for business sustainability, which in turn increases interest in stock ownership and drives up stock prices. Thus, Return on Assets serves not only as an internal performance indicator but also as a key reference for investors in assessing a stock's attractiveness.

Conceptually, Return on Assets is used to assess a company's ability to generate profits from its total managed assets and to measure management's effectiveness in optimizing the company's resources. Kasmir explains that this ratio is a vital tool for evaluating a company's ability to generate profits and for indicating how efficiently management conducts its operations. An increasing Return on Assets indicates that the company's assets are working productively and efficiently, resulting in relatively optimal profits. In the context of the capital market, this efficiency is perceived as a fundamental strength of the company, as profits generated from asset management reflect the quality of management's investment and operational decisions. Additionally, Return on Assets provides insight into a company's capital structure, where the ability to generate profits from assets becomes crucial when some assets are financed by debt, allowing capital costs to be managed more effectively without burdening shareholders. The findings of this study align with Signaling Theory, which states that financial information published by a company serves as a signal to investors in assessing the company's condition and prospects. A high Return on Assets signals operational efficiency and the company's ability to create value from its assets. This signal fosters investor confidence in the company's performance and prospects, prompting the market to respond with increased demand for its shares. The implications of these findings suggest that management needs to maintain and improve asset utilization efficiency as part of a strategy to convey positive market signals. In other words, operational policies focused on enhancing asset productivity not only impact internal performance but also strengthen the company's stock value in the market. The results of this study are also consistent with previous research conducted by Winda and Kenny, who found that Return on Assets has a positive effect on stock prices. Similar findings were presented by Saputri *et al.*, (2020), who concluded that Return on Assets influences stock prices and reflects a company's efficiency in using assets to generate profits.

4.2.3 The Effect of the Fundamental Variable (X_1)—Measured by the Debt-to-Asset Ratio—on Stock Prices

The results of the study show that the debt-to-asset ratio has a positive and significant effect on stock prices. This finding indicates that the market perceives an increase in the proportion of debt relative to total assets as a positive signal in certain contexts. The debt-to-asset ratio reflects the extent to which a company's assets are financed by debt; thus, an increase in this ratio indicates a greater reliance on external funding within the company's capital structure. In practice, increased use of debt is often associated with business expansion strategies, the development of new projects, or efforts to scale up operations to achieve greater profits. When the market assesses that additional debt is used productively and directed toward activities that have the potential to improve company performance, investor response tends to be positive, as reflected in rising stock prices. Thus, the Debt-to-Asset Ratio is not only a source of risk but also an indicator of the company's growth strategy.

Conceptually, the Debt-to-Asset Ratio is a leverage ratio that measures the extent to which a company's financing comes from debt relative to its total assets. Kasmir (2017) explains that this ratio is used to assess the extent to which a company's profit-generating capacity is financed by debt. In the context of banking companies, the use of debt in certain proportions is considered reasonable because the nature of the banking business is highly dependent on third-party funds and external financing sources. Investors understand that debt is necessary to support large-scale financing and investment

activities. As long as the company can manage this debt effectively and maintain its ability to generate profits, an increase in the Debt-to-Asset Ratio can be seen as an effort to optimize its capital structure. However, this ratio still needs to be controlled because excessively high leverage can increase the company's financial risk and raise concerns about its ability to meet future obligations. The findings of this study align with the Trade-Off Theory, which explains that companies strive to balance the benefits of using debt with the risks it entails. In this theory, the use of debt provides benefits such as tax savings and opportunities for higher returns, but also carries the risk of bankruptcy and financial strain. The results of the study indicate that at a certain level, an increase in the Debt to Asset Ratio remains within optimal limits, so that the benefits of using debt outweigh the risks. The implications of these findings suggest that corporate financing policies should be directed toward achieving an optimal capital structure. Management must ensure that additional debt is used for productive activities that generate returns greater than the cost of debt. The research findings are consistent with previous studies conducted by Amalia & Ardillah (2022) and Dewi & Rangkuti (2020), which found that the debt-to-asset ratio has a positive effect on stock prices. If a company uses debt to finance investments that yield returns greater than the cost of the debt, this can increase the company's value and, in turn, positively impact stock prices.

4.2.4 The Effect of the Fundamental Variable (X1)—Measured by Total Asset Turnover—on Stock Prices

The results of the study show that Total Asset Turnover does not have a significant effect on stock prices and tends to be negatively related to them. This finding indicates that the efficiency with which a company uses total assets to generate sales is not a primary consideration for investors when evaluating a company's stock. Total Asset Turnover illustrates a company's ability to use its assets to generate sales; thus, conceptually, this ratio reflects operational efficiency. However, sales efficiency does not always directly correlate with an increase in a company's market value. In practice, increased sales from asset utilization do not necessarily translate into higher profits, especially if the cost structure is inefficient or profit margins are relatively low. Therefore, changes in Total Asset Turnover—whether an increase or a decrease—do not automatically influence investor perceptions or stock price movements.

Conceptually, Total Asset Turnover is often used to assess how productive a company's assets are in generating revenue. This ratio emphasizes activity and sales volume rather than profit. In the context of the capital market, investors tend to focus more on a company's ability to generate sustainable profits rather than merely high sales levels. This explains why Total Asset Turnover is not a dominant indicator in stock price formation. Additionally, differences in industry characteristics, operational strategies, and the stability of the assets supporting sales can affect the relevance of this ratio. When a company's asset values fluctuate or undergo structural changes, Total Asset Turnover becomes less informative as a consistent performance signal for investors. This finding aligns with Signaling Theory, which states that not all financial information carries the same signaling power for the market. Information considered relevant by investors is information that clearly reflects a company's profit prospects and risks. While Total Asset Turnover provides a snapshot of operational efficiency, it does not directly signal a company's ability to generate profits and value for shareholders. The implications of these findings suggest that management should exercise caution when relying on activity indicators to communicate performance to the market. Asset management efforts should focus not only on increasing sales but also on optimizing margins and profitability so that the financial information communicated carries stronger signaling power regarding investor assessments. Research

results related to previous studies. Research by Nur'aidawati (2018) and Putri & Yustisia (2021) found that TATO has no significant effect on stock prices. Although TATO can provide an overview of how efficiently a company uses its assets, it does not provide information about the company's cost and profit structure. Some companies may have high profit margins even though their TATO is low.

4.2.5 The Effect of Technical Factors (X2), as Measured by Interest Rates, on Stock Prices

The results of the study show that interest rates have a positive and significant effect on stock prices. These findings indicate that the market perceives changes in interest rates as economic signals that have direct implications for a company's performance and prospects, particularly in the banking sector. In this context, an increase in interest rates is not merely seen as a factor exerting downward pressure on the stock market. However, it may also reflect expectations of stronger economic growth. When interest rates rise, this is often associated with improving economic conditions and increased business activity, leading investors to assess that companies have opportunities to boost their revenue and performance. This perception drives investor interest in stocks, which ultimately contributes to rising stock prices. Thus, the positive relationship between interest rates and stock prices in this study demonstrates that market responses are heavily influenced by investors' interpretations of changes in monetary policy.

In the banking sector, interest rates play a highly strategic role as they are directly linked to intermediation activities. Loan interest rates are the primary source of bank revenue; consequently, changes in interest rate policy are not always met with symmetric responses by the banking sector. A simultaneous decrease does not necessarily follow a decrease in the benchmark interest rate for loan or deposit interest rates. This situation creates a unique dynamic in banking performance. Even when loan interest rates remain at a certain level, banks can still maintain profit margins on loan disbursements. On the other hand, a decrease in loan interest rates can also stimulate increased loan demand from the real sector, thereby increasing credit volume and supporting the bank's operational performance. However, investors are also aware of the potential for a decline in interest income if loan interest rates are adjusted aggressively. It is this dynamic that makes the response of banking stock prices to interest rate changes complex; however, in this study, the trend is generally positive. The findings of this study align with Signaling Theory, which holds that macroeconomic policies, including interest rates, serve as signals that help investors assess economic conditions and corporate prospects. An interest rate hike can be perceived as a signal that monetary authorities see sufficient economic strength to withstand inflationary pressures and maintain financial stability. Investors respond to this signal with optimism about corporate performance, particularly in the banking sector, which can leverage interest rate changes in its credit allocation and fund management strategies. The implications of these findings suggest that monetary policy affects not only fixed-income financial instruments but also investors' perceptions of stocks. Therefore, company management and investors need to understand the direction and implications of interest rate changes as part of their investment decision-making strategies. Research results related to previous studies: Research conducted by Andriyani & Armereo (2016) and Aizsa *et al.*, (2020) found that interest rates have a positive and significant effect on stock prices. If interest rates rise, bond-based investments and other fixed-income financial instruments may become more attractive than stocks. This can lead to a shift of funds from the stock market to the bond market, which can affect stock prices.

4.2.6 The Effect of Technical Factors (X2) Measured by Inflation on Stock Prices

The results of the study show that inflation has a significant negative effect on stock prices. These findings indicate that a decline in the inflation rate is met with a positive market response, whereas an increase in inflation tends to put downward pressure on stock prices. Inflation reflects a general rise in prices that directly impacts production costs and consumer purchasing power. In the context of this study, inflation is understood as cost-push inflation, that is, inflation arising from rising production costs stemming from increases in raw material prices, labor wages, and external factors such as a weakening exchange rate. These conditions cause companies to face higher cost pressures, leading to reduced production capacity and operational efficiency. When cost pressures cannot be fully passed on to selling prices, the company's profit margins are eroded. The market then responds to this situation by downgrading the valuation of the company's shares as profit prospects are perceived to be weakening.

Conceptually, high inflation creates economic and business uncertainty. This uncertainty increases the risks investors face when assessing a company's prospects. As inflation rises, a company's production costs tend to increase, and product selling prices follow suit, ultimately reducing consumer purchasing power. The decline in purchasing power leads to weaker demand for goods and services, potentially reducing a company's sales volume. This decline in sales, in turn, results in reduced corporate profits. Since profits are a primary consideration for investors, this situation prompts them to become more cautious or even withdraw their investments from the stock market. Consequently, demand for stocks decreases, putting downward pressure on stock prices. Thus, the negative relationship between inflation and stock prices reflects the mechanism through which inflation affects corporate performance and investor perceptions. These research findings align with the Fisher Effect Theory, which explains that inflation affects the real value of income and investment returns. Within this theoretical framework, rising inflation reduces the real value of future cash flows that investors will receive, thereby diminishing the attractiveness of stock investments. High inflation also increases uncertainty about the real value of corporate profits, which in turn raises the risk perceived by investors. The implications of these findings suggest that price stability is a critical condition for fostering a conducive investment climate. For companies, cost control and the ability to adjust operational strategies become crucial for mitigating the impact of inflation on profitability. For investors, inflation is a macroeconomic indicator that must be taken seriously when constructing an investment portfolio, as changes in inflation rates can significantly affect stock prices. Research findings are consistent with previous studies. Research by Andriyani & Armereo (2016) and Yudistira & Adiputra (2020) found that inflation has a significant negative effect on stock prices. Inflation reduces the purchasing power of money. As prices rise, the value of money decreases. This can reduce consumer purchasing power and corporate profits, which in turn can lead to a decline in corporate revenue. This decline may be reflected in falling stock prices.

5. Concluding Remarks and Recommendation

This study generally aims to answer the research question regarding how fundamental and technical factors influence the stock prices of banking companies listed on the Indonesia Stock Exchange. Through a quantitative approach and empirical analysis of banking company data during the observation period, this study concludes that stock price dynamics cannot be understood from a single perspective but rather result from the interaction between a company's internal conditions and the macroeconomic environment. This study provides a comprehensive overview of the role of fundamental



indicators reflecting liquidity, profitability, funding structure, and operational efficiency, as well as technical indicators reflecting monetary policy and economic stability. Thus, this study confirms that banking stock prices are formed through a complex mechanism, in which investors respond to financial information and economic signals simultaneously in the investment decision-making process.

In terms of scientific and practical contributions, this study adds value by integrating fundamental and technical analysis simultaneously within a single empirical framework for the banking sector. Academically, this study enriches the capital market literature with empirical evidence showing that not all fundamental indicators have the same explanatory power regarding stock prices, and that technical variables play a strategic role in shaping investor perceptions. From a practical and managerial perspective, the results of this study can serve as a basis for banking management to formulate financial policies, particularly regarding liquidity management, profitability, and funding structure, to align with market expectations. For investors, the findings of this study provide additional insights for formulating investment strategies by considering a combination of corporate fundamental information and macroeconomic conditions, thereby making investment decisions more rational and informed.

This study has several limitations that need to be noted. First, the research focus is limited to the banking sector, so the results may not generalize to other industrial sectors with different financial characteristics and risks. Second, the observation period is limited to a specific timeframe, so the long-term dynamics of stock prices are not fully accounted for. Third, this study uses only certain fundamental and technical indicators, so other variables that could influence stock prices remain unanalyzed. Given these limitations, future research is recommended to expand the scope to other industrial sectors, employ a longer observation period, and incorporate additional financial and macroeconomic variables to achieve a more comprehensive understanding of the determinants of stock prices. Additionally, alternative methodological approaches could be considered to enrich the analytical perspective in future studies.

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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