

THE INFLUENCE OF MACROECONOMICS ON BANKING STOCK RETURNS IN INDONESIA: A STUDY OF STATE-OWNED AND PRIVATE BANKS

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Abstract

This study examines the influence of macroeconomic variables on banking stock returns in Indonesia, with a comparative focus on state-owned and private banks. The macroeconomic variables analyzed include inflation, the BI Rate, and the rupiah exchange rate against the US dollar. This research applies a quantitative explanatory approach using monthly panel data from 2015 to 2025. The sample consists of six banking companies listed on the Indonesia Stock Exchange, namely three state-owned banks and three private banks, with a total of 792 observations. The data were analyzed using panel data regression through the Common Effect Model estimated by Ordinary Least Squares. The findings indicate that inflation, interest rates, exchange rates, and bank ownership simultaneously have a significant effect on banking stock returns. Partially, the BI Rate and exchange rate have a negative and significant effect on stock returns, while inflation has no significant effect. The ownership dummy shows no significant difference between the stock returns of state-owned and private banks. These results suggest that macroeconomic conditions, particularly interest rates and exchange rate movements, play a more dominant role in influencing banking stock returns than bank ownership characteristics. The study contributes to investment decision-making by highlighting the importance of monitoring monetary policy and exchange rate stability in assessing banking sector stock performance.

Keywords: macroeconomics; stock returns; banking sector; BI Rate; exchange rate; Indonesia.

INTRODUCTION

The capital market is one of the rapidly growing economic instruments and plays a strategic role in national economic development. The banking sector is one of the most dominant and most regulated sectors by the government in the Indonesian capital market, considering its role as a bridge for financing the real sector and supporting national economic growth (Piere et al., 2023). Banking stocks are highly sought after by investors because bank health is a major factor influencing investment decisions, the healthier a bank is, the higher investor confidence in investing their capital (Piere et al., 2023). Based on IDX data, there are four banking stocks included in the 10 *blue chip stocks*, with year-over-year *Earnings Per Share* (EPS) growth reaching 78% in Bank BBRI, making banking stocks one of the most attractive investment options in Indonesia.

The performance of banking stocks is inextricably linked to macroeconomic conditions. The rupiah exchange rate *against* the US dollar is one indicator that investors should pay attention to, given that Indonesia uses a floating exchange rate system, where the central bank allows the exchange rate to adjust based on foreign exchange supply and demand. (Piere et al., 2023) *Exchange rate* instability can reduce foreign investor confidence in the Indonesian economy and impact bank stock price movements. Inflation is also a negative signal for investors; rising inflation leads to increased production and operational costs for banks, reduced purchasing power, and reduced investment interest in the capital market, ultimately depressing stock prices (Dede Hendra, 2026). Meanwhile, Bank Indonesia's benchmark interest rate (BI-Rate) directly impacts banks' *net interest margins*, so changes in interest rates will directly impact bank profitability and stock returns. (Harsanico & Sugiyanto, 2024).

Indonesian inflation fluctuated from 3.35% in 2015 to a peak of 5.51% in 2022 due to post-pandemic global food and energy price pressures, before returning to a manageable level of 2.72% in November 2025 (Bank Indonesia, 2025). BI's benchmark interest rate fluctuated widely, from a low of 3.50% in July 2022 as a form of economic

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stimulus to 6.25% in August 2024 in response to global monetary policy normalization, before being gradually reduced to 4.75% by the end of 2025 (CEIC Data, 2026; Bank Indonesia, 2025). The rupiah exchange rate also experienced significant pressure, particularly during the 2020 Covid-19 pandemic and the global monetary tightening cycle of 2022-2023. Fluctuations in these three macroeconomic variables provide sufficient data variation for empirical analysis of their impact on banking stock returns.

Various empirical studies have examined the influence of macroeconomic variables on stock prices and banking stock returns in Indonesia, but have yielded inconsistent findings. (Piere et al., 2023) in their study found that the exchange rate has a positive and significant effect on banking stock prices, inflation has a negative and significant effect, while GDP growth has no significant effect. This finding is in line with research (Nurdiyansyah & Aziz, 2022) that also concluded that inflation, exchange rates, and interest rates simultaneously have a significant effect on banking stock returns, with the exchange rate being the most dominant variable. However, different results were found (Ananda & Santoso, 2022) for the 2018-2020 period, as well as several recent studies in the 2021-2023 and 2018-2022 periods, which concluded that inflation and interest rates do not have a significant partial effect on banking stock returns (Norhaliza & Purbowati, 2025). (Nurdiyansyah & Aziz, 2022) also found that inflation had no effect, while interest rates and exchange rates had a significant negative effect on stock returns in LQ-45 members for the 2016-2020 period (Nurdiyansyah & Aziz, 2022).

Although numerous studies have examined the macroeconomic impact on bank stock prices and returns, several gaps remain. First, existing research, including that (Piere et al., 2023) covering 26 banks listed on the Indonesian Stock Exchange (IDX) from 2011 to 2021, does not differentiate between bank ownership groups (state-owned vs. private), even though the characteristics of these two groups are fundamentally different in terms of government support, business orientation, and investor risk perception. Second, most studies use a period that does not include the post-pandemic monetary policy normalization phase (2022-2025), which was marked by a spike in inflation to 5.51%, a cyclical increase in the BI Rate from 3.50% to 6.25%, and persistent exchange rate pressures. Third, the data frequency commonly used is annual or quarterly, making it less able to capture the dynamics of short-term macroeconomic movements that are more relevant to stock investors. Therefore, analyzing the influence of inflation, interest rates, and exchange rates is crucial for understanding stock return dynamics, particularly in the banking sector, which is highly sensitive to changes in economic conditions.

LITERATURE REVIEW

Stock returns are a key indicator in assessing investment performance in the capital market because they reflect the level of profit investors receive for the risks they take. Stock returns can come from capital gains or dividends and form the basis for investment decisions. According to Eduardus Tandelilin, stock returns are influenced not only by internal company factors but also by external factors, particularly macroeconomic conditions. From the perspective of the *Efficient Market Hypothesis*, all information available in the market, including information related to macroeconomic conditions, will be immediately reflected in stock prices. (Fama, 1970). Thus, changes in macroeconomic variables such as inflation, interest rates, and exchange rates will be responded to by market players and affect stock returns. (Chen et al., 1986).

The relationship between macroeconomic variables and stock returns can be explained through the economic transmission mechanism that influences cash flow expectations, risk levels, and the company's cost of capital (Chen et al., 1986). Monetary policy implemented by Bank Indonesia, particularly through interest rate determination, plays a crucial role in determining the discount rate used in stock valuation. An increase in interest rates will increase the cost of capital and reduce the present value of future cash flows, thus negatively impacting stock prices and returns. (Bernanke & Kuttner, 2005) In addition, higher interest rates also encourage investors to shift their funds to safer investment instruments, thereby reducing demand for shares. (Mukherjee & Naka, 1995).

Inflation, as an indicator of economic stability, also has a significant impact on stock returns. Theoretically, high inflation will reduce people's purchasing power and increase company operating costs, which can ultimately depress profitability and stock returns. However, the relationship between inflation and stock returns is not always linear, as under certain conditions, moderate inflation can reflect healthy economic growth. This has led to mixed results in empirical research on the effect of inflation on stock returns. Some studies find that inflation has a significant negative effect on stock returns, while others show no significant effect, as demonstrated by the study (Nurdiyansyah & Aziz, 2022)

Besides inflation and interest rates, the exchange rate is also an important macroeconomic variable influencing stock returns. The exchange rate reflects a country's external economic conditions and influences foreign capital flows. A weakening exchange rate is generally interpreted as a signal of increasing economic risk, which can undermine investor confidence and encourage capital outflows. In the banking sector, exchange rate fluctuations can

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increase financial system risk and impact the stability of bank performance. Research conducted by [[(Silaban, 2020)...

RESEARCH METHODS

This study uses a quantitative approach to analyze the influence of macroeconomic variables on stock returns in the Indonesian banking sector. The type of research used is explanatory research, which aims to examine the causal relationship between independent variables such as inflation, interest rates, and exchange rates on the dependent variable, namely stock returns. The objects of this study are banking sector companies listed on the Indonesia Stock Exchange (IDX), consisting of state-owned banks (BUMN) and private banks. The research sample was determined using a purposive sampling technique with the criteria of companies that are consistently listed during the research period and have complete data. Based on these criteria, six banks were obtained as research samples: Bank Rakyat Indonesia (BBRI), Bank Mandiri (BMRI), and Bank Negara Indonesia (BBNI) as state-owned banks, and Bank Central Asia (BBCA), Bank CIMB Niaga (BNGA), and Bank Danamon (BDMN) as private banks.

The data used is secondary data in the form of panel data with a monthly frequency for the period 2015 to 2025, resulting in a total of 792 observations. Stock return data was obtained from the Indonesia Stock Exchange and financial data platforms such as Yahoo Finance, while data on inflation, interest rates (BI Rate), and exchange rates were obtained from official publications of Bank Indonesia. The dependent variable in this study is stock returns, measured using realized returns, namely monthly stock price changes. The independent variables consist of inflation (monthly inflation percentage), interest rates (BI Rate), and the rupiah exchange rate against the US dollar. This research was conducted using EViews econometric software. The data analysis technique used was panel data regression. However, based on the characteristics of the research data, where macroeconomic variables have the same value in each cross-section unit (common variables), and the results of model testing, the model used in this study is the Common Effects Model (CEM), estimated using the Ordinary Least Squares (OLS) method.

The regression model used in this study is formulated as follows:

$$Return_{it} = \alpha + \beta_1 Inflasi_t + \beta_2 Birate_t + \beta_3 Kurs_t + \beta_4 Dummy_i + \epsilon_{it}$$

Model selection was conducted using the Chow test to compare the Common Effect and Fixed Effect models. The test results indicated that the Common Effect model was more appropriate for this study because there were no significant differences in characteristics between individuals (banks).

RESULTS AND DISCUSSION

Based on the Chow test results, the cross-section F probability value was 1.0000, which is greater than the 0.05 significance level. This result indicates that the Fixed Effect model is not superior to the Common Effect model. Therefore, the most appropriate model used in this study is the Common Effect Model (CEM). This finding indicates that there are no significant differences in individual characteristics between banks in explaining stock return variations during the study period. This also reflects that the movement of banking stock returns in Indonesia tends to be influenced by general macroeconomic factors (common factors), rather than by the specific characteristics of each bank. The multicollinearity test results show that all independent variables have correlation values below 0.8, thus it can be concluded that multicollinearity does not occur in the model. This indicates that each macroeconomic variable contributes different information in explaining variations in stock returns. The autocorrelation test using Durbin-Watson yielded a value of 2.264786, which is close to 2, thus it can be concluded that there is no autocorrelation in the model.

Thus, the regression model used does not contain serial correlation problems in the residuals. The normality test results indicate that the residuals are not normally distributed with a probability value of 0.0000. However, this condition is not a serious problem in this study due to the large number of observations (792 data). Based on the concept of the Central Limit Theorem, the sampling distribution of the estimator will approach a normal distribution so that the estimation results remain consistent and can be used for statistical inference. The results of the regression estimation using the Common Effect Model indicate that the variables of inflation, the BI Rate, the exchange rate, and the bank ownership dummy simultaneously have a significant effect on stock returns. This is indicated by the F-statistic probability value of 0.000284, which is less than 0.05. Thus, the model used in this study is suitable for explaining the relationship between macroeconomic variables and banking stock returns. However, the coefficient of determination (R^2) value of 0.026593 indicates that the ability of the independent variables to explain variations in stock returns is relatively low, at 2.65%. This indicates that most of the variation in stock returns is influenced by factors other than the model, such as micro-company factors, market sentiment, global conditions, and investor behavior.

Table 1. Regression Results

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	21.70134	5.370667	4.040717	0.0001
Inflation	-0.016385	0.221914	-0.073835	0.9412
BI Rate	-0.902655	0.311251	-2.900083	0.0038
Exchange rate	-0.001110	0.000349	-3.182030	0.0015
Dummy State-Owned Enterprises	-2.58E-15	0.667182	-3.87E-15	1,0000

Model Statistics

Information	Mark
R-squared	0.026593
Adjusted R-squared	0.021646
F-statistic	5.375145
Prob(F-statistic)	0.000284

The results of the study indicate that inflation does not significantly affect banking stock returns. This finding indicates that changes in the inflation rate did not directly influence investment decisions in the banking sector during the study period. This can be explained because the banking sector has the ability to adjust lending and third-party funding rates, so the impact of inflation on bank financial performance is relatively limited. Furthermore, inflation that occurred during the study period tended to be within a controlled range, thus not causing significant shocks to the stock market. This finding aligns with research (Santosa et al., 2024) showing that inflation does not significantly influence banking stock returns, indicating that the stability of inflation prevents investors from considering it as a primary factor in making investment decisions. This condition is also supported by research (Nurdiyansyah & Aziz, 2022) that found that inflation does not significantly influence stock returns, because investors tend to consider other factors such as market conditions and company performance more than changes in inflation. Furthermore, theoretically, the relationship between inflation and stock returns is not always direct, because in conditions of low and stable inflation, its impact on company cash flow expectations is relatively small (Fama, 1970). Thus, the results of this study indicate that in relatively stable economic conditions, inflation is not a primary determinant in influencing banking stock returns, but rather only a supporting factor whose influence depends on overall macroeconomic conditions.

Conversely, interest rates, represented by the BI Rate, have been shown to have a negative and significant effect on stock returns. This finding is consistent with financial theory, which states that rising interest rates will increase the cost of capital and reduce the present value of future cash flows. Furthermore, rising interest rates also encourage investors to shift their investment portfolios to safer financial instruments such as deposits and bonds. Thus, demand for stocks decreases, resulting in lower stock returns. These results align with monetary policy transmission theory and are supported by empirical findings (Bernanke & Kuttner, 2005) showing that changes in interest rate policy have a significant impact on stock market movements through the mechanism of changes in discount rates and market expectations.

Furthermore, the results of this study are also consistent with findings (Hendra, 2026; Santosa et al., 2024) showing that interest rates have a negative and significant effect on banking stock returns, indicating that increasing interest rates directly reduce investor interest in stocks. Similar findings were also expressed by (Nurdiyansyah & Aziz, 2022) those who stated that interest rates have a significant negative effect on stock returns, because investors tend to substitute portfolios to safer instruments when interest rates rise. Furthermore, within the framework of macroeconomic and capital market relations, changes in interest rates are one of the main factors influencing stock returns through changes in liquidity conditions and investment costs (Chen et al., 1986). Thus, the results of this study further confirm that interest rates are the most sensitive macroeconomic variable in influencing banking stock returns, especially under conditions of active monetary policy dynamics.

The exchange rate has also been shown to have a significant negative effect on stock returns. The weakening of the rupiah against the US dollar increases economic uncertainty and investment risk, thus reducing investor confidence. Furthermore, exchange rate depreciation can increase pressure on the financial sector and trigger capital outflows. This condition has an impact on declining stock prices and banking stock returns. These results are consistent with open market theory and empirical research showing that the exchange rate is a key determinant of stock market movements. Research by [1] (Lubis et al., 2020) states that the rupiah exchange rate has a significant negative effect on stock returns, because exchange rate depreciation causes increased production costs and decreased

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company profitability, so investors tend to respond negatively to these conditions. Furthermore, the study (Nofitasari, 2025) also found that exchange rate depreciation has a significant negative effect on stock returns of consumer goods companies. The study explains that rupiah depreciation increases the cost of importing raw materials and suppresses company profit margins, which ultimately impacts stock returns.

The findings of this study are also in line with research (Ulfa et al., 2025) explaining that fluctuations in the rupiah exchange rate can influence investor decisions in investing in the capital market, particularly in the banking sector, because exchange rate changes reflect macroeconomic conditions and national financial stability. Meanwhile, state-owned banks did not show a significant impact on stock returns. This finding indicates no significant difference between stock returns of state-owned and private banks during the study period. This suggests that investors tend to assess the overall performance of banking stocks without distinguishing ownership status. In other words, macroeconomic factors play a more dominant role than bank ownership characteristics in influencing stock returns.

CONCLUSION AND SUGGESTIONS

This study shows that inflation, interest rates, and exchange rates simultaneously significantly influence stock returns in Indonesian banking. Partially, interest rates and exchange rates are proven to have a negative and significant effect on stock returns, while inflation has no significant effect. Furthermore, there is no significant difference between stock returns in state-owned banks and private banks. These results indicate that macroeconomic factors, particularly interest rates and exchange rates, are more dominant in influencing stock returns than bank ownership characteristics. For future researchers, it is recommended to add other variables such as company financial performance or global factors to improve the model's ability to explain stock returns. Furthermore, the use of more complex analytical methods such as dynamic models can also be considered to obtain more comprehensive results. The author expresses his deepest gratitude to the Institute for Research and Community Service (LPPM) of Bangka Belitung University for the support and facilities provided during this research process. The assistance and cooperation provided by LPPM significantly contributed to the smooth running and completion of this research. The author also expresses his appreciation to all parties who provided support, both directly and indirectly, in the preparation of this article.

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