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Analysis of the influence of external and internal factors on stock prices (Case study on the Infobank15 index)

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ABSTRACT

In the era of globalization, the capital market plays an important role in the economy, especially in Indonesia, which has experienced an increase in the number of investors by 17.19% in 2023. This study aims to analyze the factors that affect the stock price of the banking sector in Indonesia during the period 2018 to 2023. The method used is secondary data analysis from the annual financial statements obtained from the Indonesia Stock Exchange, with a purposive sampling technique to select 13 banking companies as a sample. The analysis for the difference test in comparing changes in stock prices from the period before the pandemic, during pandemic and pasca pandemic using the Anova and Kruskal Wallis tests and the panel data test to evaluate the influence of macroeconomic variables and fundamental factors on stock prices. The results of the Anova and Kruskall Wallis test show that almost all companies tested had differences in stock prices pra-pandemic, during pandemic and pasca pandemic. The results data panel show that interest rate variables, NIM, CAR, NPL, ROE, BOPO, LDR, and PBV have a significant influence on stock prices, while GDP, Inflation, EPS, and PER have no effect. The study found that interest rates have a positive effect, while NPLs and BOPO have a negative impact on stock prices. The study's implications emphasize the importance of bank management to pay attention to fundamental and external factors, especially interest rates and financial ratios, to increase investor attractiveness and stock price stability in the capital market.

Keywords:

banking sector

capital market

fundamental factors

panel data analysis

stock price

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INTRODUCTION

In the current era of globalization, the capital market plays an important role in economic activities, especially in countries that adhere to the market economic system. The capital market is one of the sources of economic progress because it has the ability to provide sources and alternative profits for investors and companies (Yuningsih, 2020). The increasing public interest in investing in the Indonesian capital market is reflected in data from the Indonesian Central Securities Depository (KSEI) where the number of capital market investors throughout 2023 was recorded at 12.16 million investors. This figure increased by 17.19% compared to the 2022 period of 10.31 million investors.

An important aspect that is interesting for investors to understand in investing in the capital market is about the movement of stock prices up and down. Stock prices on the stock exchange are influenced by the strength of demand and supply. If the demand for stocks increases, the stock price tends to increase, on the other hand, if investors sell a lot of their shares, the stock price will tend to fall (Purnamasari, 2017).

Capital market conditions correlate with the country's macroeconomic conditions, but the capital market is more sensitive to crises. In 2018 the US-China trade war and the Fed's interest rate hikes caused global uncertainty, affecting foreign capital flows and weakening the rupiah. Then the Covid Pandemic that occurred in 2020 had a significant impact on the Indonesian economy, from changes in the world supply chain to a decline in foreign investment into Indonesia. Increasing uncertainty regarding the economic impact of Covid-19 has encouraged domestic and foreign investors to avoid risky assets and switch to safe havens such as gold commodities and the US Dollar (Sabanari, 2022).



Figure 1. JCI Movement

Figure 2 above shows the fluctuating movement of the JCI from 2018 to 2023. Since Covid-19 first appeared in Indonesia, the JCI has continued to experience a significant decline until it reached its lowest level of 3,911 on March 23, 2020. In line with research conducted by Baek et al. (2020) revealed that Covid-19 increased the likelihood of a stock market decline.

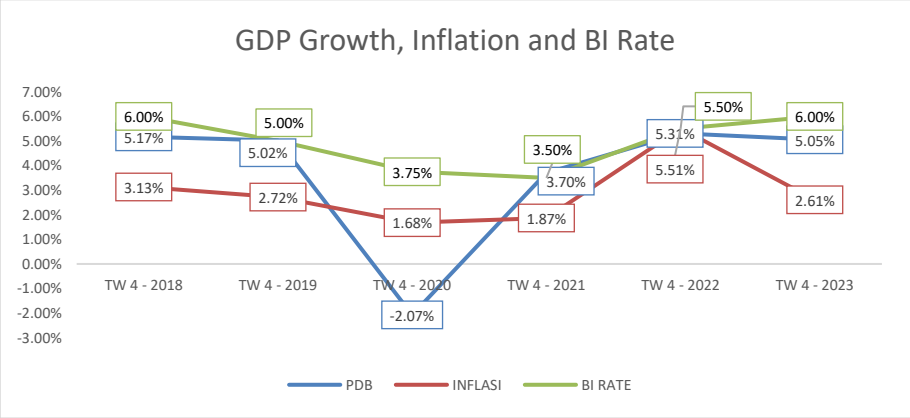

Figure 2. GDP Growth, Inflation and BI Rate

Based on data from the Central Statistics Agency in Figure 3, Indonesia's GDP growth plummeted in 2020, reaching -2.07%. This is due to a reduction in consumption carried out by the public due to uncertainty during the Covid-19 pandemic. In addition, affected business people are trying to reduce operational costs so that they carry out layoffs and this has an impact on decreasing the amount of income, causing people's purchasing power to decline (Sabanari, 2022).

Indonesia's inflation was recorded at 1.68% (*yoy*) in 2020. This figure is the lowest inflation and does not reach the inflation target which results in a slowdown in economic growth. A number of policies to handle the Covid-19 pandemic and economic stimulus have been carried out, in this case Bank Indonesia stimulated economic growth by gradually lowering the benchmark interest rate to 3.75% until the end of 2020. Macroeconomic fundamental factors play an important role in improving a company's performance. Changes in economic factors such as inflation and interest rates will affect stock prices quickly because investors react faster (Sia *et al*., 2023).

Bank Indonesia stimulates economic growth by gradually lowering the benchmark interest rate. This strategy creates a difference between domestic interest rates and foreign markets. Such variations have the potential to affect the magnitude of foreign fund flows and exchange rates due to mechanisms in the foreign exchange market. Changes in interest rates can have an impact on the investment portfolio owned by investors. As a result, interest rates have the ability to affect the volume and price of stocks.

Investors who have more courage will choose to take high investment risks with higher rates of return (Sitanggang, 2015). In the midst of stock market volatility, investors must be able to choose defensive stocks that can maintain stable performance even in times of crisis. Usually, the fundamentals of defensive stocks remain strong so that they can recover faster when market conditions begin to improve.

One of the defensive stock sectors and is in great demand by investors is banking sector stocks. Banking stocks listed on the IDX control 29% of the capital market capitalization in Indonesia. Banking stocks are also dominant among stocks that are liquid and have a large market capitalization. The banking industry has an important role in the economy because it is an intermediary institution between economic actors. Therefore, banking strategies will have an impact on how the country conducts economic recovery after the pandemic.

During the Covid-19 period, the banking sector experienced considerable pressure, as reflected in banking profit in 2020 which contracted by 30.98% yoy compared to the previous year growing by 4.28% yoy (OJK, 2020). One of the causes of this decline in net profit is the hampering of banking credit disbursement activities. In Figure 3, bank credit growth based on OJK data decreased by 2.41% yoy in December 2020. On the other hand, the bank's Net Performing Loan (NPL) increased by 56 bps to 3.06% yoy in 2020. The increase in NPLs was influenced by a decline in debtors' ability to pay and weak demand for new loans as a result of the Covid-19 pandemic, which was quite significant.

Operational Expenses to Operating Income (BOPO) of Banking increased compared to the previous year, from 79.39% to 86.58% yoy. In the midst of global and domestic economic conditions that are still affected by the Covid-19 pandemic, banking resilience in general in 2020 is still maintained, as reflected by the bank's fairly solid capital condition with a CAR of 23.81%. This shows that the bank's ability to absorb risk is adequate.

Fluctuating stock price changes greatly affect investors' decisions in deciding to invest, so every investor needs to obtain clear information, both about individual and group stock prices. In line with the efficient market hypothesis theory expressed by Fama (1991) the emphasis of this theory is information, the stock price will change when the information obtained by investors changes. If the market quickly responds to information and establishes a new equilibrium in the stock price, then the market is said to be efficient. Fundamental analysis is a tool that is generally used in stock investment decisions (Utami *et al*., 2017).

Basically, the fundamental aspects of a company have a significant impact on the value of the stock because it is directly related to the company's performance. The better the company's performance, the higher the stock price will also increase. Based on research conducted by Dwiry et. al. (2022) which aims to determine the impact of fundamental factors including microeconomic factors and macroeconomic factors on the stock market price of 13 banks in Jordan. Based on the results of the analysis conducted by EPS, DPS, ROA and Company Size have a major impact on stock prices in Jordan. Meanwhile, the most impactful macroeconomic factors are Gross Domestic Product (GDP) and the amount of money supply (MS).

Another study on the movement of the Stock Market in Malaysia according to Chia & Lim (2015) in the long term Malaysian stock prices are positively influenced by the amount of money in circulation, exchange rates, industrial production and interest rates, while inflation affects Malaysian stock prices negatively. On the other hand, Alswalmeh and Dali (2019) conducted a study on seven financial ratios that were tested to predict the banking sector index. The results of the study show that financial ratios can predict the index of the banking sector in ASE, Jordan. There is a significant relationship between debt ratio, stock turnover, Return on Assets (ROA), Price to Book Value (PBV) and Return on Equity (ROE) with the banking sector index in ASE. Referring to other research on the stock market under the influence of Covid-19, according to research conducted by Sullivan & Widoatmodjo (2021) shows that there are significant differences in bank performance before and during the pandemic.

This study aims to analyze the factors that affect the stock price of the banking sector in Indonesia during the period 2018 to 2023. The research contributes to the understanding of the banking sector in Indonesia by identifying and analyzing key factors that influence stock prices over a significant timeframe (2018 to 2023). By examining variables such as interest rates, NIM, CAR, NPL, ROE, BOPO, LDR, and PBV, the study provides valuable insights into the internal and external dynamics affecting bank valuations. This analysis not only enhances the existing body of knowledge regarding the economic factors influencing stock prices but also offers practical implications for bank management and investors, enabling them to make informed decisions based on the identified relationships. Additionally, the research highlights the impact of macroeconomic conditions, such as the pandemic, on stock price fluctuations, thereby contributing to a more comprehensive understanding of market behavior in the Indonesian banking sector during a critical period.

The study on factors affecting stock prices in the Indonesian banking sector during 2018-2023 identifies macroeconomic and internal banking factors such as interest rates, NIM, CAR, NPL, ROE, BOPO, LDR, and PBV. In contrast, Ruhiyat dan Terzaghi (2023) emphasize the impact of cryptocurrencies, exchange rates, and gold prices on stock prices, incorporating inflation as a moderating variable, highlighting a gap in understanding how traditional banking factors interact with emerging financial instruments. Additionally, Prakoso & Zulfiqar (2024) explore the influence of bank risk and internal factors on stock prices but do not analyze the broader macroeconomic context or the effects of external financial variables. The novelty of the current study lies in its comprehensive analysis of traditional banking factors within a specific timeframe, including the pandemic's impact, providing insights into critical factors influencing stock valuations in

Indonesia, unlike the focus on external influences in Ruhiyat & Terzaghi (2023) or bank-specific risks in Prakoso dan Zulfiqar (2024).

METHOD

This study uses annual financial statement data from the Indonesia Stock Exchange for the period 2018 to 2023, with the type of secondary data obtained from quarterly financial statements. The sampling method used is non-probability sampling with purposive sampling techniques, which allows researchers to select samples based on certain criteria. From this process, 13 banking companies that met the criteria to be used as samples in the study were obtained, consisting of various companies listed on the Indonesia Stock Exchange.

The data processing and analysis method was carried out using ANOVA analysis to test the relationship between dependent and independent variables. After the ANOVA test, a homogeneity test is carried out to determine the appropriate follow-up test, namely the Bonferroni Test or the Howell Games Test, depending on the results of the homogeneity test. If the data are not normally distributed, the analysis continues with the Kruskal-Wallis Test, which is a nonparametric test to compare more than two groups. For the second purpose of the study, panel data analysis was used to find out the determinants that affect stock prices.

In panel data analysis, multiple models can be used, including the Common Effect Model, Fixed Effect Model, and Random Effect Model, with tests such as the Chow Test, Hausman Test, and Lagrange Multiplier Test to select the right model. In addition, classical assumption tests such as normality, multicollinearity, heteroscedasticity, and hypothesis tests with t-test and F test were carried out to determine the influence of independent variables on dependent variables. The coefficient of determination (R^2) is used to measure how well the model explains the variation in the bound variable.

RESULTS AND DISCUSSION

Anova Test

Although considered promising, during the Covid-19 pandemic, the performance of the Infobank15 Index showed a significant decline. The decline in stock prices on the Infobank15 Index is reflected in banking profits in 2020 which contracted by 30.98% yoy compared to the previous year which grew by 4.28% yoy (OJK, 2020). One of the causes of this decline in net profit was the hampered banking credit distribution activities due to the Covid-19 pandemic. This study divides the data observation phase into three, namely pra-pandemic (January 2018 - December 2019), Pandemic (January 2020 - December 2021), and Pasca-Pandemic (January 2022 - December 2023). This is done to provide a more in-depth analysis of the differences in stock prices in each period.

Table 1. Summary of Anova Test on Infobank15 Index

No	Stock Code	Sig.	The Result
1	BBNI	<.001	There are differences between the 3 research periods
2	BBRI	<.001	There are differences between the 3 research periods
3	BDMN	<.001	There are differences between the 3 research periods
4	BMRI	<.001	There are differences between the 3 research periods
5	BNGA	<.001	There are differences between the 3 research periods
6	MEGA	.040	There are differences between the 3 research periods

Based on the results of the Anova test conducted on 6 companies in Table 4, it shows that all companies tested showed significant results that had differences in stock price values in the 3 pre-pandemic, pandemic and pasca-pandemic periods.

Kruskall Walish H Test

Table 2. Summary of Kruskal Wallis H Test on Infobank15 Index

No	Stock Code	Sig.	The Result
1	AGRO	0,128	There is no difference between the 3 research periods
2	ARTO	<.001	There are differences between the 3 research periods
3	BBCA	0.002	There are differences between the 3 research periods
4	BBHI	0.002	There are differences between the 3 research periods
5	BBTN	<.001	There are differences between the 3 research periods
6	BJBR	0.040	There are differences between the 3 research periods
7	PNBN	0.003	There are differences between the 3 research periods

Based on the results of the Kruskal Wallis H test conducted on 7 companies in Table 17, it shows that 6 companies tested including ARTO, BBCA, BBHI, BBTN, BJBR, and PNBN stocks showed significant results in having differences in stock price values in the 3 pra-pandemic, pandemic and pasca-pandemic periods. However, for AGRO shares, it shows a significance value> 0.05, indicating that there is no difference in stock prices between the 3 periods tested.

T Test

To see the influence of external and internal variables partially on the stock price of the Infobank15 index, it is necessary to conduct a t-test. If the probability value is less than the significance level of 5%, the results show that there is an influence of independent variables on dependent variables.

Table 3. T Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.90726	4.242325	2.571056	0.0106
X1PDB	0.000223	0.000629	0.354780	0.7230
X2INFLASI	-0.017773	0.017245	-1.030595	0.3035
X3SUKUBUNGA	0.032349	0.014157	2.285068	0.0230
X4NIM	0.182853	0.021155	8.643345	0.0000
X5CAR	0.032349	0.014157	2.285068	0.0230
X6NPL	-0.256049	0.099634	-2.569899	0.0106
X7ROE	0.025544	0.009973	0.915648	0.0054
X8BOPO	-0.311159	0.105598	-2.946631	0.0035
X9LDR	0.506726	0.077761	6.516438	0.0000
X10EPS	2.041243	1.175958	1.735813	0.0837
X11PBV	0.182853	0.021155	8.643345	0.0000
X12PER	-0.283701	0.381604	-0.743444	0.4578

The Effect of GDP on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the GDP variable has a probability value of 0.7230 or greater than 0.05 which means that GDP has no influence on the bank's stock price.

The Effect of Inflation on Infobank15 Index Stock Prices

The results of the t-test in the table show that the inflation variable has a probability value of 0.3035 or greater than 0.05 which means that inflation has no effect on the share price of Infobank15. However, the resulting constant value is -0.017773 which means that inflation has a negative effect but does not affect the share price of Infobank15.

The Effect of Interest Rates on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the interest rate has a coefficient value of 0.032349, the positive coefficient value shows a positive relationship of the interest rate variable to the bank's stock price with a probability of 0.0230. A probability value of < 0.05 means that interest rates have a positive influence on the increase in the bank's stock price so that H_1 is accepted.

The Effect of NIM on Infobank15 Index Stock Price

The results of the t-test in the table show that NIM has a coefficient value of 0.182853, the positive coefficient value shows a positive relationship of the NIM variable to the bank's stock price with a probability of 0.0000. A probability value of < 0.05 means that NIM has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

The Effect of CAR on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that CAR has a coefficient value of 0.032349, the positive coefficient value shows a positive relationship of the CAR variable to the bank's stock price with a probability of 0.0230. A probability value of < 0.05 means that CAR has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

The Effect of NPLs on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that NPLs have a coefficient value of -0.256049, the negative coefficient value shows a negative relationship of the NPL variable to the bank's stock price with a probability

of 0.0106. A probability value of < 0.05 means that NPLs have a negative influence on the increase in the bank's stock price.

The Effect of ROE on Infobank15 Index Stock Price

The results of the t-test in the table show that ROE has a coefficient value of 0.025544, a positive coefficient value shows a positive relationship of the ROE variable to the bank's stock price with a probability of 0.0054. A probability value of < 0.05 means that ROE has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

The Effect of BOPO on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that BOPO has a coefficient value of -0.311159, the negative coefficient value shows the negative relationship of the BOPO variable to the bank's stock price with a probability of 0.0035. A probability value of < 0.05 means that BOPO has a negative influence on the increase in the bank's stock price.

The Effect of LDR on Infobank15 Index Stock Price

The results of the t-test in the table show that LDR has a coefficient value of 0.506726, a positive coefficient value shows a positive relationship of the LDR variable to the bank's stock price with a probability of 0.0000. A probability value of < 0.05 means that LDR has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

The Effect of EPS on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the EPS variable has a probability value of 0.0837 or greater than 0.05 which means that EPS has no influence on the bank's stock price.

The Effect of PBV on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that PBV has a coefficient value of 0.182853, a positive coefficient value shows a positive relationship of the PBV variable to the bank's stock price with a probability of 0.0000. A probability value of < 0.05 means that PBV has a positive influence on the increase in the bank's stock price.

The Effect of PER on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the EPS variable has a probability value of 0.4578 or greater than 0.05 which means that GDP has no influence on the bank's stock price.

F Test

Table 4. Test Result F

Cross-section fixed			
R-squared	0.810492	***Mean dependent var***	1.947720
Adjusted R-squared	0.776651	***S.D. dependent var***	2.299043
S.E. of regression	1.086524	***Akaike info criterion***	3.144482
Sum squared resid	363.6043	***Black criterion***	3.744044
Log likelihood	-516.2957	***Hannan-Quinn criter.***	3.382780
F-statistic	23.95016	***Durbin-Watson stat***	1.990303
Prob(F-statistic)	0.000000		

The F test is used to test the significance of the influence of independent variables on the overall (simultaneous) bound variables. From the results of the F-statistical test, we can see that a significant F-statistical value indicates that overall, all independent variables are able to explain their dependent variables. Based on the results of the F Test above, it shows that variable X affects the stock price simultaneously because the p value is 0.000 < 0.05. So it is concluded that all variables X together have an influence on the share price of Infobank15.

Coefficient of Determination Test

The Coefficient of Determination test was carried out to see how much the influence of the independent variable in influencing the dependent variable. Based on the results of the Determination Coefficient Test, the Adjusted R-squared value was obtained at 0.776651. This means that external and internal factors have an

influence on the bank's stock price by 77.66% while the rest is influenced by other variables that are not included in the study.

Hypothesis Test Results

The Effect of GDP on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the GDP variable has a probability value of 0.7230 or greater than 0.05 which means that GDP has no influence on the bank's stock price.

The Gross Domestic Income (GDP) variable is a metric used in macroeconomics that describes the total value of goods and services produced in a country over a given period of time. Typically, GDP indicates the overall health of the economy, but it does not necessarily indicate the performance of a particular company or sector. In contrast, various components of the microeconomy, such as business performance, management, industry and market conditions usually affect stock prices. While there is a correlation between the stock market and the economy as a whole, bank stock prices in the Infobank15 Index may be more influenced by the bank's internal policies and certain aspects of the banking industry. More direct external factors, such as monetary policy, interest rates, and market sentiment, also often affect stock prices in the market. Therefore, even if a country's economy grows, other factors such as central bank policies, political conditions, or even global market turmoil can affect stock prices more than just the overall GDP figure.

In line with what Fama (1991) stated in Efficient Capital Markets: II explained that the stock market is more influenced by future expectations of the Company's revenue and profits than macroeconomic variables such as GDP. Fama argues that stock prices reflect available information about the future, and do not necessarily follow directly macroeconomic developments such as GDP.

The Effect of Inflation on Infobank15 Index Stock Prices

The results of the t-test in the table show that the inflation variable has a probability value of 0.3035 or greater than 0.05 which means that inflation has no effect on the share price of Infobank15. However, the resulting constant value is -0.017773 which means that inflation has a negative effect but does not affect the share price of Infobank15.

Inflation can affect stock prices differently depending on the industry sector. In the banking sector, the impact of inflation is often neutral or insignificant. This is due to the ability of banks to adjust lending and deposit interest rates according to the inflation rate, so that profit margins are relatively stable.

The increase in inflation will cause an increase in the company's operational burden which will lead to a decrease in the company's profit, so it will be a negative signal for investors. Diversification can help banks reduce the negative impact of inflation on banks' financial performance. Banks often have various sources of income, such as interest income, fee-based income, and other investments so that stock prices remain stable. Investors view the banking sector as a relatively stable sector and able to adapt to macroeconomic changes, including inflation. Stock prices can be affected by many factors other than inflation, such as company performance, interest rates, and investor expectations. If these other factors are more dominant, the effect of inflation can be absorbed in market dynamics, so it does not have a significant influence on stock prices. This perception can cause bank stock prices to be less affected by inflation fluctuations. Inflation often does not have a significant effect on the banking sector because banks have the ability to adjust net interest margins according to changes in inflation (Agoraki dan Kouretas, 2019).

The Effect of Interest Rates on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the interest rate has a coefficient value of 0.032349, the positive coefficient value shows a positive relationship of the interest rate variable to the bank's stock price with a probability of 0.0230. A probability value of < 0.05 means that interest rates have a positive influence on the increase in the bank's stock price so that H_1 is accepted.

A number of policies to handle the Covid-19 pandemic and economic stimulus carried out by Bank Indonesia in stimulating economic growth by gradually lowering the benchmark interest rate to 3.75% by the end of 2020. Changes in interest rates can have an impact on the investment portfolio owned by investors. As a result, interest rates have the ability to affect the volume and price of stocks.

This is relevant to the theory that banks can take advantage of rising interest rates to increase interest income, which boosts investor confidence and boosts stock prices. When interest rates increase, the interest income earned by banks from loans also increases, especially for floating rate loans. This increases the bank's net profit, which is an attraction for investors. Investors can see interest rate hikes as a sign of economic stability or sound monetary policy, thereby increasing confidence in the banking sector.

The results of this analysis are in line with the analysis conducted by Halim (2020). This study shows a positive relationship between interest rates and bank stock prices on the Indonesia Stock Exchange, because banks tend to get higher profits in high interest rate conditions.

In the last 2 years, Bank Indonesia has again increased bank interest rates to 6% in 2023. Rising interest rates allow banks to increase bank interest margins. Higher interest margins will increase the bank's profitability, which can ultimately attract investor interest and drive up stock prices. Based on OJK data in 2023, banking credit growth grew by 10.38% from the previous year. The potential for banking growth in Indonesia is quite rapid, so investors will certainly invest their funds in issuers that are considered to have good growth.

The Effect of NIM on Infobank15 Index Stock Price

The results of the t-test in the table show that NIM has a coefficient value of 0.182853, the positive coefficient value shows a positive relationship of the NIM variable to the bank's stock price with a probability of 0.0000. A probability value of < 0.05 means that NIM has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

NIM is a measure that describes how well a bank manages its net interest income by considering its productive assets. A high NIM indicates that the bank has the ability to generate a large interest income that exceeds its funding costs. Banks with high NIM are seen as safe and profitable investment places because banks are better able to deal with macroeconomic pressures and credit risks. A high NIM is usually considered more profitable and stable, thus increasing investor confidence and increasing the bank's stock price directly.

Umara *et al.* (2023) conducted a study on the Analysis of the Influence of Financial Ratios on Stock Prices in Banking Companies Listed on the Indonesia Stock Exchange. The results of the study show that NIM has a significant positive effect on stock prices, indicating that an increase in NIM can increase investor interest and bank stock prices. From the study, it is stated that the higher the loan interest income, the higher the increase in stock prices

The Effect of CAR on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that CAR has a coefficient value of 0.032349, the positive coefficient value shows a positive relationship of the CAR variable to the bank's stock price with a probability of 0.0230. A probability value of < 0.05 means that CAR has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

In general, banking resilience in December 2023 is still maintained, this is reflected in the bank's capital condition which is relatively stable and quite solid, showing the bank's adequate ability to absorb risk with a CAR indicator of 27.65%. The Capital Adequacy Ratio (CAR) reflects a bank's ability to provide capital to cover credit, operational, and market risks. Banks with higher CARs are considered to have better financial health and are safer, thus giving investors greater confidence to invest. Bank Indonesia sets the minimum capital of a bank at 8%. The higher the CAR, the more capital the bank has to cover the decline in assets. This compliance indicates good governance, which increases market confidence. Although CAR reflects stability, the positive relationship between CAR and stock price also depends on the bank's ability to leverage existing capital to generate profits. CAR is one of the important tools for investors to assess the bank's ability to meet its financial obligations and protect depositors from the risk of loss. The high CAR reflects the bank's ability to survive unstable economic conditions, which increases the value of the bank's shares in the market (Subagyo *et al*., 2022). The results of the analysis show that CAR has a positive and significant influence on the bank's stock price in the Infobank15 Index. This shows that capital stability is an important factor that investors consider when investing in banking stocks.

The Effect of NPLs on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that NPLs have a coefficient value of -0.256049, the negative coefficient value shows a negative relationship of the NPL variable to the bank's stock price with a probability of 0.0106. A probability value of < 0.05 means that NPLs have a negative influence on the increase in the bank's stock price.

Non-Performing Loans (NPLs) measure how large the proportion of loans that cannot be repaid by debtors is. A high NPL ratio indicates that the bank has a lot of non-performing assets, which means more losses in the future. This gives a negative signal to investors, causing the stock price to fall. Banks with high NPLs tend to need more funds for credit loss reserves. As a result, the bank's net profit decreased and had an impact on the decline in investor interest in investing. Investors usually see NPLs as an indication of credit risk levels. Banks with high NPLs are considered riskier, which can lead to a decline in stock prices as investors seek safe investments. The highest surge in NPLs occurred in 2020 due to the impact of the Covid-19 pandemic reaching 3.06%, but until the end of 2023, banking performance and bank stock prices began to improve. Credit risk decreased with the gross NPL ratio decreasing by 25 bps to 2.19% in 2023. Historically, the value of banking NPLs will not jump higher, so this is one of investors' confidence in large banks that usually provide credit with the principle of prudence.

In line with Umara *et al*. (2023) research, it was found that NPLs have a negative impact on stock prices because the movement or increase in the NPL ratio affects stock prices. The high number of NPLs indicates the bank's failure to manage the business, leading to liquidity, solvency and profitability problems. One consequence of the decline in profits is the fact that banks not only lose their source of income but also have to set aside reserves according to credit collectibility.

The Effect of ROE on Infobank15 Index Stock Price

The results of the t-test in the table show that ROE has a coefficient value of 0.025544, a positive coefficient value shows a positive relationship of the ROE variable to the bank's stock price with a probability of 0.0054. A probability value of < 0.05 means that ROE has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

This positive relationship reflects that banks with higher ROEs are considered more efficient in utilizing capital to generate profits. With this level of significance, the test results support the hypothesis that ROE has a positive influence on the bank's stock price. A high ROE is seen as an indicator of management's success in generating profits from shareholders' capital, thus encouraging investors to buy the bank's shares. In the banking sector, a high ROE indicates that banks are able to maintain profitability despite facing credit, operational, or market risks. This signals confidence to investors in the sustainability of the Company's profits and gives hope for greater dividends. ROE as one of the main indicators used by investors to evaluate a company's profitability and have an impact on stock prices (Tantra *et al*., 2022).

The Effect of BOPO on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that BOPO has a coefficient value of -0.311159, the negative coefficient value shows the negative relationship of the BOPO variable to the bank's stock price with a probability of 0.0035. A probability value of < 0.05 means that BOPO has a negative influence on the increase in the bank's stock price.

The high BOPO ratio reflects operational inefficiencies, which negatively impact the profitability and attractiveness of the stock in the eyes of investors. Banks with high BOPO ratios are often considered less efficient in managing their operations. This can affect the bank's net profit, which ultimately reduces the attractiveness of the bank's shares in the market.

Investors tend to avoid banks with high BOPO because they perceive them to be less capable of generating competitive profits. As BOPO increases, the bank's profit margin shrinks, thereby reducing the intrinsic value of the bank's stock. This can cause investors to sell the bank's shares, which ultimately lowers the share price. Therefore, banks need to keep their BOPO ratios low to increase the attractiveness of their stocks in the market.

Alfretdo & Nasution (2021) stated in their research that BOPO has a negative effect on the stock prices of banks listed on the Indonesia Stock Exchange. The greater the BOPO value produced, the lower the net profit value which also has an impact on the decrease in dividends. If the dividend value decreases, the stock price will fall.

The Effect of LDR on Infobank15 Index Stock Price

The results of the t-test in the table show that LDR has a coefficient value of 0.506726, a positive coefficient value shows a positive relationship of the LDR variable to the bank's stock price with a probability of 0.0000. A probability value of < 0.05 means that LDR has a positive influence on the increase in the bank's stock price so that H_1 is accepted.

This positive relationship reflects that banks with high LDRs are considered more efficient in managing their liquidity by channeling credit from third-party funds. In the banking sector, a high but controlled LDR reflects good liquidity management. This gives a positive signal to investors regarding the stability and profitability of the bank, thereby encouraging an increase in stock prices. Stable economic conditions, high levels of market confidence, and supportive monetary policies, such as low interest rates, can strengthen the positive relationship between LDR and stock prices.

Research conducted by Jamaluddin (2022) states that the Loan to Deposit Ratio (LDR) has a significant effect on stock prices. A bank's LDR that is high and exceeds the reasonable limit describes the condition of the bank that lacks liquidity so that the bank cannot repay its obligations on third-party funds so that it will affect investors' interest in investing which indirectly also affects the stock price.

The Effect of EPS on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the EPS variable has a probability value of 0.0837 or greater than 0.05 which means that EPS has no influence on the bank's share price, EPS is a measure of net profit per share, which is often used by investors to assess the company's performance. A high EPS is usually

considered an indication of a company's good profitability, so it is expected to increase the stock price. Although EPS is theoretically important, in this study its effect on bank stock prices in the Infobank15 Index is not significant. This shows that there are other factors that are more dominant in influencing the bank's stock price. In the banking sector, EPS may not adequately reflect the overall performance of banks. Investors also consider other indicators such as ROE, NIM, and BOPO which more directly reflect the bank's operational efficiency and profitability. Bank stock prices tend to be influenced more by investor confidence in the stability and growth of banks than by EPS fluctuations alone. In line with research conducted by Sanjaya (2018) that EPS has no influence on bank stock prices**.**

The Effect of PBV on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that PBV has a coefficient value of 0.182853, a positive coefficient value shows a positive relationship of the PBV variable to the bank's stock price with a probability of 0.0000. A probability value of < 0.05 means that PBV has a positive influence on the increase in the bank's stock price so that H_1 is accepted. Price to Book Value (PBV) is a ratio that compares the market price of a company's stock with its book value. In the banking sector, PBV is an important indicator because book value often reflects the net worth that banks have, including liquidity reserves and equity. A higher PBV indicates that the bank has strong fundamentals, good management, or promising growth prospects. When PBV increases, it means that the market values the bank's assets higher than the book value, which is usually driven by the expectation of larger profits or the bank's good reputation. Investors see banks with high PBVs as efficient and stable entities, which drives the increase in demand for shares and their share prices. A high PBV is considered more valuable by the market, as it shows optimism about its profitability and long-term stability.

According to Sorongan & Yatna (2018), PBV is considered an important indicator for new investors in choosing banking stocks, because it reflects the value of the stock and is closely related to stock returns. These findings provide valuable insights for investors and companies in making the right decisions regarding banking stocks. Therefore, increasing PBV can be a strategy to attract more investors and increase the value of bank shares.

The Effect of PER on the Stock Price of the Infobank15 Index

The results of the t-test in the table show that the EPS variable has a probability value of 0.4578 or greater than 0.05 which means that GDP has no influence on the share price of PER banks, it is often used to evaluate whether a stock is overpriced or cheap based on the profits generated. In theory, a high PER usually reflects high market expectations for future profit growth. Conversely, a low PER can indicate an undervalued stock or low profit expectations. In the banking sector, PER may be less relevant as a key indicator because the valuation of bank shares is often more influenced by other indicators such as CAR, NPL**,** or NIM that reflect financial stability and operational performance. PER does not always have a significant influence on bank stock prices, especially when investors prioritize stability and risk (Viphindrartin *et al*., 2021). So a high or low PER may be less meaningful if investors pay more attention to the prospects for long-term profits or the potential for bank business expansion.

CONCLUSION

The study concludes that significant differences in stock prices were observed using ANOVA and Kruskal-Wallis tests across pre-pandemic (2018-2019), pandemic (2020-2021), and post-pandemic (2022-2023) periods for six banking companies, with ARTO shares showing no significant difference. Panel data analysis identified eight variables—Interest Rate, NIM, CAR, NPL, ROE, BOPO, LDR, and PBV—as having a significant impact on Infobank15's share prices, while GDP, Inflation, EPS, and PER were found to have no influence. The positive effect of interest rates on stock prices suggests that bank management should focus on internal factors and respond to inflation and interest rate changes to enhance profitability. Future research could explore the long-term effects of macroeconomic indicators on stock prices, compare stock price reactions to interest rate changes across different banking sectors, examine interactions between internal and external factors, assess strategic adaptations to interest rate changes, and investigate investor sentiment during the pandemic recovery.

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