

Factors Affecting Banking Stock Price on the Indonesian Stock Exchange 2017 to 2021

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A B S T R A C T

This research aims to ascertain the impact of the factors named Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Return on Assets (ROA), and Loan to Deposit Ratio (LDR). Both simultaneously and partially on banking stock prices on the Indonesia Stock Exchange (IDX) in the period (2017-2021). The analysis method used in this study is Multiple Linear Regression Analysis using a Statistical Analysis tool in the form of SPSS. The results of simultaneous hypothesis testing of independent variables consisting of LDR, ROA, NPL and CAR affect Stock Prices. Stock prices are unaffected by the findings of the LDR partial hypothesis test. Stock prices are significantly impacted by the findings of the partial hypothesis testing of ROA. Stock prices are unaffected by the partial hypothesis testing outcomes for NPL. Stock prices are unaffected by the findings of the CAR partial hypothesis test.

INTRODUCTION

Banking is a major factor in the flow of money across different financial sectors in the modern era. Among the ten issuers with the biggest market capitalization, the banking sector holds the largest category. An increase in share prices can be caused by a large market capitalization value. Investors that trade shares determine the going rate for shares on the capital market. With the specified share price, share trading on the stock exchange is automatically conducted.

Profitability to measure the most accurate bank performance. Third party funds are considered as a liquid liability component, so that these funds can be disbursed quickly, and lead to increased profitability. Third party funds, which banks obtain from the general public, comprise savings, deposits, and current accounts. The quantity of risk that investors are exposed to is shown by changes in stock prices over time, which are often referred to as stock price volatility. A number of internal and external factors might affect the volatility of stocks. Ultimately, good financial performance will have a positive impact on internal and external parties.

The higher the public's trust in the bank. Banking also has an interest in helping to stabilize the country's economy. It is important for Indonesia to maintain its economic stability, this has a great influence on increasing high investment in Indonesia so that it can encourage economic progress for the welfare of the community. In other matters, it is also necessary to pay attention to the capital market as one of the supporting sectors in the economy. It serves as a way for businesses to secure funding or for companies to raise capital from investors within the capital community. As more investors purchase shares of publicly traded companies, these companies gain additional revenue to further expand their operations, providing an alternative for investors looking to allocate their funds into financial assets.

Through a number of from results study about influence performance finance to price share has done, However the result Which in get diverse And generally No consistent or No in harmony, from results This interesting attention For to study return study Which relate with factors influence price share banking in Exchange Effect Indonesia year 2017 until 2021, specifically about existence factor (variable) Which determine fluctuation (volatility) price share banking. As which has explained in on that sector banking which very support as well as strategic in world business, development and trading Indonesia which most Good For in time front. Besides as intermediary, bank Also play a role as institution organizer And provider service services in field finance as well as then cross payment which on become bridge Supporter growth economy Indonesia as financing in the sector rill.

The researcher conducted an analysis from 2017 to 2021, because he wanted to know how much influence the LDR, ROA, NPL and CAR variables had on Stock Prices both partially and simultaneously, because at that time it was before and after the Covid-19 outbreak. Given the phenomena that have been expressed above, the researcher was interested in conducting research on the factors influencing stock prices.

LITERATURE REVIEW

Loan to Deposit Ratio (LDR)

The Loan to Deposit Ratio (LDR) is a metric that contrasts the total amount of credits extended with funds from third parties. LDR shows how well the bank can use the money it has gathered from other parties (Riyadi, 2017). The ratio between the quantity of credit a bank extends and the money it receives is known as the loan to deposit ratio, according to Fadhil (2015). The bank's liquidity is assessed using this ratio. The affected bank's liquidity decreases with increasing ratios. The lower and higher limits of the LDR objective are 78% and 92%, respectively, as per Bank Indonesia Regulation (PBI) Number 15/7/PBI/2013.

Return on Assets (ROA)

According to Anwar (2019), Return on Asset (ROA) is defined as a company's ability to generate profit from its owned assets. A company is said to be more profitable if the ROA is greater, and less profitable if the ROA decreases. The definition of Return on Assets (ROA), according to Munawir (2010), is a profitability ratio used to measure the company's ability to generate profits from all funds utilized for operations. Munawir (2012) further explains that ROA is the comparison (ratio) of profit before tax (earnings before tax / EBIT) over 12 months against the average business volume during the same period. According to Bank Indonesia Regulation (PBI) Number 6/9/PBI/2004, the best standard for ROA is set at 1.5%. The indicator used to measure profitability is Return on Asset (ROA).

Non-Performing Loan (NPL)

According to Zaino et al. (2018), NPL is defined as bad credit. In accordance with Bank Indonesia Regulation (PBI) Number 20/8/PBI/2018, the maximum amount of NPL permitted by Bank Indonesia has currently been set at 5%. The Non-Performing Loan Ratio (NPL) (Akbar, 2019) is stated as an indicator of the quality of credit provided by the bank. The greater the NPL, the worse the credit quality, and is considered a negative signal for bank performance.

Capital Adequacy Ratio (CAR)

According to Riyadi (2017), the Capital Adequacy Ratio (CAR) is the ratio of the minimum capital obligation that must be fulfilled by banks. CAR is considered to show the extent to which assets containing risks, such as credit, valuable securities, bills, investments, etc., can be financed by the bank using its own capital funds (Riyadi & Rafii, 2018). The CAR ratio calculation, as explained by Riyadi (2017), is based on the rules of Bank Indonesia, which mandate that banks meet the Minimum Capital Participation duty, also known as CAR, which is calculated as the ratio of equity to risk-weighted assets (RWA). Consequently, all Indonesian banks must offer a minimum capital of 8% in compliance with the guidelines established by the Bank of International Settlements (BIS) (Darmawi, 2016).

Capital adequacy ratio (CAR) is a ratio used by regulators in the banking sector to assess the health of the banking system and ensure that the level of capital adequacy can be determined by the bank from the potential losses arising from bank operations (Aspal and Nazneen, 2014). There are several opinions from previous researchers who have conducted research on factors that influence fluctuations and volatility in banking company stock prices showing that the CAR, LDR, NPL, and ROA variables have an influence on stock prices, both partially and simultaneously.

LDR, ROA, NPL and CAR to Stock Price

Stock price is the price set for a company for other parties who want to have stock ownership rights. There are several factors that affect the amount of shares that investors will obtain, including financial ratios including loan to deposit ratio, return on assets, non-performing loans, and capital adequacy ratio. This is based on the results of previous research on these factors which state that the above factors affect stock prices.

Many indicators, including the Loan to Deposit Ratio, Return on Equity, Return on Assets, Non-Performing Loan, and Capital Adequacy Ratio, have been found to have an impact on Stock Price, according to prior research that has been discussed above. Capital Adequacy Ratio, Non-Performing Loan, Loan to Deposit Ratio, and Return on Assets all affect stock prices concurrently or jointly.

H1: Return on Assets, Non-Performing Loans, Loan to Deposit Ratio, and Capital Adequacy Ratio all have a simultaneous or combined impact on price share.

LDR to Price Share

The loan-to-deposit ratio (LDR) in banks can be considered financially healthy when it falls within the range of 78% to 92%. A high LDR indicates that a bank may lack adequate liquidity to meet its obligations to customers. Conversely, a low LDR suggests that the bank has sufficient liquidity, but its earnings might be reduced, as banks typically generate income through extending credit. When the LDR is within the acceptable range, it attracts investors who are interested in banks maintaining an LDR between 78% and 92%. This interest can lead to an increase in share prices, indicating that the LDR has an impact on stock prices.

H2: LDR influential to Price Share

ROA to Price Share

Purwanti (2020) and Putri (2017) state that *return on assets* influence on stock prices can be interpreted as the ROA financial ratio in banks can be categorized as good financially as shown by the ratio achieved is above 1.5%. If the ROA ratio is above 5%, investors will have more interested in investing in a bank that can use assets with well, this results in an increase in the stock price, so theoretically ROA own influence on prices share.

H3: ROA influential to Price Share

NPL against Price Share

Research conducted by Eric and Nasution (2021) and Sumantri (2020) found that non-performing loans (NPL) do not impact stock prices. In contrast, Aryanti, Rahmi, and Herlina (2022) demonstrated that non-performing loans have a simultaneous effect on stock prices, while Fatma (2020) indicated that NPLs can influence stock prices both partially and simultaneously. Therefore, it can be inferred from these studies that the NPL financial ratio in banks is considered financially sound when it remains below 5%. A very low NPL value suggests that the bank is less vulnerable to business risks. As the NPL ratio decreases, investors may show greater interest in investing in banks with lower risks, indicating that NPLs theoretically influence stock prices.

H4: *NPL influential to stock price*

CAR against Price Share

The taller ratio CAR, so the more Good guarantee bank to risk business. On the other hand, if the CAR ratio does not meet the standard of 8% then the bank must be careful - heart, Which It means potential liquidity the more big. The taller ratio CAR, then there will be more investor demand for bank shares, this is resulting in an increase in share prices, so that theoretically CAR has influence against price share.

H5: *CAR has an effect to Price Share*

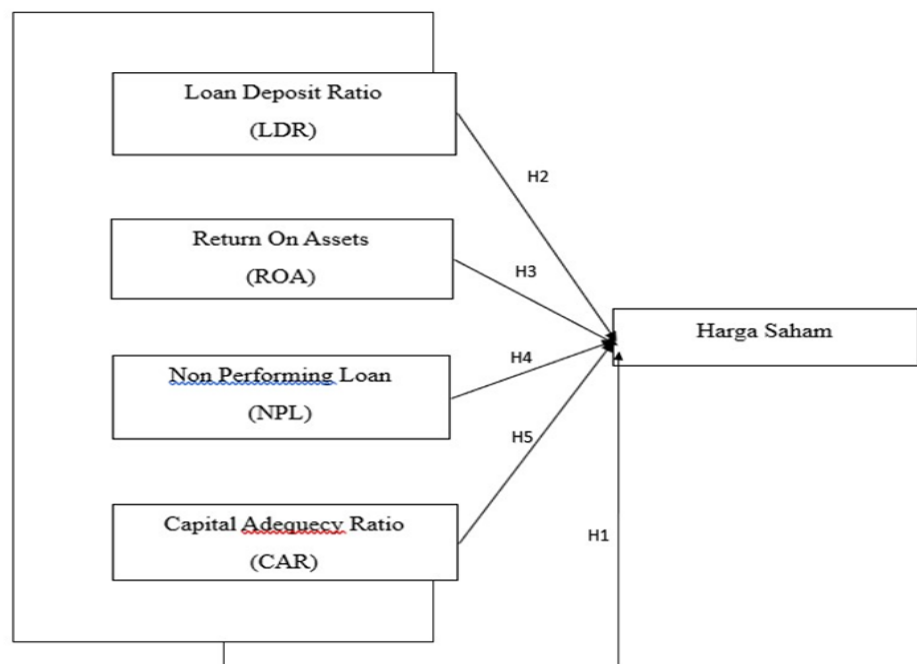


Figure 1. Conceptual Framework

METHODOLOGY

This study looks at financial performance, with an emphasis on independent variables such the capital adequacy ratio (CAR), non-performing

loans (NPL), return on assets (ROA), and loan to deposit ratio (LDR). The stock price is the dependent variable in this research. The analysis includes the financial statements of ten publicly listed banks from 2017 to 2021. Employing a quantitative methodology, this study relies on numerical data throughout the stages of data collection, processing, and analysis. The data utilized are quantitative and are structured as a time series, comprising secondary data collected over a specified period.

For this research, data collection was conducted through documentation studies, which involved examining, clarifying, and analyzing secondary data relevant to the study's scope. The population for this research comprised ten banking institutions listed on the Indonesia Stock Exchange from 2017 to 2021. These banks include BCA, BRI, INDEPENDENT, BNI, DANAMON, BTN, BTPN, CIMB, OCBC, and MEGA. All data analysis was performed using the SPSS application.

RESEARCH RESULT

Description Statistical Analysis

Table 1. Descriptive Statistics

Variable	N	Minimu m	Maximu m	Mean	Std. Deviation
LDR	50	56.50	163.00	88.65	18.39
ROA	50	0.10	4.20	2.35	1.00
NPL	50	0.80	4.80	2.47	0.94
CAR	50	16.80	31.00	22.02	3.04
STOCK PRICE	50	670.00	33850.00	6169.36	7362.91

Source: Processed data, SPSS (2023)

The descriptive statistical analysis shown in Table 1 reveals that the Loan to Deposit Ratio (LDR) variable, based on 50 observations (N), has an average of 88.65, with a minimum value of 56.50 and a maximum of 163.00, leading to a standard deviation of 18.39. The Return on Assets (ROA) variable also consists of 50 data points (N), with an average of 2.35, a minimum of 0.10, a maximum of 4.20, and a standard deviation of 1.00. For the Non-Performing Loans (NPL) variable, the average is 2.47 from the same set of 50 data points (N), with a minimum of 0.80, a maximum of 4.80, and a standard deviation of 0.94. The Capital Adequacy Ratio (CAR) has an average of 3.04, with minimum and maximum values of 16.80 and 31.00, respectively, resulting in a standard deviation of 3.04. Regarding the Stock Price variable, the average is 6169.36, with a minimum of 670.00 and a maximum of 33850.00, which leads to a standard deviation of 7362.91 over the period from 2017 to 2021. Analyzing the banks' annual performance along with these descriptive statistics shows that stock prices varied from a minimum of 670.00 to a maximum of 33850.00, averaging 6169.36 with a standard deviation of 7362.91 during the study period. Notably, the minimum value was recorded in 2021, while the maximum was in 2020, indicating that there was no significant

decline in stock prices; instead, there was a considerable increase in stock prices from 2017 to 2021.

Classic Assumption Test

To proceed with data testing for the next stage, it is essential to conduct a classical assumption test, because it makes multiple linear regression analysis possible to continue. The normality, multicollinearity, heteroscedasticity, and autocorrelation tests are among the evaluations that are part of the traditional assumption test.

Normality Test

A probability plot that compares the cumulative distribution to the normal distribution is used to assess the normality of the residuals. If the data points are distributed around the diagonal line and align with its direction, it indicates a normal distribution pattern, suggesting that the regression model satisfies the normality assumption. This can be observed in Graph 6 of this research.

Table 2. Normality Test Results

		Unstandardized Residual
N		50
Normal Parameters	Mean	0.000
	Std. Deviation	0.754
	Most Extreme Differences	
	Absolute	0.086
	Positive	0.086
	Negative	-0.082
Test Statistic		0.086
Asymp. Sig. (2-tailed)		0.200

Source: Processed data, SPSS (2023)

The analysis performed using the One Sample Kolmogorov-Smirnov test shows that the significance value of Asymp. Sig (2-tailed) is 0.200, which exceeds the 0.05 threshold. This indicates that the data is normally distributed, confirming that the normality assumptions for the regression analysis are met.

Autocorrelation Test

Autocorrelation testing is performed using a run test, where the Asymp. Sig (2-tailed) value must be less than 0.05 to indicate a significant result, and the opposite is true for non-significance. The results of the run test are presented in Table 3.

Table 3. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.633 ^a	.401	.348	.78684	0.545

a. Predictors: (Constant), CAR, LDR, ROA, NPL

b. Dependent Variable: Stock Price

Source: Processed data, SPSS (2023)

Table 2 shows that the Durbin-Watson value for this study is 0.545. The autocorrelation test in this research employs the standard assessment $(4 - d) > DU$. The results indicate that $(4 - 0.545) > 1.771$, which simplifies to $3.455 > 1.771$. This indicates the absence of negative autocorrelation. Therefore, it can be concluded that there is no autocorrelation present in this study.

Multiple Linear Regression Analysis

The results of this analysis, performed using SPSS (2023), are detailed in Table 5.

Table 4. Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5,804	1,585		3,661	.001
	LDR	-.001	.007	-.016	-.130	.897
	ROA	.695	.153	.711	4,554	.000
	NPL	.222	.165	.215	1,347	.185
	CAR	.016	.045	.049	.346	.731

a. Dependent Variables: Price Share

Source: Processed data, SPSS (2023)

Based on table 4 above, a multiple linear regression equation can be prepared as follows:

Information:

Y = Stock Price

X1 = Loan to Deposit Ratio X2 = Return Of Asset

X3 = Non Performing Loan X4 = Capital Adequacy Ratio

a = Constant

b = Coefficient Regression

c = error term

The results of testing the multiple linear regression equation in Table 5 above, it can be interpreted as follows:

1. **Constant** (α)
 The constant value of 5.804 indicates that if there are no influences from the four independent variables—LDR, ROA, NPL, and CAR—the average debt policy will change or increase by IDR 5,804.
2. **Regression Coefficient (β_1) for LDR Variable (X1)**
 The beta coefficient for the LDR variable is -0.001. This means that if the other variables remain constant and the LDR increases by 1%, the share price will decrease by IDR 0.1.
3. **Regression Coefficient (β_2) for ROA Variable (X2)**
 The beta coefficient for the ROA variable is 0.695. If the other variables remain constant and the ROA increases by 1%, the share price will increase by IDR 69.5.
4. **Regression Coefficient (β_3) for NPL Variable (X3)**
 The beta coefficient for the NPL variable is 0.222. If the other variables remain constant and the NPL increases by 1%, the share price will increase by IDR 22.2.
5. **Regression Coefficient (β_4) for CAR Variable (X4)**
 The beta coefficient for the CAR variable is 0.016. If the other variables remain constant and the CAR increases by 1%, the share price will increase by IDR 1.6.

Effect of LDR (X1), ROA (X2), NPL (X3) and CAR (X4) on Stock Prices Simultaneously

The F test essentially determines whether all independent variables included in the model collectively explain the dependent variable. The testing criteria employ a significance level of 0.05. This test is conducted under the following conditions:

1. If the significance is less than 0.05, it indicates that the research model is appropriate and demonstrates that all independent variables have a simultaneous and significant effect on the dependent variable.
2. If the significance is greater than 0.05, it implies that the research model is not suitable for use and suggests that the independent variables do not simultaneously and significantly affect the dependent variable.

Table 5 Simultaneous Test Results (F Test)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18,665	4	4.666	7,537	.000 ^b
	Residual	27,860	45	.619		
	Total	46,525	49			

a. Dependent Variables: Stock Price

b. Predictors: (Constant), LDR, ROA, NPL, CAR

Source: Processed data, SPSS (2023)

From Table 5, it is evident that the F count value is 7.537, while the F table value is 2.58. The F table values can be referenced from the F distribution, where column 4 represents the total number of variables (5) minus the dependent variable (1), and row 45 corresponds to the total data points (50) minus the number of variables (5). Since the F count (7.537) is greater than the F table (2.58), and the significance value is 0.000, which is less than 0.05, it indicates that the independent variables – Loan to Deposit Ratio (X1), Return on Assets (X2), Non-Performing Loans (X3), and Capital Adequacy Ratio (X4) – simultaneously influence the Stock Price (Y) of banking companies listed on the Indonesian Stock Exchange during the period from 2017 to 2021. The results of the F test suggest that all independent variables included in the model can collectively explain the dependent variable, confirming that the model is appropriate for this research.

DISCUSSION

Partial influence of LDR (X1), ROA (X2), NPL (X3) and CAR (X4) on Stock Prices

This research, the method used to assess the influence of independent variables on the dependent variable individually is through the T test. According to Ghozali (2018), the purpose of the T test is to evaluate how each independent variable – Loan to Deposit Ratio, Return on Assets, Non-Performing Loans, and Capital Adequacy Ratio – affects the dependent variable, which is the Share Price, on an individual basis. This test involves comparing the T count with the T table, utilizing a significance level of 0.05, with the following criteria:

1. If T count > T table with a significant value $\alpha < 0.05$, it means that each independent variable has a significant effect on the dependent variable.
2. If T count < T table with a significant value $\alpha > 0.05$, it means that each independent variable has no significant effect on the dependent variable.

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	5,804	1,585		3,661	.001
	LDR	-.001	.007	-.016	-.130	.897
	ROA	.695	.153	.711	4,554	.000
	NPL	.222	.165	.215	1,347	.185
	CAR	.016	.045	.049	.346	.731

a. Dependent Variables: Stock Price

Source: Processed data, SPSS (2023)

T table value is 2.014. The T table result of 2.014 was obtained from the t distribution table for the 2-way test, in column 0.25 and in test row 45 (total data 50 minus 4 minus 1). The results of the T test can be explained as follows:

The influence of the LDR Variable on Stock prices

For the Loan to Deposit Ratio (X1) variable, the t count is -0.130, with a significance value of 0.897. By referencing the table, the critical value is 2.014. Thus, we find that $t \text{ count} < t \text{ table}$ ($-0.130 < 2.014$), and the significance ($0.897 > 0.05$) indicates that we accept H0 and reject H1. Therefore, the Loan to Deposit Ratio (X1) variable does not have a significant impact on the share price variable (Y) of banking companies listed on the Indonesian Stock Exchange from 2017 to 2021.

The research findings suggest that as the amount of Loan to Deposit credit disbursed increases, the liquidity capacity of the bank tends to decrease. The total credit extended serves as an indicator that can influence the LDR: the more credit that is issued, the higher the LDR becomes, and vice versa. This implies that when both the credit provided and the LDR are high, the bank's profits from interest income are likely to increase.

The Influence of the ROA Variable on Stock Prices

The significance value for the ROA variable (X2) is 0.000, and its t-value is 4.554. A significant value ($0.000 < 0.05$) is found by decomposing the t table, indicating that $t \text{ count} > t \text{ table}$ ($4.554 > 2.014$) and that H0 is rejected and H1 is approved. This suggests that the ROA variable (X2) has a considerable effect on the stock price variable (Y) to some extent. According to the study's findings, ROA can be used to predict changes in stock prices (Y). A higher ROA can be interpreted as a sign of a company's ability to manage its assets in a way that affects income, and a lower ROA will have a negative effect on the business, including the banking industry, which will directly affect the company's stock price.

The Influence of NPL Variables on Stock Prices

For the Non-Performing Loan (NPL) variable (X3), the t count is 1.347, with a significance value of 0.185. Referring to the t table, the critical value is 2.014. This results in $t \text{ count} < t \text{ table}$ ($1.347 < 2.014$) and a significance level ($0.185 > 0.05$), leading to the acceptance of H0 and the partial rejection of H1. Therefore, the NPL variable (X3) does not significantly influence the share price variable (Y).

These findings differ from those of previous studies, such as Fatma (2020), Nurfauziah and Ainy (2019), and Rusdiyanto et al. (2018), which indicated that Non-Performing Loans have a positive effect on stock prices, whether considered individually or collectively. The Non-Performing Loans (NPL) ratio reflects a bank's ability to manage problem loans effectively.

Influence of the CAR variable

For the CAR variable (X4), the t-value is 0.346, with a significance value of 0.731. According to the t table, the critical value is 2.014. This leads to the conclusion that $t \text{ count} < t \text{ table}$ ($0.346 < 2.014$) and the significance level ($0.731 > 0.05$). Therefore, we accept H0 and reject H1, which indicates that the CAR variable (X4) does not have a significant effect on the stock price variable (Y).

Coefficient of Determination Test (R²)

The coefficient of determination (R^2) ranges from zero to one. The assessment criteria indicate that if R^2 is closer to 1, it signifies a stronger ability of the independent variable (X) to explain the variation in the dependent variable (Y). Conversely, if R^2 is closer to 0, it suggests that the independent variable (X) has a diminishing ability to influence the dependent variable (Y), indicating that the model may not adequately explain the relationship between the variables. The results of the coefficient of determination test can be found in Table 8.

Table 7. Coefficient of Determination Test (R²)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.633a	.401	.348	.78684

a. Predictors: (Constant), LDR, ROA, NPL, CAR

b. Dependent Variables: Stock Price

Source: Processed data, SPSS (2023)

The relationship between the dependent variable, share prices, and the independent variables, loan to deposit ratio, return on assets, non-performing loans, and capital adequacy ratio, is quite weak and constrained, as Table 7 demonstrates. The corrected R square value of 0.348, or 34.8%, supports this by showing that these independent factors account for 34.8% of the variations in stock prices. Other independent factors that are not covered in this study, like other financial ratios, have an impact on the remaining 65.2%.

CONCLUSIONS AND RECOMMENDATIONS

LDR, ROA, NPL, and CAR obtained results that did not have a significant effect on the price of banking shares listed on the Indonesia Stock Exchange from 2017 to 2021.

When the variables are combined, LDR, ROA, NPL, and CAR produce an effect on the price of banking shares on the Indonesia Stock Exchange in the same period.

Among these variables, ROA has the most significant individual influence on banking sector stock prices on the Indonesia Stock Exchange from 2017 to 2021.

Collectively, LDR, ROA, NPL, and CAR have the most dominant influence on banking stock prices on the Indonesia Stock Exchange from 2017 to 2021.

ADVANCED RESEARCH

The conclusions of this study can be used as information for banking company management regarding the influence of LDR, ROA, NPL and CAR simultaneously on stock prices so that it is useful in making company policy decisions to maximize company performance.

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