

**CAPITAL ADEQUATION RATIO (CAR) ANALYSIS OF BRI IN  
INDONESIA PERIOD 2009 TO 2022**

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**ABSTRACT**

Banking institutions basically have a very important and strategic role in national economic development. Banks have a function as financial intermediaries by collecting funds from parties who have excess funds and channeling them back to parties who need funds, so that the capital adequacy ratio needs to be maintained at all times.

This research wants to see what factors influence the capital adequacy level (CAR) of PT. Bank Rakyat Indonesia (BRI) Persero. The independent variables of this research are Return On Assets (ROA), Operational Costs to Operating Income (BOPO), Non Performing Loans (NPL), Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM). The research period was 14 years from 2009 to 2022. This research used SPSS software version 26, with partial and simultaneous correlation analysis, regression tests and coefficient of determination.

The research results show that only the ROA and BOPO variables have a significant effect on BRI's Capital Adequacy Ratio (CAR), while NIM, NPL and LDR apparently do not have a significant effect on CAR. Together, all independent variables have a significant effect on the capital adequacy ratio (CAR), and have a correlation of 77.8%.

*Keywords: ROA, NIM, BOPO, NPL, LDR and CAR*

## **INTRODUCTION**

Banking is one of the most important bases for a country's economy to support investment. The basic function of banks is as a financial intermediary by bridging fund savings from the public and channeling them back in accordance with M. K. Blass's (2016) credit policy.

Banking institutions basically have a very important and strategic role in national economic development. In this case, the bank has an intermediation function or as a financial intermediary by collecting funds from parties who have excess funds and channeling them back to parties who need funds.

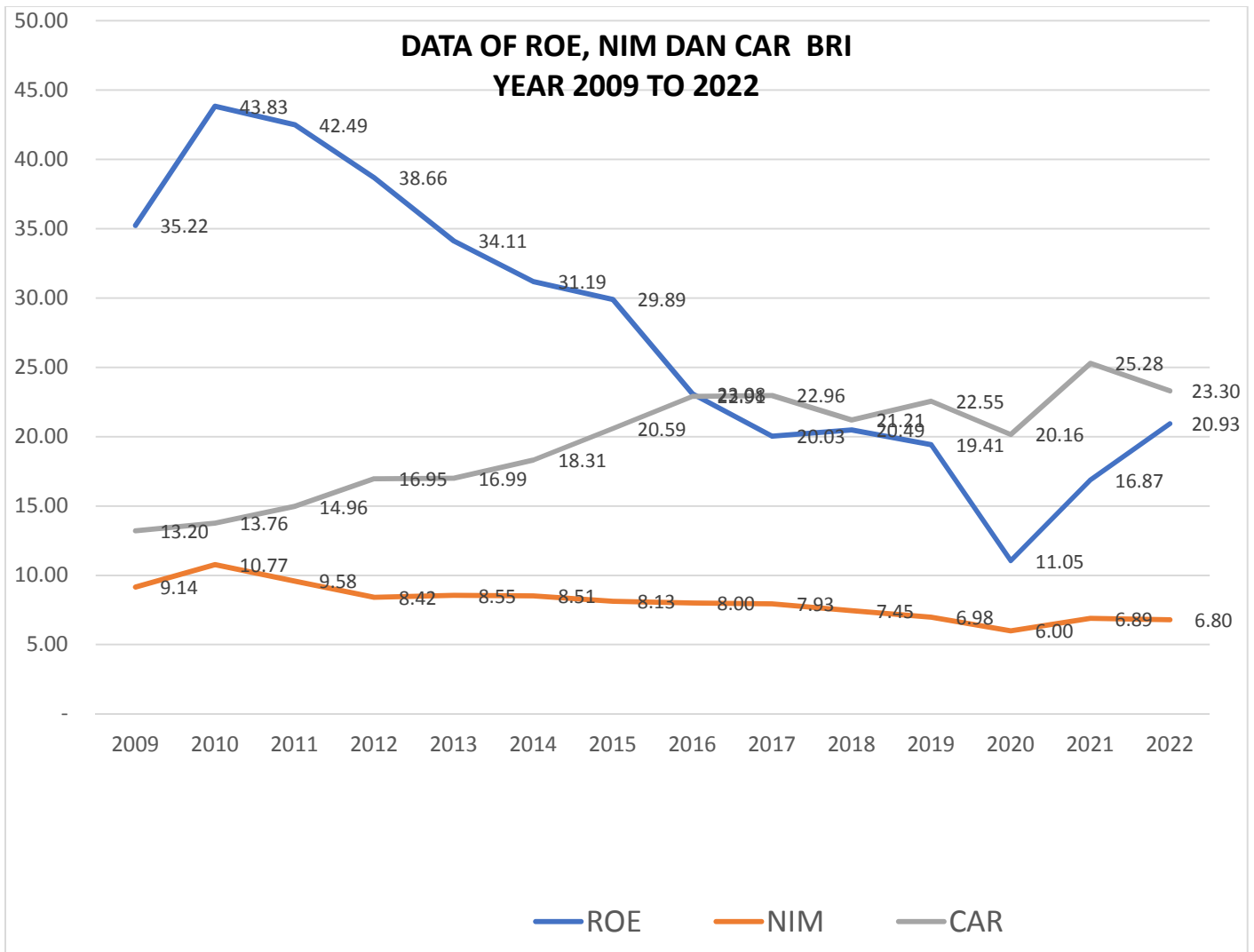
The banking industry after 2022 in Indonesia faces quite tough challenges, due to the emergence of the Covid-19 pandemic and all the restrictions that follow. Competition between banks, developments in digital finance and changes in people's economic behavior will influence banks' ability to anticipate and innovate, so that financial system stability is maintained.

The main goal of banking is to maximize profits. The size of the profit obtained depends greatly on the measurement of the income received and the costs incurred. In generating maximum profits, banking players continue to strive to carry out various activities, then maintain consistency, so as not to experience losses. However, banks are also required to maintain the level of financial health, including; capital adequacy or Capital Adequacy Ratio (CAR).

"The banking capital aspect is very important, because large capital strength is needed in global competition. However, capital is often the main problem for national banks. "Capital is indeed a problem for banking growth in the future" (Info Bank News. (2013). According to Bank Indonesia, the level of bank capital

adequacy can be maintained by paying attention to the Capital Adequacy Ratio (CAR), because CAR is the most important indicator. is important in maintaining bank capital levels, so this research uses CAR as the dependent variable.

A bank's capital adequacy must be maintained, therefore it is necessary to examine the factors that can influence bank capital, so that it can become the main basis and guideline in managing banking capital. "Several factors that can influence the level of capital adequacy are profitability, asset quality and liquidity" Nazaf, Feby Loviana. (2014).



Source: Indonesian Banking Statistics and BRI Annual Report

Financial reports become important when used to assess company performance. To assess whether a company's performance is good or not, it is necessary to measure performance, one of which is by analyzing financial ratios Yuliarni, Maryati, and Ihsan (2016). Banks are a business that prioritizes the trust of their customers, so the risks faced by banks are greater Kasmir (2019).

The profitability ratio used is Return On Assets (ROA) and the use of the ROA ratio is based on previous research, the majority of which use the ROA ratio

to represent the profitability aspect. "ROA has a positive influence on CAR" Nazaf, Feby Loviana. (2014). It can be said that, if the ROA value increases, the CAR value will also increase and vice versa.

Asset quality ratio uses Non Performing Loans (NPL). NPL was chosen because it can show the level of banking risk. The higher the NPL value, the greater the banking risk. "NPL has a negative influence on CAR" Nazaf, Feby Loviana. (2014). This means, when the NPL value increases, the CAR value will decrease and vice versa.

The liquidity ratio uses the Loan to Deposit Ratio (LDR). LDR was chosen because based on theory, the higher the LDR, the riskier the banking liquidity condition is and vice versa. The lower the LDR indicates the less effectiveness of banks in distributing credit to Nazaf, Feby Loviana. (2014).

The LDR ratio is most appropriate to use to measure the liquidity of a bank. "LDR has a negative influence on CAR" Nazaf, Feby Loviana. (2014). This means, if the LDR value increases, the CAR value will decrease and vice versa.

The following are some previous research results, which state that ROA and ROE partially have an insignificant negative influence on CAR. The research results also state that ROA and ROE partially have a significant positive influence on CAR according to Bateni, Leila, Vakilifard, et al (2014). The research results show that partial NPL has a positive and insignificant influence on CAR and the results of other research show that partial NPL has a significant negative influence on CAR (Shingjergji, Ali., and Hyseni, Marsida. (2015) and also shows that LDR is partial has an insignificant positive effect on CAR.

Based on the inconsistent results of several previous studies, we are very interested in researching what factors or variables influence CAR at PT. Bank Rakyat Indonesia (BRI) Persero, period 2009 to 2022.

## **THEORITICAL REVIEW**

Financial reports are a company's report regarding financial conditions and performance prepared based on certain standards or rules). Financial reports present information on events from transactions that occur, where the arrangements follow the classification accounting data according to Kasmir (2019). With financial reports presented in detail, investors and creditors can use them in making decisions regarding investment decisions or credit decisions Hery (2016).

Financial reports become important when used to assess company performance. To assess whether a company's performance is good or not, it is necessary to measure performance, one of which is by analyzing financial ratios (Yuliarni, T., Maryati, U., & Ihsan, H. (2016). Financial ratio calculations carried out in the banking and non-banking industries are actually not that different. The difference lies in the larger number of ratios. This is because the components of financial reports in the banking industry are slightly different. Banks are a business that prioritizes the trust of their customers, so the risks faced by banks are greater Kasmir (2019).

Financial report analysis is a stage to look more deeply at the information presented in it, so that a good understanding of the results of the report is obtained. To be able to assess the company's performance and development, the analysis also carries out internal and external comparisons. Apart from that, by analyzing financial

reports, management can find out what deficiencies can be identified so that the decision making process can be better Hery (2016).

According to article 1 of Law no. 10 of 1998 concerning amendments to Law No. 7 of 1992 concerning Banking, where the definition of a bank is as follows "A bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit or other forms in order to improve the level of the lives of many people." Meanwhile, another definition is "Banks are financial institutions. Financial institutions in the broadest sense are intermediaries between parties who have excess funds (surplus of funds) and parties who lack funds (lack of funds)" Wardiah, Mia Lasmi. (2013).

### **Capital Adequacy Ratio (CAR)**

"The capital ratio commonly used to measure bank capital adequacy is the Capital Adequacy Ratio (CAR)" Barus, Andreani Caroline. (2011). The amount of CAR is measured from the ratio between own capital and Risk Weighted Assets (RWA). Systematically the Capital Adequacy Ratio (CAR) can be formulated as follows (according to Bank Indonesia Circular Letter No. 3/30/DPNP dated 14 December 2001).

$$\text{CAR} = (\text{Bank Capital} / \text{Risk Weighted Assets}) \times 100\%$$

### **Return On Assets (ROA)**

"ROA is a ratio that shows the comparison between profit (before tax) and total bank assets. This ratio shows the level of efficiency of asset management carried out by the bank concerned. ROA is an indicator of the bank's ability to obtain profits on a number of assets owned by the bank". Systematically Return On Assets (ROA) can



be formulated as follows (according to Bank Indonesia Circular Letter No. 3/30/DPNP dated 14 December 2001).

$$\text{ROA} = [(\text{Profit before Tax} / \text{Total Assets (average)}) \times 100 \%$$

### **Non Performing Loans (NPL)**

This ratio shows the quality of credit assets, if the collectability is less than current, doubtful and bad compared to the total credit as a whole, then the bank is facing problem loans. According to Bank Indonesia Regulation Number 6/10/PBI/2004 dated 12 April 2004 concerning the Health Level Assessment System for Commercial Banks, "the higher the NPL value (above 5%) the unhealthy the bank is." Systematically, Non Performing Loans (NPL) can be formulated as follows (according to Bank Indonesia Circular Letter No. 3/30/DPNP dated 14 December 2001).

$$\text{NPL} = (\text{Non-Performing Credit} / \text{Total Credit}) \times 100 \%$$

### **Loan to Deposit Ratio (LDR)**

"LDR is also called the ratio of credit to total third party funds which is used to measure third party funds distributed in the form of credit. Distribution of credit is the main activity of the bank. Therefore, the bank's main source of income comes from this activity" Wardiah, Mia Lasmi. (2013). Systematically, the Loan to Deposit Ratio (LDR) can be formulated as follows (according to Bank Indonesia Circular Letter No. 3/30/DPNP dated 14 December 2001).

$$\text{LDR} = (\text{Total Credit} / \text{Third Party Funds})$$

### **Net Interest Margin (NIM)**



Net Interest Margin (NIM) is a ratio used to analyze the comparison between net interest income and a company's productive assets. If the NIM ratio increases, it shows that the bank generates a greater amount of income than the productive assets it owns (according to Bank Indonesia Circular Letter No. 3/30/DPNP dated 14 December 2001).

$$\text{NIM} = [(\text{Interest Income} - \text{Interest Expense}) / (\text{Average Earning Assets})]$$

## **RESEARCH METHODS**

### **Type of Research and Operational Variables**

"A causal relationship is a relationship that is cause and effect. So here there are independent variables (variables that influence) and dependent variables (influenced)" Sugiyono. (2010). The independent variables in this research are Return On Assets (ROA), Operational Costs to Operating Income (BOPO), Non Performing Loans (NPL), Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM). The dependent variable is the Capital Adequacy Ratio (CAR).

### **Population and Sample**

The population in this research is the company PT. Bank Rakyat Indonesia (BRI) (Persero). The samples are several financial ratios that are predicted to influence the company's Capital Adequacy Ratio (CAR), namely: ROA, BOPO, LDR, NIM and NPL

### **Types of Data, Data Sources and Data Analysis Techniques**

This research uses quantitative data in the form of company financial reports for the period 2009 - 2022. In this research, the data used is secondary data. Secondary data in this research comes from the company's financial reports published on the official PT company website. BRI (Persero). Data analysis techniques use correlation analysis, regression and coefficient of determination and data processing uses SPSS software version 26.

## RESULT AND DISCUSSION

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.929 <sup>a</sup>	.863	.778	1.81540

The influence of the independent variables (NPL, NIM, LDR, BOPO, ROA) on the dependent variable is 0.778 or 77.8%, meaning that the Capital Adequacy

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	166.400	5	33.280	10.098	.003 <sup>b</sup>
	Residual	26.365	8	3.296		
	Total	192.765	13			

a. Dependent Variable: CAR

b. Predictors: (Constant), NPL, NIM, LDR, BOPO, ROA

Ratio (CAR) is influenced by 77.8% by the variables NPL, NIM, LDR, BOPO, ROA from Bank Rakyat Indonesia (BRI) during the research period from 2009 to 2022.

The simultaneously influence of the independent variables (NPL, NIM, LDR, BOPO, ROA) on the dependent variable (CAR) of Bank Rakyat Indonesia (BRI) with a significance of  $0.03 < 0.05$ , meaning that the independent variables (NPL, NIM, LDR, BOPO, ROA) have a significant effect on BRI's CAR for the period 2009 to 2022.

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	113.950	24.711		4.611	.002
	ROA	-9.034	3.029	-2.112	-2.983	.018
	NIM	.929	1.385	.300	.671	.521
	BOPO	-1.073	.302	-1.660	-3.552	.007
	LDR	.071	.094	.134	.755	.472
	NPL	.869	1.549	.125	.561	.590
a. Dependent Variable: CAR						

$$CAR = 113,950 - 9,034 ROA + 0.929 NIM - 1,073 BOPO + 0.071 LDR + 0,869 NPL$$

1. Influence of NPL, NIM, LDR, BOPO, ROA on CAR

Based on the test results in this research, all independent variables (NPL, NIM, LDR, BOPO, ROA) simultaneously have a significant effect on the dependent variable (CAR). These results are in line with research which shows that the variables profitability, asset quality, liquidity simultaneously have a significant effect on CAR.

2. Influence of ROA on CAR

Based on the test results in this research, the results showed that the profitability ratio or ROA partially had a significant negative effect on CAR. This means that every time ROA increases by one unit, CAR will decrease by 9,034 units.

3. Influence of NIM on CAR

Based on the test results in this research, the results showed that the interest income ratio or NIM partially had a positive and insignificant effect on CAR. This means that every time the NIM increases by one unit, the CAR will increase by 0.929 units.

4. Effect of BOPO on CAR

Based on the test results in this research, the results showed that the company's cost ratio or BOPO partially had a significant negative effect on CAR. This means that every time BOPO increases by one unit, CAR will decrease by 1.073 units.

5. Effect of LDR on CAR

Based on the test results in this research, the results showed that the liquidity ratio or LDR partially had a positive and insignificant effect on CAR. This means that every time the LDR increases by one unit, the CAR will increase by 0.071 units.

#### 6. Effect of NPL on CAR

Based on the test results in this research, the results showed that the asset quality ratio or NPL partially had a positive and insignificant effect on CAR. This means that every time the NPL increases by one unit, the CAR will increase by 0.869 units.

### **CONCLUSION**

The results of research on Bank Rakyat Indonesia (BRI) Persero during the research period from 2009 to 2022, show that only the ROA and BOPO variables have a significant effect on BRI's Capital Adequacy Ratio (CAR), while NIM, NPL and LDR apparently do not have a significant effect. against CAR. Thus, BRI management needs to pay attention to changes and developments in the ROA and BOPO ratios and needs to carry out focused and detailed analysis so that BRI's capital adequacy ratio can be maintained and is always in good, safe and healthy condition in accordance with banking regulations in Indonesia (Central Bank).

### **RECOMMENDATION**

Prospective investors in the capital market, especially those who want to buy banking shares, need to pay attention to the level of company profitability and the ratio of operational costs to operating income (BOPO), because these two ratios have

a significant influence. However, you also need to look at and pay attention to other ratios such as; LDR, NPL, NIM and LLL so that funds invested in the Capital Market in banking shares do not experience a decline or loss. This is if, if there is insufficient capital in an unhealthy bank, then the company will experience losses and if the company experiences losses, then it is certain that share prices will decline, so that investors will suffer losses, due to the decline in share prices on the Indonesian Capital Market (BEI).

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