THE EFFECT OF CAR, NPL AND LDR ON THE PROFITABILITY OF REGIONAL DEVELOPMENT BANKS IN JAVA FOR THE PERIOD 2018-2023

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ABSTRACT

Due to the dependency of the younger generation on digital solutions, the banking sector in Indonesia is going through a period of fierce rivalry, both in terms of goods and services and technological innovation. The products, services, and technological infrastructure that banks offer to their customers are designed to make financial transactions and activities more accessible and more convenient. One of the most important indicators of a bank's success and prospects is profitability, which can be quantified using a ratio, such as Return on Assets (ROA). This is because profitability involves a diverse variety of stakeholders. This study aims to investigate the influence of CAR, NPL, and LDR ratios on the profitability (ROA) of the Regional Development Bank in Java, both partially and simultaneously. ROA is the dependent variable in this study, while CAR, NPL, and LDR are the independent variables. The analysis tools utilized in this study were SPPS Version 26, and the methodology included basic and multiple regression tests. This study found that between 2019 and 2023, the CAR, NPL, and LDR factors partially and simultaneously impacted the profitability (ROA) of the Regional Development Bank in Java.

Keywords: Bank, CAR, LDR, NPL, RDB

1. INTRODUCTION

Competition in Indonesia's banking industry is fierce. Nowadays, rivalry is intense not only over goods and services but also over technological advancements. The circumstances of the new generation, heavily reliant on technology, are the driving force behind this. Competition among banks is heating up as they try to satisfy their consumers. These days, it is not just about the products that satisfy customers but also about the services and technology banks offer to help their clients with their financial transactions and activities [1]

The ability of a bank to make profits or profitability, which is typically quantified using profitability ratios, is one of the main indications that are considered when evaluating a bank's performance. Both the high and low levels of profitability that banks can attain have a significant impact on the prospects and development of banks in the future. Customers, capital owners, creditors, and investors are some of the organizations that are interested in the bank's success. Other parties who have an interest include investors [2].

Two indications and two significant dimensions pertain to the bank's performance. Additionally, there are quality and quantity indicators that pertain to bank performance. In terms of bank performance, the profitability and risk dimensions are the most important. The ROA ratio can be used as a proxy for measuring profitability, whereas the CAR, NPL, and LDR ratios can be used as proxies for measuring risk [3].

Return on assets, often known as ROA, is a measure of profitability used to evaluate a finance institution's overall financial performance. ROA, or return on assets, measures how effectively owned assets are used to generate net profit [4]. An important criterion for determining the quality of bank capital is the CAR ratio. The CAR ratio is the ratio of a bank's capital to the risk of a drop in assets and short-term debt held by the bank [5]. An NPL ratio is a ratio of credit that has been disbursed but needs to be up to standard, questionable, and poor. The purpose of NPL is to evaluate management's effectiveness in using all operations [6]. When it comes to short-term positions that are utilized to cover costs, the LDR ratio may be used to evaluate the health of the bank [7].

The profitability of banking institutions in Indonesia has been the subject of previous research that has explored the impact of several financial ratios, including CAR, NPL, LDR, and others. One study found that these ratios had significant impacts on profitability, while another study found that they did not have a significant impact. The data indicate that the impact of these ratios on profitability fluctuates. Several researchers, including [8], [9] and [10], have performed studies to investigate the impact that CAR, NPL, LDR, and other financial parameters have on the profitability of banking organizations.

Research conducted by [8] discovered that the NPL, LDR, NIM, BOPO, and CAR factors all combined significantly impact the profitability of state-owned banks in Indonesia. However, the NPL and NIM ratios partially have a positive influence. In contrast, the BOPO ratio has a negative influence, and the LDR and CAR ratios do not significantly influence profitability at state-owned banks in Indonesia.

Similarly, [9] investigated the impact that the CAR, NPL, NIM, BOPO, and LDR ratios had on the profitability of National Private Foreign Exchange Commercial Banks. Regarding profitability, their studies indicate that CAR, NIM, and BOPO all have a partial impact; however, NPL and LDR do not have any partial impact. In addition, their findings demonstrate that CAR, NPL, NIM, BOPO, and LDR impact the profitability of National Private Foreign Exchange Commercial Banks from a simultaneous perspective. A further investigation of the influence of CAR, NPL, and NIM ratios on the profitability of commercial banks listed on the IDX in Indonesia was carried out [10]. Based on the findings of their investigation, it has been shown that the CAR ratio has a partial positive influence on profitability. However, NPL and NIM have a partial negative effect on profitability.

The government in Indonesia founded a Regional Development Bank (RDB) to assist in the implementation of equitable development throughout all areas of the country [11]. This bank is connected to the function that banking plays in developing regional economies. Currently, the presence of regional development banks is still being considered in the process of driving the economy, particularly in financing development in the regions. As a result of the ongoing development of the economies in the areas, competition between banks is opening up and increasing in intensity. For this reason, every RDB needs to improve its business strategy to improve its financial performance [5].
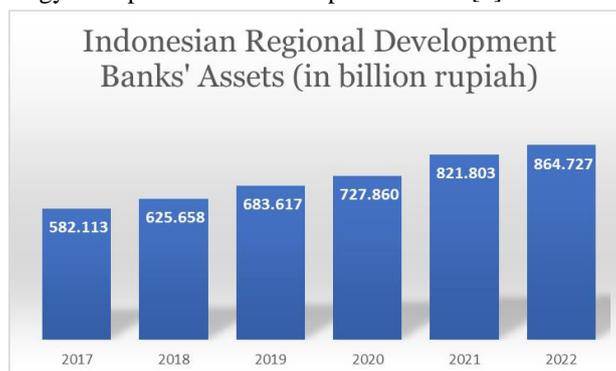

Figure 1: Indonesian Regional Development Bank's Assets [12]

The assets of the RDB have grown between 2017 and 2022, as reported by Statistics Indonesia. RDBs held a total of 582,113 billion rupiah throughout 2017. A total of 625,658 billion rupiah was added to the RDB's assets in 2018, a 7.48% increase. RDB assets reached 683,617 billion rupiah, a 9.26% rise, for 2019. RDB assets reached 727,860 billion rupiah, a gain of 6.47% during 2020. The assets of the RDB rose to 821,803 billion rupiah, a 12.91% growth, throughout 2021. The asset value of the RDB will rise to 864,727 billion rupiah, a 5.22% growth, beginning in 2022.

Researchers are interested in analyzing the profitability of RDBs on the island of Java. This analysis will focus on the limiting factors of CAR, NPL, and LDR ratios. The research aims to determine the relationship between the CAR, NPL, and LDR ratios and profitability, as assessed by the ROA ratio. This investigation examines whether these ratios impact profitability, either partially or simultaneously. This study aims to examine and assess the impact of CAR, NPL, and LDR ratios on the profitability (ROA) of RDBs located on the island of Java.

2. LITERATURE REVIEW
2.1. Regional Development Bank
Regional Development Bank is a regionally owned enterprise, which means that the bulk of its ownership is held by the provincial government as well as the district and municipal governments located within the province. The RDBs can operate and establish office networks throughout Indonesia. The company concentrates most of its commercial endeavours on the neighbourhood where the RDB is situated [11]. RDB is not just a financial organisation; it also offers services to manage the funds of local governments, and the majority of those governments are stakeholders in RDBs [13].

RDBs operate as financial organisations and as providers of services to manage monies allocated by regional governments. Aside from that, RDBs also play a role in improving the regional economy by

implementing regional government programs through the distribution of productive credit. This includes providing public service facilities and infrastructure to BUMDs and the private sector as project implementers. Additionally, RDBs encourage the growth of micro, small, and medium-sized enterprises (MSMEs) [11]. Most of the services offered are specifically tailored to meet the requirements of the local government, and they include facilities for civil officials in terms of savings and loans. The fact that RDBs have direct access to cooperate with regional governments benefits them from a financial market perspective. Furthermore, in accordance with their function as "regional development agents," RDBs are also incorporated into regional development initiatives [13]. This is in addition to those mentioned above aforementioned.

2.2. Bank Profitability

Increasing future profitability through investments in retained earnings and strengthening capital positions are two examples of how profitability can be used as a primary defence mechanism in the banking industry against unforeseen losses [1]. The profitability of a bank is the most crucial metric that can be used to measure its overall performance. According to [15], banks that have seen positive profitability performance can also help individuals feel more confident about putting their money in banks. Generally, the ROA ratio is used to quantify the level of profitability. This ratio describes the capacity of a bank to generate profits from its operational activities by using its assets [16]. As a result, the ROA ratio is utilised in this investigation to determine the profitability ratio.

[17], [18], [4], and [19] are some of the researchers who conducted a variety of studies on the profitability of banks in Indonesia. According to [18], to enhance the competitiveness of RDBs, it is essential to conduct an analysis of both the internal and external factors that determine profitability. This study highlights the significance of factors such as total assets, LDR, BOPO, and NIM internally within the organisation when assessing the profitability of RDBs. According to [18], the profitability of RDBs is determined by the BIRATE and inflation rates external to the institution. From 2012 through 2016, [17] analysed the factors that contributed to the profitability of Sharia banks in Indonesia. His research focuses on the significance of the CAR, NPF, and FDR variables in terms of their influence on the profitability of Sharia Banks in Indonesia from 2012 to 2016.

From 2017 through 2022, the elements that contributed to Bank BTN's profitability were evaluated by [4]. His research focuses on the significance of NPL and LDR ratio variables that impact Bank BTN's profitability for 2017-2022. In the study conducted by [19], the profitability determinants of BPRS in Indonesia were studied over the period of 2014-2021 the profitability determinants of BPRS in Indonesia were studied over the period of 2014-2021. The primary focus of his research is on the significance of the FDR and BOPO variables in terms of their impact on the profitability of BPRS in Indonesia between 2014 and 2021.

2.3. Previous Research
2.3.1. The Effect Of CAR On Bank Profitability

It has been stated by [10] that the CAR ratio is one of the ratios that is regarded to impact the ROA condition of a banking organization. In banking, the CAR provides a description of the evaluation outcomes that compare capital management and capital adequacy. This is because there has been a considerable increase in both operational and credit risks, and there has not been an increase in bank capital to accompany this fall in capital. According to [15] a high level of the CAR ratio shows that the level of capital adequacy of a banking firm is relatively high. This affords the management of the bank the opportunity to make the most of the capital it possesses, which in turn has an effect on the opportunities available to the bank to boost its profitability.

In the past, researchers such as [20], [10], [17], and [1] have conducted several studies that investigate the impact of the CAR ratio on the profitability of banks, as assessed by the ROA ratio. The CAR variable has been shown to positively affect the profitability ratio (ROA) of RDBs in Indonesia throughout 2015-2018, according to the findings of a research study [20]. From 2015 to 2020, the CAR variable was shown to positively affect the profitability ratio (ROA) of Commercial Banks that were registered on the IDX, according to the findings of research conducted by [10]. Between 2012 and 2016, the CAR variable negatively affected the profitability ratio (ROA) of Islamic banks in Indonesia, according to a study conducted by [17]. Consequently, the following is the formulation of the first hypothesis in this research:

H_1 : CAR significantly affects the profitability (ROA) of regional development banks on Java Island for 2019-2023.

2.3.2. The Effect Of NPL On Bank Profitability

Due to the tight competitive scenario, RDBs are encouraged to channel their money intensively, particularly to projects in their specific regions. This results in a relaxation of the credit monitoring side, which can potentially affect NPLs [1]. NPL ratios reflect credit risk; the larger the NPL, the greater the danger that the bank may incur losses because the money lent has not been returned. This has the ability to not only lower earnings but also interest revenue. Following [8], credit risk refers to the possibility that a client will not complete their commitments to the bank in line with the agreement that was made. Furthermore, according to [10], a bank's profitability decreases in proportion to the number of NPL.

Several studies were carried out by [8], [10] and [16] to investigate the impact of NPL ratio on the profitability of banks, as assessed by the return on assets (ROA) ratio. The results of the research conducted by [8] indicate that the NPL variable positively affects the profitability ratio, which is determined by the ROA ratio, at state-owned banks in Indonesia throughout the period of 2016-2020. According to the findings of a study conducted by [10], the NPL variable negatively affects the return on assets (ROA) of commercial banks listed on the IDX throughout the period of 2015-2020. According to a study conducted by [16], the NPL variable negatively affects the profitability ratio, which is determined by the ROA ratio.

Therefore, the following is the formulation of the second hypothesis in this research:
H_2 : The NPL significantly affects the profitability (ROA) of regional development banks on Java Island for 2019-2023.

2.3.3. The Effect Of LDR On Bank Profitability

A bank's profitability is affected by the level of lending. Therefore, if the LDR ratio is high and the bank can allocate credit properly, resulting in fewer bad loans, the bank's profits would be higher [8]. A high LDR could be risky if lending practices are not prudent and efficient. Efficient loan allocation by the bank will result in higher profitability and lower incidence of NPL. A decrease in the LDR ratio leads to a decrease in the amount of money channelled, reducing efficiency and lowering the ROA [4].

[20], [1] and [16] conducted several studies that examined the LDR ratio's effect on banks' profitability as measured by the ROA ratio. Looking at the profitability ratio (ROA) of RDBs in Indonesia for the period 2015-2018, the findings of the study conducted by [20] indicate that the LDR variable positively impacts the results. The results of the study conducted by [1] indicate that the LDR variable positively affects the return on assets (ROA) of RDBs in Indonesia for 2014-2018. The research results by [16] indicate that the LDR variable negatively affects the ROA ratio, which measures profitability. Consequently, the third hypothesis found in this research is formulated as follows:
H_3 : The LDR significantly affects the profitability (ROA) of regional development banks on Java Island for 2019-2023.

2.3.4. The Effect Of CAR, NPL And LDR On Bank Profitability

Bank profitability ratios have been the subject of some studies, focusing on their ability to predict changes in profits and the influence of these ratios on profit growth. CAR, LDR, NPL and BOPO factors are highlighted in [16] as having a simultaneous impact on the profitability (ROA) of listed banks in Indonesia. [8] In their study of BUMN banks in Indonesia for the period 2016-2020, they found that the variables of NPL, LDR, NIM, BOPO, and CAR ratio all impact profitability (ROA) simultaneously. [1] shows that the variables NPL, LDR, BOPO, and CAR affect profitability (ROA) simultaneously in his research on regional development banks in Indonesia from 2014-2018. According to [10], the profitability ratio (ROA) of commercial banks listed in Indonesia between 2015 and 2020 is simultaneously influenced by CAR, NPL and NIM variables. It is shown that the profitability ratio (ROA) of PT BPR Sukawati Pancakanti for the period of 2013-2020 is influenced simultaneously by the variables CAR, NPL, LDR, and third-party funds, as shown by the research of [21]. Consequently, the fourth hypothesis tested in this study is formulated as follows:
H_4 : CAR, NPL and LDR simultaneously significantly affect the profitability (ROA) of regional development banks on Java for 2019-2023.

3. RESEARCH METHOD

In this study, all Indonesian banks were considered as a population. The researchers in this study used a purposive sampling strategy to collect the sample. This study uses the Java Island Regional Development Bank as its sample. The banks forming the bank include PT Bank Pembangunan Daerah Jawa Barat dan Banten (Bank BJB), PT Bank Pembangunan Daerah Banten (Bank Banten), PT Bank DKI (Bank DKI), PT Bank Pembangunan Daerah Jawa Tengah (Bank Jateng), PT Bank Pembangunan Daerah Jawa Timur Tbk (Bank Jatim), and PT Bank Pembangunan Daerah Daerah Istimewa Yogyakarta (Bank BPD DIY). Documentary and secondary data were the main forms of information used in this research. The data used

in this study were obtained from the bank's official website, and they are related to the annual report for the years 2019-2023.

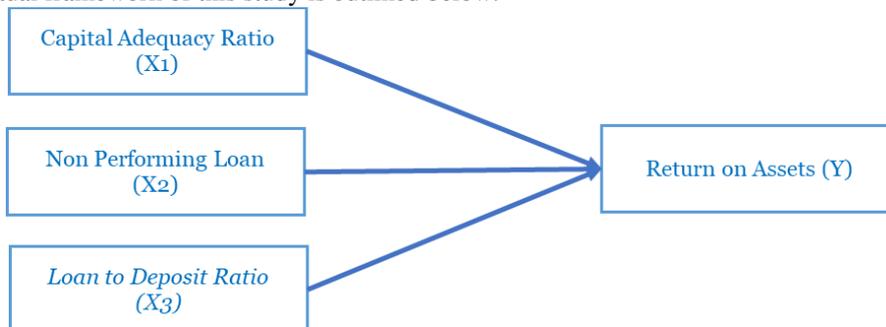The conceptual framework of this study is outlined below:

Figure 2: Research Model Conceptual Framework

CAR, NPL and LDR ratios are the independent factors examined in this study. The ROA ratio is the dependent variable examined in this study. Classical hypothesis testing, which includes normality test, multicollinearity test, autocorrelation test and heteroscedasticity test, as well as simple regression test and multiple regression test, are the analytical methods used in this research. The simple regression test allows us to determine the partial regression coefficient that exists between the independent variables. The tests of Hypothesis 1, Hypothesis 2 and Hypothesis 3 are used to examine the effect that the CAR, NPL and LDR ratios have on the ROA of regional development banks on the island of Java during the period 2019-2023 ratio in a partial way.

The equation associated with the simple linear regression line is as follows
$$\textbf{H: Y = α + b X}$$
Description:

Y	=	ROA
α	=	Constant
b	=	Regression Coefficient
X	=	Independent variable.

The significance of the influence of all independent variables simultaneously on the dependent variable can be assessed by using multiple regression tests. To examine the influence of CAR, NPL and LDR simultaneously on the return on assets (ROA) of regional development banks on the island of Java during the period 2019-2023, the test of hypothesis 4 is used.

The equation of the multiple linear regression line is as follows:
$$\textbf{H: Y = α} + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4$$
Description:

Y	=	ROA
α	=	Constant
b_{1-4}	=	Regression coefficient of the independent variable.
X_1	=	CAR
X_2	=	NPL
X_3	=	LDR

4. RESULT OF DISCUSSION
4.1 Overview Of The Financial Performance Of Regional Development Banks In The Island Of Java For The Period 2019-2023.

According to the data presented in Table 1, the CAR ratio of Regional Development Banks on the island of Java for the period of 2019-2023 has a minimum value of 9.01 and a maximum value of 44,72. The CAR ratio of RDBs on the island of Java is estimated to have an average value of 25,4457 for the period of 2019-2023. The CAR ratio of RDBs on the island of Java has an average value that is greater than 12 %, which indicates that the health level of RDBs on the island of Java is in a very healthy condition, as stated in [22]. Over the course of the period 2019-2023, the NPL ratio of RDBs on the island of Java can range from a minimum of 0.00 to a maximum of 4,51 per cent. Over the period 2019-2023, the NPL ratio of the RDB on the island of Java is expected to have an average value of 1.0427. According to [22], the non-performing loan ratio of RDBs on the island of Java has an average value of less than 2 per cent. This indicates that the health level of RDBs on the island of Java is very healthy for the time being.

During the period 2019-2023, the LDR ratio of RDBs on the island of Java has a minimum value of 51,38 and a maximum value of 146,77. This range is expected to remain stable. The LDR ratio of RDBs on the island of Java is expected to average 82,1707 over the period 2019-2023. According to the information provided by [22], the LDR ratio of RDBs on the island of Java has an average value that is greater than 75% and less than 85%. This indicates that the health level of RDBs on the island of Java is a healthy condition.

During the period of 2019-2023, the return on assets ratio of RDBs on the island of Java ranges from a minimum of -3,80 to a maximum of an impressive 3,01. During the period 2019-2023, the ROA ratio of RDBs located on the island of Java is expected to have an average value of 1,3087. Based on the fact that the ROA ratio of RDBs on the island of Java has an average value that is greater than 1,25 per cent and less than 1,5 per cent, the health level of RDBs on the island of Java is considered to be in a healthy condition as stated by [22].

Table 1. Descriptive statistics of the RDB in the island of Java for the period 2019-2023

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CAR	30	9.01	44.72	25.4457	8.05116
NPL	30	.00	4.51	1.0427	1.15905
LDR	30	51.38	146.77	82.1707	17.55950
ROA	30	-3.80	3.01	1.3087	1.82232
Valid N (listwise)	30				

Source: Processed data, 2024

4.2 Classical Assumptions Test
4.2.1 Normality Test

Table 2. One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardiz ed Residual
N		30
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.92896839
Most Extreme Differences	Absolute	.155
	Positive	.105
	Negative	-.155
Test Statistic		.155
Asymp. Sig. (2-tailed)		.065[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Source: Processed data, 2024

The variables of the study have a significant value of 0,065, as shown in Table 2. This significant number proves that all the variables of the study are statistically significant, with values higher than 0,05. So it's safe to say that the data from the study follows a normal distribution. All four variables consisting of CAR, NPL, LDR and ROA variables follow a normal distribution.

4.2.2 Multicollinearity Test

Table 3. Multicollinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.906	1.074		4.569	.000		
	CAR	-.055	.023	-.241	-2.327	.028	.933	1.072
	NPL	-1.112	.180	-.708	-6.197	.000	.767	1.304
	LDR	-.013	.011	-.123	-1.112	.276	.816	1.225

a. Dependent Variable: ROA

Source: Processed data, 2024

According to the data presented in Table 3, the value of the VIF for the CAR variable is 1,072, the value for the NPL variable is 1,304, and the value for the LDR variable is 1,225. Meanwhile, the CAR variable has a

tolerance value of 0,933, the NPL variable has a tolerance value of 0,767, and the LDR variable has a tolerance value of 0,816. These values are based on the tolerance value. The results presented above indicate that every single independent variable in this study has a tolerance value greater than 0,10 and a VIF value less than 10. Therefore, it can be concluded that the regression model used in this research does not exhibit multicollinearity.

4.2.3 Heteroscedasticity Test

Table 4. Heteroscedasticity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.615	.720		-.854	.401
	CAR	.028	.016	.341	1.807	.082
	NPL	-.093	.120	-.161	-.773	.446
	LDR	.008	.008	.198	.984	.334

a. Dependent Variable: Abs_RES

Source: Processed data, 2024

The significance value of the CAR variable is 0.082, the significance value of the NPL variable is 0.446, and the significance value of the LDR variable is 0.334, all of which are shown in Table 4. It can be concluded that there is no heteroskedasticity problem because the significance value for each of the three variables, namely CAR, NPL and LDR, is greater than 0.05.

4.2.4 Autocorrelation Test

Table 5. Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.860[a]	.740	.710	.98110	1.763

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

b. Dependent Variable: ROA

Source: Processed data, 2024

1,763 is the value shown in Table 5 for the Durbin Watson (d) value. It is higher than the DU value of 1,650, but lower than the value corresponding to 4-DU, which is 2,350. It can therefore be concluded that the data from this study do not show any anomalies or signs of autocorrelation. No autocorrelation problems or symptoms are found in any of the CAR, NPL, LDR and ROA variable data.

4.3 The Effect Of CAR On The Profitability (ROA) Of Regional Development Banks In Java Island For The Period 2019-2023.

A correlation or relationship value (R) of 0,432 is shown in Table 6, which can be found here. The coefficient of determination, also known as R-squared, is 0,187, indicating that the effect of the independent variable CAR on the dependent variable ROA is 18,7%. This information is derived from the results of the output analyses.

Table 6. R-Squared Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.432[a]	.187	.157	1.67271

a. Predictors: (Constant), CAR

b. Dependent Variable: ROA

Source: Processed data, 2024

Table 7. Simple Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.796	1.028		3.692	.001
	CAR	-.098	.039	-.432	-2.534	.017

a. Dependent Variable: ROA

Source: Processed data, 2024

A value of 3,796 for the constant (a) and a value of -0,098 for the CAR (b / regression coefficient) are given in Table 6, which allows us to formulate the regression equation as follows.

Y = a + bX

Y = 3,796 - 0,098 X_1

A constant value of 3,796 for the ROA variable is indicated by the constant value. The regression coefficient X_1 has a value of -0,098, indicating that for every 1% increase in CAR, ROA decreases by 0,098. As the regression coefficient is negative, we can conclude that X_1 has a negative effect on Y.

Table 7 shows the results of the simple linear regression test of the first hypothesis, which shows a significant value of 0,017 for CAR. These results indicate that CAR has a significance level of less than 0,05. Therefore, it can be said that the first hypothesis is acceptable. Between 2019 and 2023, RDBs on the island of Java will see partial effects of CAR on their profitability (ROA).

The findings of this research are in agreement with [1]. According to the findings [1], the CAR variable partially has a negative impact on the return on assets (ROA) of RDBs in Indonesia during the period of 2014-2018. It is further demonstrated [23] that CAR partially has a negative influence on the return on assets (ROA) of state-owned banks during the period of 2014-2018. Furthermore, [24] demonstrates that the performance of Bank Mandiri's return on assets (ROA) throughout the period of 2012-2021 is negatively impacted by partial CAR. In addition, according to [24], the CAR has a negative effect on the return on assets (ROA) of PT. Bank Mandiri (Persero) Tbk. between the years 2011 and 2020 partially.

4.4 The Effect Of NPL On The Profitability (ROA) Of Regional Development Banks In Java Island For The Period 2019-2023.

According to Table 8, the value of the correlation or relationship, denoted by the letter R, is 0,822. The coefficient of determination, also known as R Square, is 0,676, indicating that the effect of the independent variable (NPL) on the dependent variable (ROA) is 67,6%. This information is derived from the results of the output analyses.

Table 8. R Square Result

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822[a]	.676	.664	1.05627

a. Predictors: (Constant), NPL

b. Dependent Variable: ROA

Source: Processed data, 2024

Table 9. Simple Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.656	.261		10.162	.000
	NPL	-1.292	.169	-.822	-7.637	.000

a. Dependent Variable: ROA

Source: Processed data, 2024

Taking into consideration the fact in Table 9 that the value of the constant (a) is 2,656 and the value of the NPL (b / regression coefficient) is -1,292, the equation for regression may be expressed as follows:

Y = a + bX

Y = 2,656 - 1,292 X_2

In this case, the ROA variable will always have a value of 2,656 because the constant value is 2,656. With a regression coefficient value of -1,292, we can see that for every 1% increase in NPL, ROA will decrease by 1,292. We can say that X_2 has a negative effect on Y because the regression coefficient is negative. Table 8 shows the results of the simple linear regression test of the second hypothesis, which shows a significance level of 0,000 for NPL. These results show that the NPL variable has a significance level lower than 0.05. Therefore, we can say that the second hypothesis is acceptable. For the years 2019-2023, NPL have an impact on the return on assets (ROA) of Java Island regional development banks.

This research aligns with the findings of [1] . it was shown that RDBs in Indonesia saw a partially negative effect on their ROA due to the NPL variable from 2014 to 2018. Furthermore, according to [23], it has been demonstrated that NPL had a partially negative impact on the ROA of state-owned banks throughout the period of 2014-2018. Additionally, a study conducted by [21] on PT BPR Sukawati Pancakanti Sukawati District from 2012 to 2020 demonstrates that NPL negatively impacts ROA. Additionally, research on Bank BNI for the years 2017–2022 by [4] reveals that the NPL variable partially negatively affects ROA.

4.5 The Effect Of LDR On The Profitability (ROA) Of Regional Development Banks In Java Island For The Period 2019-2023.

Table 10 shows a correlation value (R) of 0,443. The output shows that the independent variable (LDR) has a 19,6% effect on the dependent variable (ROA), with an R-squared value of 0,196.

Table 10. R Square Result

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443[a]	.196	.168	1.66246

a. Predictors: (Constant), LDR
b. Dependent Variable: ROA

Source: Processed data, 2024

Table 11. Simple Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	5.088	1.476		3.447	.002
	LDR	-.046	.018	-.443	-2.616	.014

a. Dependent Variable: ROA

Source: Processed data, 2024

According to Table 11, the value of the constant (a) is 5,088 and the value of the LDR (b / regression coefficient) is -0,046. Both values are shown in the table. As a result, the regression equation can be formulated as follows:

$Y = a + bX$
$Y = 5,088 - 0,046\ X_3$

A constant value of 5,088 indicates that the ROA variable has a constant value of 5,088. With a regression coefficient of -0,046 for X_3, we can see that for every 1% increase in the LDR value, the ROA value decreases by 0,046 points. As the regression coefficient is negative, we can conclude that X_3 has a negative effect on Y.

This study aligns with the studies carried out by [25]. The study conducted by [25] indicates that there is a negative effect of LDR on Return on Assets (ROA) for banks listed on the Indonesia Stock Exchange (IDX) over the period of 2008-2012. This research is additionally backed by [26]. The ROA of LPD or Village Credit Institutions in Gianyar Regency was shown to be partially impacted negatively by LDR between 2014 and 2018 [26]. Furthermore, according to [27] , it has been found that LDR have a partially negative impact on the Return On Assets of banks listed on IDX during the period of 2015-2020.

4.6 The effect of CAR, NPL and LDR On The Profitability (ROA) Of Regional Development Banks In Java Island For The Period 2019-2023.

According to the results of the multiple linear regression test of the fourth hypothesis, which can be seen in Table 12, the significant value of the variables LDR, CAR and NPL simultaneously on ROA is 0,000. On the basis of these results, it has been established that the significant value of the variables LDR, CAR and NPL simultaneously on ROA is lower than 0,05. Therefore, it can be concluded that the fourth hypothesis is acceptable. During the period 2019-2023, the profitability (ROA) of regional development banks on the island of Java is simultaneously affected by CAR, NPL, and LDR.

Table 12. Multiple Regression Test Results

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.278	3	23.759	24.684	.000b
	Residual	25.026	26	.963		
	Total	96.305	29			

a. Dependent Variable: ROA

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

Source: Processed data, 2024

Based on the data shown in Table 13, the R-squared value is 0,740, which indicates that the variables LDR, CAR and NPL have a 74% influence on the variable ROA.

Table 13. R Square Result

Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860a	.740	.710	.98110

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

b. Dependent Variable: ROA

Source: Processed data, 2024

Table 14. Coefficient Result

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.906	1.074		4.569	.000
	CAR	-.055	.023	-.241	-2.327	.028
	NPL	-1.112	.180	-.708	-6.197	.000
	LDR	-.013	.011	-.123	-1.112	.276

a. Dependent Variable: ROA

Source: Processed data, 2024

Given the information presented in Table 14, the equation for the multiple linear regression line corresponding to the fourth hypothesis can be written as follows:

$Y = 4,906 - 0,055\ X_1 - 1,112\ X_2 - 0,013\ X_3$

The constant a is 4,906, and this number is shown as a constant number. This means that if the variables CAR (X_1), NPL (X_2) and LDR (X_3) are all equal to zero, then the variable ROA (Y) is also equal to 4,906. Assuming that all other independent variables remain the same, the value of the regression coefficient for the variable CAR (X_1) is -0,055, indicating that the variable CAR has a negative impact on ROA. This means that a one-unit increase in the variable CAR results in a 0,055-unit decrease in ROA. Assuming that all other independent variables remain unchanged, the value of the regression coefficient for the variable NPL (X_2) is -1,112, indicating that the variable NPL has a negative effect on ROA. This suggests that an increase of one unit in the NPL variable results in a decrease in ROA of 1,112 units. Assuming that all other independent variables remain the same, the value of the regression coefficient for variable LDR (X_3) is -0,013, indicating that the LDR variable has a negative effect on ROA. This means that an increase of one unit in the LDR variable results in a decrease in ROA of 0,013 units.

The findings of this investigation are consistent with [28]. During the period of 2011-2015, the profitability of banking firms that are listed on the Indonesia Stock Exchange was significantly impacted by CAR, NPL, and LDR simultaneously, as stated by [28]. [29] study is another piece of evidence that lends credibility to this research. In his study, [29] discovered that the CAR, LDR, and NPL all have a significant positive effect on Return On Asset (ROA) in the Banking Sector on the Indonesia Stock Exchange for the period of 2014-2018. This was shown to be the case concurrently. Furthermore, according to [30] the ROA of banks listed on IDX throughout the years 2016 to 2020 was influenced simultaneously by three factors. These considerations were CAR, LDR, and NPL.

5.   CONCLUSION AND SUGGESTION

Based on the results of this study, it can be concluded that: (1) The financial performance of Regional Development Banks on the island of Java for the 2019-2023 period has an average value of CAR and an average NPL of 25,4457 and 1,0427, so the financial health of Regional Development Banks on the island of Java for the 2019-2023 period is in a very healthy condition. The average value of LDR and the average ROA of regional development banks on the island of Java for the period 2019-2023 are 82,1707 and 1,3087, respectively, so the financial health level of regional development banks on the island of Java for the period 2019-2023 is in a healthy condition. (2) CAR has a partial effect on the return on assets (ROA) of regional development banks on the island of Java for the period 2019-2023. (3) NPL has a partial effect on Profitability (ROA) of Regional Development Banks on the island of Java for the 2019-2023 period. (4) LDR has a partial effect on the Profitability (ROA) of Regional Development Banks on the island of Java for the period 2019-2023. (5) CAR, NPL and LDR simultaneously affect the Profitability (ROA) of Regional Development Banks on the island of Java for the period 2019-2023. The observation sample used in this study is limited to regional development banks located on the island of Java; therefore, it is expected that suggestions for further research will be made to expand the scope of the research sample. It is also expected that suggestions for further research will be made to extend the observation period and other financial ratio variables to make the analysis conducted more accurate, comprehensive and appropriate.

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