

## **The Effect of Financial Ratio Performance on Credit Distribution (Study on Commercial Banks in Indonesia for the 2020-2022 Period)**

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### **ABSTRACT**

*The goal to be realized in this study is to provide partial or simultaneous empirical evidence of the effect of CAR, NPL, LDR, ROA, DPK on lending. In this research using secondary data. The sample in this research amounted to 60 data using a purposive sampling technique. In analyzing the data using multiple linear regression analysis test, t test, F test and the coefficient of determination. Relying on the results obtained in partial and simultaneous research CAR, NPL, ROA have a non-significant positive effect on lending, LDR, DPK have a significant positive influence on lending. The results of the calculation of the coefficient of determination are 99.2% while the remaining 0.8%.*

**Keywords :** Lending, CAR, NPL, LDR, ROA, DPK.

### **INTRODUCTION**

Commercial banks have a very important role in a country's financial system, including Indonesia. As financial institutions, commercial banks function as intermediary institutions that channel funds from the public to those in need. This role is very strategic in supporting economic development and national development. One of the programs that is being promoted by Bank Indonesia to achieve its goal, namely maintaining and maintaining stability in the rupiah, is the "MSME (Micro, Small and Medium Enterprises) Development Program". It is hoped that this program can reduce the rate of regional inflation which will ultimately have an impact to national inflation (Dina, 2023). Commercial banks in Indonesia provide banking services to individuals, corporations and MSMEs. They accept deposits such as savings, time deposits and current accounts, and provide credit for business, property, vehicles and consumption. Corporate services include working capital, investment, international trade, liquidity management, securities issuance, stock offerings, mergers and acquisitions. Fund distribution is the process of selling funds that have been collected from the public which is known as the "Loan" activity. Banks channel these funds by providing credit to the public who means channeling back funds that have been collected from public savings in the form of loans.

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As a financial institution, commercial banks function as intermediaries that channel funds from the public to those in need. This role is very strategic in supporting economic development and national development. Commercial banks in Indonesia provide banking services for individuals, corporations and MSMEs. They accept deposits such as savings, time deposits and current accounts, and provide credit for business, property, vehicles and consumption. Corporate services include working capital, investment, international trade, liquidity management, issuance of securities, stock offerings, mergers and acquisitions. Channeling funds is the process of selling funds that have been collected from the public, known as "Lending" activities. Banks distribute these funds by providing credit to the community, which means re-flowing funds that have been collected from public deposits in the form of loans.

According to the Education Corner of the UGM Faculty of Business Economics in its blog <https://macroeconomicdashboard.feb.ugm.ac.id/makna-car-roa-ldr-dan-bopo/>, CAR (Capital Adequacy Ratio) is a capital adequacy ratio that shows the bank's ability to provide funds used to overcome possible risks of loss. This ratio is important because by maintaining the CAR at a safe limit (minimum 8%), it also means protecting customers and maintaining the stability of the financial system as a whole. The greater the CAR value reflects the better banking ability to face possible risks of loss. When the CAR level decreases, this results in a decrease in the soundness level of the bank. Conversely, the higher the CAR value, the bank can offer more credit. Bank Indonesia sets a minimum CAR requirement of 8% as an effort to maintain financial stability and bank sustainability in facing economic challenges (Dendawijaya, 2015). Non Performing Loan (NPL) reflects the bank's management expertise in overcoming credit problems. The higher the NPL ratio, the worse the bank's credit quality, which can lead to an increase in the number of non-performing loans and increase the risk of a bank's condition becoming problematic. Bank Indonesia sets a maximum NPL limit for a bank of 5% as a measure to maintain credit quality and stability in the banking sector (Dendawijaya, 2015).

According to the Education Corner of the UGM Faculty of Business Economics in its blog <https://macroeconomicdashboard.feb.ugm.ac.id/makna-car-roa-ldr-dan-bopo/>, LDR (Loan to Deposits Ratio) is a ratio that measures a bank's ability to meet short-term obligations (which can be called liquidity) by dividing total credit by total Third Party Funds (DPK). Banking liquidity needs to be managed to meet needs when customers

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withdraw funds and distribute loans (credit) to borrowers (debtors). If the LDR value is too high, it means that the bank does not have sufficient liquidity to cover its obligations to customers (DPK). On the other hand, if the LDR value is too low, it means that the bank has sufficient liquidity but its income may be lower, because as is known in the banking world it earns income through disbursed credit. The Loan to Deposit Ratio (LDR) reflects the capacity of a bank to provide loans to its debtors using the capital owned by the bank and funds collected from the public. Bank Indonesia has set a maximum LDR limit of 110%, while the optimal standard is in the range of 85% - 110%. If the LDR is too high, this indicates that banks tend to be less liquid (Dendawijaya, 2015). The following are the differences in research results:

*Tabel 1: Research Gap*

No	Arah Variabel	Berpengaruh Signifikan	Berpengaruh Tidak Signifikan
1	CAR Terhadap Penyaluran Kredit	Julia (2019), Najakhah (2014)	Pranata (2019), Adnan (2016)
2	NPL Terhadap Penyaluran Kredit	Najakhah (2014)	Cintiya (2022), Julia (2019), Prananta (2019)
3	LDR Terhadap penyaluram Kredit	Cintiya (2022), Julia (2019), Prananta (2019)	Najakhah (2014)
4	ROA Terhadap Penyaluran Kredit	Cintiya (2022), Julia (2019)	Najakhah (2014)
5	DPK Terhadap penyaluran Kredit	Adnan (2016)	Igarniwau (2019)

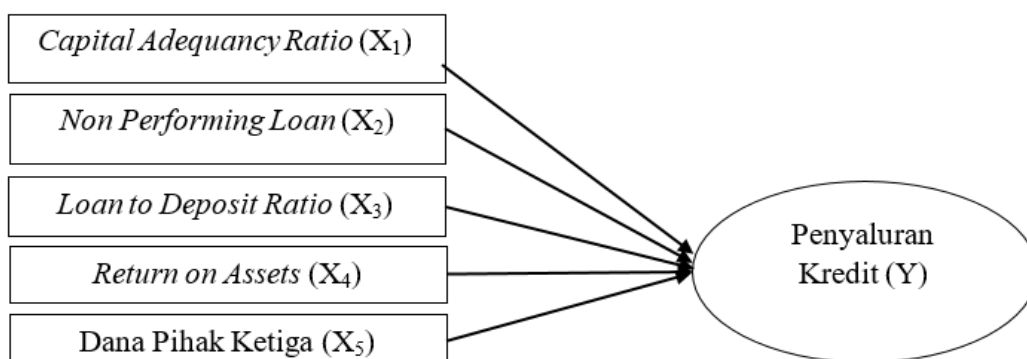
Based on this background information, the author's interest arose in carrying out research entitled " The Effect of Financial Ratio Performance on Credit Distribution (Study of Commercial Banks in Indonesia for the 2020-2022 Period)".

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## RESEARCH FRAMEWORK



Picture 1: Research Model

## METHOD, DATA AND ANALYSIS

The total population of banking companies is 44 companies, while the sample selected in this research accepts 20 banking companies. The techniques applied in analyzing the data in this study used descriptive statistical tests, classic assumption tests, hypothesis testing (multiple linear regression analysis, t-test, F-test and "coefficient of determination").

Formula for this Research :

CAR (Capital Adequacy Ratio) is a capital adequacy ratio that shows the banking ability to provide funds used to overcome possible risks of loss.

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

Non-Performing Loans are loans of doubtful quality, substandard and bad. It can be concluded that non-performing loans are one of the asset health indices of a financial institution.

$$\text{NPL Ratio} = (\text{Total NPL} / \text{Total Credit}) \times 100\%$$

LDR (Loan to Deposits Ratio) is a ratio that measures a bank's ability to meet short-term obligations (which can be called liquidity) by dividing total credit by total Third Party Funds (DPK).

$$\text{LDR} = (\text{Credit Provided} / \text{Total Funds Received}) \times 100\%$$

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ROA (Return On Assets) is a ratio that measures a bank's ability to generate profit or profit (which can be called profitability) by comparing net profit with the resources or total assets owned.

$$\text{ROA} = (\text{Net Profit} : \text{Total Assets}) \times 100$$

*Third Party Funds*, this source of funds originating from the community is often called a third party funding source, namely a source of funds originating from the community as customers in the form of current accounts, savings and deposits (Fahmi, 2014, p. 82).

$$\text{Third Party Funds} = \text{Current Account} + \text{Deposits} + \text{Savings}$$

## RESEARCH RESULT

### 1. Descriptive Statistical Test Results

*Table 2: Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
CAR	60	11,13	59,27	23,5030	7,44890
NPL	60	,21	7,99	3,1035	1,60654
LDR	60	41,07	162,29	79,8515	19,19044
ROA	60	,04	4,22	1,4020	1,05099
DPK	60	15,41941	20,99168	18,27372	1,65429025
Penyaluran Kredit	60	15,16245	20,85348	18,02174	1,70677326
Valid N (listwise)	60				

The results of the descriptive analysis of the credit distribution variable obtained the highest (maximum) value of 20.85348 PT. Bank BRI, Tbk in 2022 and the lowest value (minimum) 15.16245 PT. Bank Bumi artha, Tbk in 2022 with an average (mean) of 18.02174 and a standard deviation of 1.70677326. The results of the descriptive analysis of the variable Capital Adequacy Ratio (CAR) obtained the highest value (maximum) 59.27 PT. Bank Bumi artha, Tbk in 2022 and the lowest value (minimum) 11.13 PT. Bank

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Mayapada, Tbk in 2022 with an average (mean) Capital Adequacy Ratio (CAR) of 25.5030 and a standard deviation of 7.44890. The results of the descriptive analysis of the Non Performing Loan (NPL) variable obtained the highest (maximum) value of 7.99 PT. Bank Sinarmas, Tbk in 2022 and the lowest value (minimum) 0.21 PT. Bank Nobu, Tbk in 2020 with an average (mean) Non Performing Loan (NPL) of 3.1035 and a standard deviation of 1.60654. The results of the descriptive analysis of the variable Loan to Deposit Ratio (LDR) obtained the highest value (maximum) 162.29 PT. Bank Woori, Tbk in 2020 and the lowest score (minimum) 41.07 PT. Bank Sinarmas, Tbk in 2022 with an average Loan to Deposit Ratio (LDR) of 79.8515 and a standard deviation of 19.19044. The results of the descriptive analysis of the variable Return On Assets (ROA) obtained the highest value (maximum) 4.22 PT. Bank Mega, Tbk in 2021 and the lowest value (minimum) 0.04 PT. Bank Mayapada, Tbk in 2022 with an average Return On Asset (ROA) of 1.4020 and a standard deviation of 1.05099.

## 2. Classical Assumption Test

*Table 3: Classical Assumption Test*

Model	Unstandardized Coefficients		Coefficient		Sig	Collinearity Statistics	
	B	Std. Error	Standardized Coefficients	t		Tolerance	VIF
(Constant)	-1,535	,315		-4,876	,000		
CAR	,001	,003	,003	,249	,804	,867	1,154
NPL	,003	,015	,002	,180	,858	,709	1,411
LDR	,010	,001	,117	9,479	,000	,874	1,145
ROA	,024	,026	,015	,925	,359	,518	1,931
DPK	1,021	,015	,990	67,335	,000	,618	1,618

a. Dependent Variabel : Penyaluran Kredit

Shows that there is no multicollinearity.

*Table 4: Multicollinearity test*

Model	R	R Square	Model Summary <sup>b</sup>		Durbin -Watson
			Adjusted R Square	Std. Error of The estimate	
1	,996 <sup>a</sup>	,993	,992	,15152934	,621

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- a. Predictors : (constant), DPK,LDR, CAR, NPL, ROA
- b. Dependent Variable: Penyaluran kredit

Shows that there is no autocorrelation, because the dw value is 0.621

*Table 5: Heteroscedasticity Test*

Model	Unstandarized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta	t	
	1 (Constant)	,294	,218		
CAR	4,667	,002	,000	,002	,998
NPL	,009	,010	,141	,930	,356
LDR	,000	,001	,070	,510	,612
ROA	-,011	,018	-,107	-,603	,549
DPK	-,013	,010	-,205	-1,260	,213

- a. Dependent Variable : Absut

All data does not appear heteroscedasticity, because the significance value is > 0.05.

*Table 6: One – Sample Kolmogorov – Smirnov Test*

One – Sample Kolmogorov – Smirnov Test

	Unstandarized Residual
N	60
Normal Parameters <sup>a,b</sup> Mean	,0000000
Std. Deviation	,14496649
Most Extreme Absolute Differences	,152
Positive	,110
Negative	-,152
Kolmogorov-Smirnov Z	1,174
Asymp. Sig. (2-tailed)	,127

- a. Test distribution is normal
- b. Calculated From data

The data shows normal distribution values, because the significance is 0.127 > 0.05

### 3. Hypothesis Testing

#### a. Multiple Linear Regression Analysis

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Table 7: Multiple Linear Regression Analysis test

Model	Coefficient				Collinearity Statistics		
	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig	Tolerance	VIF
1 (Constant)	-1,535	,315		-4,876	,000		
CAR	,001	,003	,003	,249	,804	,867	1,154
NPL	,003	,015	,002	,180	,858	,709	1,411
LDR	,010	,001	,117	9,479	,000	,874	1,145
ROA	,024	,026	,015	,925	,359	,518	1,931
DPK	1,021	,015	,990	67,335	,000	,618	1,618

a. Dependent Variable Credit Distribution

$$Y = -1.535 + 0.001 + 0.003 + 0.010 + 0.024 + 1.021$$

$\alpha$ : -1.535 indicates negative credit distribution.

$\beta_1$ : 0.001, indicating a positive CAR coefficient.

$\beta_2$ : 0.003, indicating a positive NPL coefficient.

$\beta_3$ : 0.010, indicating a positive LDR coefficient.

$\beta_4$ : 0.024, indicating a positive ROA coefficient.

$\beta_5$ : 1.021, indicating a positive DPK coefficient.

b. t test

Table 8: t test

Model	Coefficients				Collinearity Statistics		
	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig	Tolerance	VIF
1 (Constant)	-1,535	,315		-4,876	,000		
CAR	,001	,003	,003	,249	,804	,867	1,154
NPL	,003	,015	,002	,180	,858	,709	1,411
LDR	,010	,001	,117	9,479	,000	,874	1,145
ROA	,024	,026	,015	,925	,359	,518	1,931
DPK	1,021	,015	,990	67,335	,000	,618	1,618

a. Dependent Variable : Penyaluran Kredit

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Based on the results of the t test LDR, DPK, has a partially significant influence on lending. CAR, NPL, ROA have a partially insignificant effect on lending.

b. F test

*Table 9: F test*

ANOVA <sup>b</sup>					
Model	Sum Of Squares	df	Mean Square	F	Sig.
1 Regression	170,632	5	34,126	1486,263	,000
Residual	1,240	54	,023		
Total	171,871	59			

- a. Predictors : (constant), DPK, LDR, CAR, NPL, ROA
- b. Dependent Variable : credit distribution

Based on the results of the CAR, NPL, LDR, ROA, DPK F test, a significant effect was found simultaneously on efforts to increase credit distribution.

c. Determination Coefficient Test

*Table 10: Determination Coefficient Test*

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of The estimate	Durbin -Watson
1	,996 <sup>a</sup>	,993	,992	,15152934	,621

- a. Predictors : (constant), DPK,LDR, CAR, NPL, ROA
- b. Dependent Variable: Credit distribution

The contribution of the independent variable to the dependent variable is 99.2%, the remaining 0.8%.

## CONCLUSIONS

It can be concluded that this research is CAR, NPL, LDR, ROA, DPK can affect credit distribution partially and simultaneously.

### Suggestion

1. The author suggests that Indonesian Commercial Banks increase lending by taking into account the Capital Adequacy Ratio (CAR). These efforts include increasing CAR

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through increasing and improving capital by increasing deposits, going public, and long-term subordinated loans from shareholders. Thus, banks can use this capital to extend credit. It is important for banks to maintain the CAR ratio above 8% in accordance with applicable regulations.

2. The author suggests that banks can increase Third Party Funds (DPK) or funds originating from the public by presenting attractive incentives. One way is to provide competitive interest rates to customers and special facilities for priority customers. In addition, banks can strengthen promotions through advertisements on television and the internet as well as offer savings programs with prizes to attract public interest.

3. Increase the number of samples and variables

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