Credit Quality as a Moderating Effect of Capital Adequacy and Credit Distribution on the Profitability of Village Credit Institutions

G. K. Kawindra Narayana[1], I Gede Putu Kawiana[2], Mirah Ayu Putri Trarintya[3]

[1]Student of Magister Management Program on Faculty of Business and Tourism Economics, University Hindu Indonesia, Indonesia

[2,3]Faculty of Business and Tourism Economics, University Hindu Indonesia, Indonesia

ABSTRACT: Profitability is one measure of the achievements of Village Credit Institution (LPD) in managing them so that they can continue to grow and develop amidst increasingly fierce competition between financial institutions. Capital adequacy, loan disbursement, and quality of credit disbursed are several factors that affect LPD profitability. This study uses a qualitative descriptive approach with secondary data sources. The research population is all LPDs in Denpasar City totaling 35 units. Determination of the sample using purposive *sampling* so that 34 units of LPD were obtained as samples and 170 observational data. The research instrument uses documentation techniques or non-participant observation. Methods of data analysis using descriptive analysis and inferential analysis with moderation analysis for moderated *regression analysis.* The research results show that *Capital Adequacy Ratio has a significant* positive effect on *Return on Asset*. *Loan to Deposit Ratio* significant positive effect on *Return on Asset*. Credit quality is able to moderate (weaken) the influence of Capital *Adequacy Ratio* to *Return on Asset*. Credit quality is not able to moderate the effect of Loan *to Deposit Ratio* to *Return on*. The implication of the research is that this research provides information for LPDs in Denpasar City regarding the influence *Capital Adequacy Ratio* and *Loan to Deposit Ratio* to *Return on Asset* which is moderated by credit quality so that LPD management in Denpasar City can determine future policy directions in order to increase the profitability and progress of LPDs in Denpasar City.

KEYWORDS: Return on Asset, Capital Adequacy Ratio, Loan to Deposit Ratio, Credit Quality

1. BACKGROUND

The success of rural development that is able to touch all levels of society cannot be separated from the role of economic actors living in rural areas. Economic actors livingin rural areas play an important role because most of Indonesia's population lives in rural areas and villages have potential that can support the growth and smooth running of national development, as well as enable equitable distribution of development and its results to improve people's lives.

LPD (Village Credit Institution) is one of the non-bank financial institutions in rural areas where LPD has a very large contribution in helping community businesses in a rural area, especially rural communities in Bali, in the form of business assistance such as capital assistance for the development of an economic micro community. The advantages of the LPD compared to other financial institutions are the business scope of the LPD which is ina traditional village and the management of the LPD which directly involves village residents as managers and supervisors, causing the flow of information regarding the LPDto be more easily accessible so that it is easy to gather the trust and comfort of village residents towards the LPD. In the era of financial inclusion that is developing in Bali, LPDs compete freely with commercial banks, rural credit banks and savings and loan cooperatives, both in raising funds and extending credit.

The ability of financial institutions to generate profits from the operational activitiesof these financial institutions is reflected by the profitability or profit of a financial institution (Asma et al., 2011). The economic profitability ratio is one of the tools to measure LPD performance. According to (Allow, 2021), which is defined as an increase or decrease in profitability that is used to measure a company's ability to generate profits over a certain period and to see a company's ability to operate efficiently. Profitability growth provides an overview of the company's ability to earn profits in a certain period. The greater the profitability, thebetter, because the prosperity and soundness of LPDs increases with greater profitability.Profitability will be a measure of the

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achievements achieved by an LPD, as well as an orientation for the LPD to continue to grow and develop.

Based on some of the results of previous studies, the profitability of the LPD can be affected by the capital owned by the LPD. Capital is one of the important factors for the sustainability of an LPD, because with the capital owned by the LPD, it can channel its funds to the community. Capital is also an important factor in business development and to accommodate the risk of loss (Sima et al., 2021). According to (Abbas et al., 2019) indicates that the strength of the capital of a financial institution is very important in influencing profitability. This is because the capital ratio has long been a valuable tool for assessing capital adequacy and as a factor in achieving the general security and soundness of a bank as measured using the capital adequacy ratio.

Capital adequacy ratio calculated based on the comparison between LPD capital and RWA (Risk Weighted Assets). The main purpose of CAR is to find out whether this capital will be able to absorb financial institution losses that occur in investing funds or decreasing assets in the future (Murinde et al., 2022). Governor Regulation Number 44 of 2017 concerning LPDs states that LPDs must meet the minimum capital adequacy of 12%. The greater the capital owned by a financial institution will increase its capital adequacy ratio, conversely if the financial institution's capital is continuously eroded by the losses experienced, then the capital adequacy ratio will decrease, this is caused by the losses experienced by financial institutions so that they absorb the capital they have.

(Sudiana et al., 2022), (Florid et al., 2023), and (Susanti et al., 2021), stating that capital adequacy has no effect on profitability, this can happen due to the possibility that the LPD under study has good internal control to prevent problem loans properly so that the LPDs risk is to cover bad credit losses with capital (CAR) can be reduced so that the LPDs income from interest on loans is still received, therefore CAR does not have a significant effect on profitability.

The profit obtained from lending is in the form of interest income which is the amount of funds paid by the debtor as remuneration for the funds received (borrowed). Increased lending will increase LPD income caused by receipt of loan interest payments, so that profitability increases. Conversely, if the level of credit disbursement decreases, the income from receiving interest payments decreases, resulting in low profitability. Therefore, management needs to be careful in preparing credit policies, so that they do not have a negative impact on profitability (Wang et al., 2022).

Ref Ali and Puah (2019) states that lending has a negative effect on profitability. Meanwhile, the results of the research by Afiezan et al. (2020), state that lending has no effect on profitability. An unhealthy LDR level shows that the amount of credit that has been disbursed exceeds funds from third parties. The higher the LDR level indicates the worse the liquidity conditions, because placements on credit are also financed from third party funds which can be withdrawn at any time. The high level of LDR allows banks to refuse to provide loans or in other words, banks will limit lending. The attitude of high caution to avoid the risk of non-performing loans is thought to be the cause of the inability of lending to affect profitability. The funds owned have not been utilized optimally so that they have not been able to affect profitability.

All LPDs in each sub-district in Denpasar City in 2020 and 2021 will experience a decrease in profit or profitability. LPD in North Denpasar District in 2020 experienced a decrease in profit of 3.33% then decreased again in 2021 by 1.48%. LPD in East Denpasar District in 2020 experienced a decrease in profit of 6.60% from the previous year, then decreased again in 2021 by 1.10%. The LPD in South Denpasar District in 2020 experienced a decrease in profit of 4.37% from the previous year, but then it was able to survive and increase profits by 0.27% in 2021. Meanwhile the LPD in West Denpasar District in 2020

Experienced a decrease in profit of 2.29% from the previous year, and then decreased again in 2021 by 1.22%. The decline in profits that occurred during 2020 and 2021 did not occur in 2022, the LPDs in Denpasar City were able to rise so that on average all LPDs in each sub- district experienced an increase in profits in 2022. However, if you look at each LPD there are still several LPDs that have experienced profit decline.

As credit distributors to indigenous peoples, LPDs in Denpasar City are currently also faced with a number of non-performing loans. Settlement of these non-performing loans is constrained by conditions in the community that make it impossible to make loan repayments. On the one hand, this billing then created a difference of understanding between the LPD management and the indigenous people. In the midst of an increase in lending, LPDs in Bali were also faced with an increase in non-performing loans. In fact, the ratio of *non-performing loan* (NPL) LPD in Bali has exceeded the threshold. LPDs in Denpasar City itself, the increase have not only occurred in credit scores but also the number of troubled debtors, this indicates that the credit quality of LPDs still needs serious attention from the government to maintain the existence of LPDs. The following is presented data on the development of the total ratio of credit disbursement/*loan to deposit ratio* (LDR) and the ratio of non-performing loans (NPL) LPD in Denpasar City for the 2018-2022 periods.

During 2022 it was also revealed that at LPD Serangan as one of the LPDs in Denpasar City there was a corruption case involving the former head of the LPD Serangan for the 2015-2020 period and LPD Serangan administrative staff for the same period. The suspect made 17 fictitious credits and manipulated the cash book records to the detriment of Rp. 3.7 billion, which

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until now the case is still being handled by the Denpasar District Attorney and has made the Serangan LPD inactive until now. Therefore,attention is needed regarding credit quality, capital adequacy, and good credit distributionto increase the profitability of the LPD itself.

Seeing from the explanation of this background and the inconsistency of the results of previous studies that have been carried out, the researcher is interested in re- examining Credit Quality as a Moderating Effect of Capital Adequacy and Credit Distribution on the Profitability of Village Credit Institutions in Denpasar City.

2. LITERATURE REVIEW

2.1 Effect of Capital Adequacy on Profitability

Capital is often referred to as solvency ratios or capital *adequacy ratios*. Solvability analysis is used: firstly, as a measure of the ability of the financial institution to absorb unavoidable losses. In this study, the ratio used to measure the capital adequacy of LPD is*Capital Adequacy Ratio* (CAR). According to Hersugondo (2021); Amalia (2021), capital adequacy describes a bank's ability to maintain sufficient capital to cover the risk of losses that may arise from investing in risky productive assets, as well as for financing in fixed assets and investments. According to Anggari dan Dana (2020), the higher the CAR ratio indicates that the LPD is healthier in the capital. If the CAR value is high, the LPD is able tofinance operational activities and make a sizable contribution to profitability. LPDs that have high capital will achieve high profits because these LPDs are more careful in choosing financing sources so that LPD profitability will increase.

Research conducted by Wiriastini et al. (2022) stated that capital adequacy has a positive effect on LPD profitability. The results of this study are supported by the results of Dharma's research (2019), which also states that capital adequacy has a positive effect on profitability. As well as the results of Brastama & Yadnya, (2020), which states that capital adequacy has a positive and significant effect on profitability (ROA). So the first hypothesis in this study is:H1: Capital adequacy has a positive effect on the profitability

2.2. Effect of Lending on Profitability

According to Tang et al. (2021) suggests that credit is a gift of achievement by one party to another party and the achievement will be returned again and at a certain time which will be accompanied by a counter-performance in the form of interest. The definition of credit according to the Banking Law Number 10 of 1998 article 21 states that credit is the provision of money or equivalent claims based on a loan agreement or agreement between the bank and another party that requires the debtor torepay the debt after a certain period of time by giving an interest (Zainuddin & Ramadhani, 2021). Thedisbursement rate is shown through the credit turnover carried out by the LPD, which shows how fast credit collection is. The greater the turnover rate, it indicates thatreceivables are collected quickly and this will also be in line with the growth rate of a LPDs profitability (Lefebvre, 2023).
H2: Credit distribution has a positive effect on the profitability

2.3 Credit Quality Moderates the Effect of Capital Adequacy on Profitability

According to (Amir & Choudhury, 2023), every credit given or disbursed has its own quality, and credit quality is very closely related to non-performing loans. The better the credit quality, the better the turnover of funds, so the higher the chance for the LPD to make a profit (Kepramareni et al., 2022). Conversely, the lower the credit quality, the lower the chance for the LPD to make a profit, because the funds owned are used as a reserve to overcome the risk of non-payment of the credit provided. The number of non-performing loans results in reduced funds or capital raised. According to (Bintoro et al., 2023) non-performing or bad credit is the failure of the debtor to fulfill his obligation to pay installments of the principal along withthe interest that has been agreed by both parties in the credit agreement. As a result of high problem loans or non-performing *loans*, banks must provide larger reserves, so that bank capital will also be eroded and because profits generated by LPDs to decrease becausecapital is not channeled as profit-generating credit. Then the third hypothesis in this studyis:
H3: It is suspected that credit quality is able to moderate the effect of capital adequacy

2.4 Credit Quality Moderates the Effect of Credit Disbursement on Profitability

According to (Dewi, 2022) non-performing or bad credit is the failure of the debtor to fulfill his obligation to pay installments of the principal along with the interest that has been agreed by both parties in the credit agreement. Good credit quality can increase LPD profitability, while low credit quality will reduce LPD profitability due to non- payment of credit interest which is the main profit of LPD (Nopiyani, 2021). Thenumber of non-performing loans results in reduced funds or capital raised and increased credit risk. High credit risk will cause banks to reduce lending, this is because the funds that have been disbursed are not returned and the funds in the LPD will be held to maintain LPD liquidity.

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So the fourth hypothesis in this study is:

H4: It is suspected that credit quality is able to moderate the effect of lending on profitability
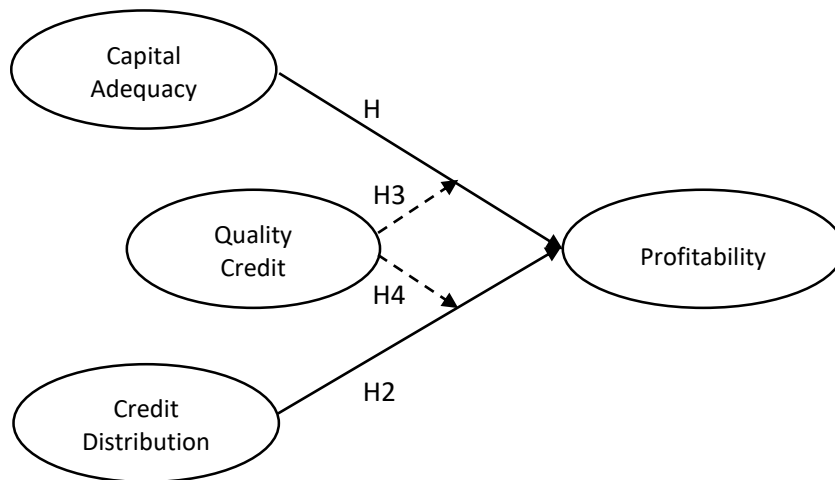
Method

This research was conducted in all Village Credit Institutions in Denpasar City. The scope of this study is all Village Credit Institutions in Denpasar City with the object of research being capital adequacy and lending to moderated profitability of credit quality. The type of data used in this study is Quantitative data in the form of financial reports Annual Village Credit Institutions in Denpasar City for the 2017-2021 periods and qualitativedata in this research is in the form of an overview of Village Credit Institutions in Denpasar City. The population of this research is all Village Credit Institutions in Denpasar City As many as 35 units of Village Credit Institution. Documentation is done by collecting all datarelated to the research. Researchers obtained research data sourced from annual financial report data for Village Credit Institution companies in Denpasar City during the study period, namely from 2018 to 2022.

3. RESULTS AND DISCUSSION

3.1 Descriptive Statistical Analysis

Descriptive statistical analysis is used to show the amount of data used in this studyand can show the maximum value, minimum value, average value and standard deviationof each variable. The results of descriptive data processing can be seen in Table 1. as follows:

Table 1. Descriptive Statistical Test Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	170	-28,88	8,39	2,2169	3,08464
CAR	170	-4,14	133,96	25,9851	14,61040
LDR	170	41,69	169,82	77,0524	20,79243
NPL	170	0,08	18,89	5,0963	3,91602
Valid N (listwise)	170				

Source: Processed data, 2023

Table 1 show that N or the amount of data on each valid variable is 170. It can be explained for each variable as follows.

1. Sample data *Return on Asset* (ROA) has a minimum value of -28.88 and the maximum value is 8.39, while the average value is 2.2169 with a standard deviation of 3.08464 thestandard deviation value is greater than the average value which means the data *Returnon Asset* (ROA) varies or is heterogeneous.

2. Sample data *Capital Adequacy Ratio* (CAR) has a minimum value of -4.14 and a maximum value of 133.96, while the average value is 25.9851 with a standard deviationof 14.61040, the standard deviation value is smaller than the average value, which means the data *Capital Adequacy Ratio* (CAR) less varied or homogeneous.

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3. Sample data *Loan to Deposit Ratio* (LDR) has a minimum value of 41.69 and a maximum value of 169.82, while the average value is 77.0524 with a standard deviation of 20.79243, the standard deviation value is smaller than the average value, which means the data Loan *to Deposit Ratio* (LDR) less varied or homogeneous.
4. Sample data *Non-Performing Loan* (NPL) has a minimum value of 0.08 and a maximum value of 18.89, while the average value is 5.0963 with a standard deviation of 3.91602, the standard deviation value is smaller than the average value, which means the data *Non-Performing Loan* (NPL) less varied or homogeneous.

3.2 Moderation Analysis Results/*Moderated Regression Analysis* (MRA)

Moderation analysis/*moderated regression analysis* (MRA) is used to determine whether there is influence *Capital Adequacy Ratio* (CAR) and *Loan to Deposit Ratio* (LDR) against *Return on Asset* (ROA) with *Non-Performing Loan* as a moderating variable at the Village Credit Institution (LPD) in Denpasar City. Based on test results *moderated regression analysis* (MRA) and the regression equation, then *Non-Performing Loans* as a moderating variable can be classified as follows:

1. *Non-Performing Loan* (NPL) is classified as criteria *pure moderator* in the relationship between *Capital Adequacy Ratio* (CAR) against *Return on Asset* (ROAs). This is based on the test results which show that *Capital Adequacy Ratio* (CAR) effect on *Return on Asset* (ROA) and the interaction between *Capital Adequacy Ratio* (CAR) with *Non-Performing Loan* (NPL) also has an effect on *Return on Asset* (ROA).
2. *Non-Performing Loan* (NPL) is classified as a criteria *as a director in* the relationship between *Loan to Deposit Ratio* (LDR) against *Return on Asset* (ROAs). This is based on the test results which show that *Loan to Deposit Ratio* (LDR) effect on *Return on Asset* (ROA) and the interaction between *Loan to Deposit Ratio* (LDR) with *Non-Performing Loan* (NPL) has no effect on *Return on Asset* (ROA).

Classic assumption test

The classic assumption test in moderation regression does not include interaction variables, because in the interaction variables there are elements of independent variables and moderating variables. This can cause problems in regression, especially multi collinearity which can reach more than 80% (Liana, 2009). The results of the classic assumption test of the regression equation can be explained as follows.

1. Normality

The normality test aims to test whether a dependent variable regression model with independent variables has a normal distribution or not. This study uses test *Kolmogorov-Smirnov* to test the normality of the data. The results of the data normality test are presented in Table 2. Below:

Table 2. Prior Normality Test Results *Outlier*

One-Sample Kolmogorov-Smirnov Test

		tandardizedResidual
N		170
Normal	*Mean*	0,0000000
Parameters[a,,b]	*Std. Deviation*	2,87069243
Most ExtremeDifferences	*Absolute*	0,216
	Positive	0,181
	Negative	-0,216
Kolmogorov-Smirnov Z		2,815
Asymp. Sig. (2-tailed)		0,000

Source: Processed data, 2023

Based on Table 2, because the value *A symp Sig* 0.000 < 0.05 then the data is not normally distributed, the next step is to take outlier data by eliminating data with extreme values so that the number of data becomes 163. The next step is to test *Kolmogorov Smirnov Next* as shown in Table 3 below.

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Table 3. Normality Test Results after *Outlier*

One-Sample Kolmogorov-Smirnov Test

		tandardizedResidual
N		163
Normal Parameters[a,,b]	*Mean*	0,0000000
	Std. Deviation	1,10252272
Most ExtremeDifferences	*Absolute*	0,064
	Positive	0,052
	Negative	-0,064
Kolmogorov-Smirnov Z		0,816
Asymp. Sig. (2-tailed)		0,518

Source: Processed data, 2023

Based on Table 3, the results obtained by using the test Kolmogorov-Smirnov Provided that if the significance of each variable is > 0.05 then it is normally distributed, whereas if the significance of each variable is less than 0.05 then the data is not normally distributed (Ilham et al., 2022). Normality test results has a statisticaltest value of 0.518 > 0.05 so that it can be said that the regression model meets the normality assumption.

2. Multicollinearity Test

The multicollinearity test aims to test whether the regression model found a correlation between the independent variables, in other words, there is no multicollinearity. The results of the multicollinearity of the data are presented in Table5 below:

Table 4. Multicollinearity Test Results

	nstandardizedCoefficients		tandardized Coefficients	ollinearityStatistics	
Model	B	Std. Error	Beta	Tolerance	VIF
(Constant)	-0,280	0,393			
CAR	0,040	0,008	0,334	0,973	1,028
LDR	0,028	0,004	0,422	0,955	1,047
NPL	-0,051	0,022	-0,146	0,980	1,021

Source: Processed data, 2023

Based on Table 4. It can be seen that all independent variables have a VIF valueof less than 10 and have a number tolerance of more than 0.1. This means that there are no symptoms of multicollinearity from the regression model used

.3. Heteroscedasticity Test

The heteroscedasticity test aims to test whether the model in the regression has an inequality of variance and residuals from one observation to another. Test results glaze for the heteroscedasticity test can be seen in Table 5 below

Table 5. Heteroscedasticity Test Results

	nstandardizedCoefficients		tandardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	1,230	0,460		2,675	0,008
CAR	0,012	0,007	0,125	1,606	0,110
LDR	-0,002	0,005	-0,025	-0,320	0,750
NPL	-0,052	0,027	-0,151	-1,942	0,054

Source: Processed data, 2023

Based on Table 5, it can be seen that all variables have a significance level greaterthan 0.05. This means that in the regression model, there are no symptoms of heteroscedasticity.

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4. Autocorrelation Test

Autocorrelation arises because successive observations over time are related to one another. This problem arises because the residuals (confounding errors) are not independent from one observation to another. This test is used to test the classical regression assumptions related to the presence of autocorrelation. This test uses Durbin Watson (DW-test). The provisions of the DW test are if the calculated

DW value lies between the upper limit (du) and the lower limit

(dl), then it can be said that the model is free from autocorrelation or if du < dw < 4-du.

Table 6. Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0,630[a]	0,397	0,378	1,09643	1,809

Source: Processed data, 2023

The DW test results in Table 6 show a DW value of 1.509. The DW value will be compared with the table value using a 5% degree of confidence, with a total sample of 163 with 4 variables, namely 2 independent variables, 1 moderating variable, and 1 dependent variable. So, from the Durbin-Watson table, the value of du 1.794 will be obtained. So that Durbin Watson's calculation in this study with the formula du <dw< 4-du will be 1.794 < 1.809 < 2.206. Thus, it can be said that the model is free from autocorrelation.

4.2 Model Feasibility Test

1. Porridge F

The test was conducted to determine the effect of *Capital Adequacy Ratio* (CAR) and *Loan Deposit Ratio* (LDR) against *Return on Asset* (ROA) with *Non- Performing Loans* as a moderating variable at the Village Credit Institution in Denpasar City. The results of the F test can be seen as follows:

Table 7. F Test Results

ANOVA[b]

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	124,166	5	24,833	20,657	0,000[a]
	Residual	188,738	157	1,202		
	Total	312,904	162			

Source: Processed data, 2023

Based on the results of the F test in Table 7, the calculated F value was 20.657 with a significance of 0.000 <0.05 indicating that *Capital Adequacy Ratio* (CAR), *Loan Deposit Ratio* (LDR), *Non-Performing Loan* (NPL), the interaction between capital *Adequacy Ratio* (CAR) with *Non-Performing Loan* (NPL), as well as interactions between *Loan to Deposit Ratio* (LDR) with *Non-Performing Loan* (NPL) simultaneously affect *Return on Asset* (ROA) at the Village Credit Institution (LPD) in Denpasar City, so the regression model is feasible to use.

2. The coefficient of determination (R^2)

The coefficient of determination (R^2) aims to determine how much influence *Capital Adequacy Ratio* (CAR) and *Loan Deposit Ratio* (LDR) against *Return on Asset* (ROA) with *Non-Performing Loan* as a moderating variable at the Village Credit Institution (LPD) in Denpasar City. The test results can be seen in Table 8 below:

Table 8. Results of the Coefficient of Determination

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	0,630[a]	0,397	0,378	1,09643	1,809

Source: Processed data, 2023

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Based on the results of the determination analysis in Table 8, the values obtained *Adjusted R Square* of 0.378 which means *Return on Asset* (ROA) at the Village Credit Institution (LPD) in Denpasar City can be explained by *Capital Adequacy Ratio* (CAR), *Loan to Deposit Ratio* (LDR), *Non-Performing Loan* (NPL), theinteraction between *Capital Adequacy Ratio* (CAR) with *Non-Performing Loan* (NPL),as well as interactions between *Loan to Deposit Ratio* (LDR) with *NonPerforming Loan* (NPL) of 37.8% while the remaining 62.2% is explained or influenced by other factors or variables outside this research model.

Hypothesis Test (t-test)

The t-test was carried out to determine whether the independent variables partiallyor individually have an influence on the dependent variable. If the significance level obtained (*p-value*) is smaller or equal to 0.05, then the hypothesis can be accepted or theindependent variable has a statistical effect on the dependent variable. Effect t-test resultsin *Capital Adequacy Ratio* (CAR) and *Loan Deposit Ratio* (LDR) against *Return on Asset* (ROA) with *Non-Performing Loan* as a moderating variable in Village Credit Institutions (LPD) in Denpasar City, shown in Table 9. below.

Table 9. Hypothesis Test Results (t-test)

Coefficients^a

Model		B (Unstandardized Coefficients)	Std. Error	Beta (Standardized Coefficients)	t	Sig.
1	(Constant)	-0,392	0,569		-0,689	0,492
	CAR	0,068	0,013	0,567	5,195	0,000
	LDR	0,021	0,007	0,316	2,804	0,006
	NPL	0,090	0,159	0,259	0,570	0,569
	CAR*NPL	-0,006	0,003	-0,525	-2,328	0,021
	LDR*NPL	8,545E-5	0,002	0,019	0,053	0,957

Source: Processed data, 2023

Based on the results of the moderation analysis/moderated regression analysis
(MRA) in Table 9, can be explained as follows.

1. Effect t-test results in Capital Adequacy Ratio (CAR) against Return on Asset (ROA) indicates the value of the count of 5.195, and a significance value of the t-test of 0.000which is smaller than (significant level) = 0.05, it can be concluded that Capital Adequacy Ratio (CAR) positive and significant effect on Return on Asset (ROA) at the Village CreditInstitution (LPD) in Denpasar City so the first hypothesis (H₁) is accepted.

2. Effect of t-test results Loan to Deposit Ratio (LDR) against Return on Asset (ROA) indicatesthe value of the count of 2.804, and the t-test significance value of 0.006 which is smaller than (significant level) = 0.05, it can be concluded that Loan to Deposit Ratio (LDR) has a positive and significant effect on Return on Asset (ROA) at the Village Credit Institution(LPD) in Denpasar City, so that the second hypothesis (H₂) is accepted.

3. The results of the t-test influence the interaction between Capital Adequacy Ratio (CAR)and Non-Performing Loan (NPL) against Return on Asset (ROA) indicating the value of t-count -2.328, and the significance value of the t-test is 0.021 which is smaller than a (significant level) = 0.05, it can be concluded that Non-Performing Loan (NPL) is able to moderate (weaken) the influence Capital Adequacy Ratio (CAR) to Return on Asset (ROA) at the Village Credit Institution (LPD) in Denpasar City, so that the third hypothesis (H₃) is accepted.

4. The results of the t-test influence the interaction between Loan to Deposit Ratio (LDR) and Non-Performing Loan (NPL) against Return on Asset (ROA) indicates the value of tcount of 0.053, and the t-test significance value of 0.957 which is greater than a (significantlevel) = 0.05, it can be concluded that Non Performing Loan (NPL) was unable tomoderate the influence Loan to Deposit Ratio (LDR) against Return on Asset (ROA) at theVillage Credit Institution (LPD) in Denpasar City, so that the fourth hypothesis (H₄) was rejected.

4.2 DISCUSSION

Influence *Capital Adequacy Ratio* (CAR) against *Return on Asset* (ROA)

Based on the calculation results, the correlation coefficient value for the influence of the Capital Adequacy Ratio (CAR) on Return on Assets (ROA) is 0.068, the t-count value is 5.195, and the t-test significance value is 0.000 which is smaller than α (real level) =

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0.05, So it can be concluded that the Capital Adequacy Ratio (CAR) has a significant positive effect on Return on Assets (ROA) in Village Credit Institutions (LPD) in Denpasar City, so the first hypothesis (H1) is accepted. This means that every increase in the Capital Adequacy Ratio (CAR) will be followed by an increase in Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City.

Capital is often also referred to as solvency ratios or *capital adequacy ratio*. Solvability analysis is used to: firstly as a measure of the ability of the financial institution to absorb unavoidable losses. According to Hersugondo (2021); Amalia (2021) capital adequacy describes a bank's ability to maintain sufficient capital to cover the risk of losses that may arise from investing in risky productive assets, as well as for financing in fixed assets and investments. According to Anggari dan Dana (2020), the higher the CAR ratio indicates that the LPD is healthier in capital. If the CAR value is high, the LPD is able to finance operational activities and make a sizeable contribution to profitability. LPDs that have high capital will achieve high profits because these LPDs are more careful in choosing financing sources so that LPD profitability will increase.

The results of this study are in line with the results of previous research conducted by Wiriastini et al. (2022) which stated that capital adequacy has a positive effect on LPD profitability. The results of this study are supported by the results of Anggari and Dana research (2020), which also states that capital adequacy, has a positive effect on profitability. As well as the results of Amalia research (2021) which states that capital adequacy has a positive and significant effect on profitability (ROA).

Influence *Loan to Deposit Ratio* (*LDR*) on *Return on Asset* (ROA)

Credit distribution in this study is proxied by the ratio *Loan to Deposit Ratio* (LDR) is the ratio used to measure the composition of total credit given compared to the amount of public funds and own capital used. According to Tang et al. (2021) suggests that credit is a gift of achievement by one party to another party and the achievement will be returned again and at a certain time which will be accompanied by a counter-performance in the form of interest. The level of disbursement is shown through the credit turnover made by the LPD, which shows how fast credit collection is. The greater the turnover rate, it indicates that the collection of accounts receivable is carried out quickly and this will also be in line with the growth rate of a profitability (ROA) in LPD, so that good credit distribution will encourage LPD revenue growth in a positive direction which affects increased profitability (ROA) so that the relationship *Loan to Deposit Ratio* (LDR) and *Return on Assets* (ROA) is positive trending.

The results of this study are in line with the results of previous research conducted by Amalia (2021) which states that lending has a positive effect on profitability. The results of this study are supported by the results of Zainuddin & Ramadhani (2021); and Lefebvre research (2023) stating that there is a positive and significant effect of partial credit distribution on profitability.

Non-Performing Loans against Return on Assets (ROA)

Based on the calculation results, the correlation coefficient value for the influence of the Loan to Deposit Ratio (LDR) on Return on Assets (ROA) is 0.021, the t-count value is 2.804, and the t-test significance value is 0.006 which is smaller than α (real level) = 0.05 , it can be concluded that the Loan to Deposit Ratio (LDR) has a significant positive effect on Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City, so that the second hypothesis (H2) is accepted. This means that as the Loan to Deposit Ratio (LDR) increases, it will be followed by an increase in Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City.

Non-Performing Loans (NPL) which had no effect on Return on Assets (ROA) in this study occurred because data from several LPDs showed relatively small NPLs below 5%, and did not show a high spike. Providing credit by LPD in Denpasar City can also produce maximum profits, because credit is a risky matter, depending on the quality of the credit itself. Considering that LPD is a financial institution jointly owned by traditional village communities, and serves for the welfare of traditional village communities, of course the community will support every LPD activity to advance LPD, even though the Non-Performing Loans (NPL) is high, community concern for LPD makes people continue to use LPD in carry out financial transactions. So, the increase in Non-Performing Loans (NPL) has relatively no effect on LPD Return on Assets (ROA) in Denpasar City.

Non-Performing Loan Full Moderation *Capital Adequacy Ratio* (CAR) on *Return on Asset* (ROA)

Based on the calculation results, the correlation coefficient value of the interaction effect between Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) on Return on Assets (ROA) is -0.006, the t-count value is -2.328, and the significance value of the t-test is 0.021 which is smaller. from ⍺ (real level) = 0.05, it can be concluded that Non-Performing Loans (NPL) are able to moderate (weaken) the influence of the Capital Adequacy Ratio (CAR) on Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City, so the third hypothesis (H3) is accepted. This means that Non-Performing Loans are able to moderate (weaken) the relationship between Capital Adequacy Ratio (CAR) and Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City.

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According to Amir & Choudhury (2023) non-performing or bad credit is the failure of the debtor to fulfill his obligation to pay installments (installments) of the principal along with the interest that has been agreed by both parties in the credit agreement. As a result of high problem loans or *non-performing loan*, companies must provide larger reserves, so that LPD capital will also be eroded and because profits generated by LPDs to decrease because capital is not channeled as profit-generating credit. According to Kepramareni et al. (2022) every credit given or disbursed has its own quality, and credit quality is very closely related to non-performing loans. The better the credit quality, the better the turnover of funds, so that the higher the chance for the LPD to make a profit. Conversely, the lower the credit quality, the lower the chance for the LPD to make a profit, because the funds owned are used as a reserve to overcome the risk of nonpayment of the credit provided. The large number of non-performing loans resulted in reduced funds or capital raised and reduced profits earned by LPDs.

The results of this study are in line with the results of research conducted by Bintoro et al (2023) which state that *non-performing loan* or credit risk is able to moderate the effect of capital adequacy and credit distribution on profitability. The results of this study are supported by the results of Amalia research (2021) which states that problem loans (credit quality) loans are able to moderate the effect of capital adequacy and lending on profitability.

Non-Performing Loan Full Moderation *Loan to Deposit Ratio* (LDR) on *Return on Asset* (ROA)

Based on the calculation results, the correlation coefficient value of the interaction effect between Loan to Deposit Ratio (LDR) and Non-Performing Loans (NPL) on Return on Assets (ROA) is 0.00008545, the t-count value is 0.053, and the t-test significance value is 0.957 which is greater. from α (real level) = 0.05, it can be concluded that Non-Performing Loans (NPL) are unable to moderate the influence of Loan to Deposit Ratio (LDR) on Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City, so the fourth hypothesis (H4) is rejected. This means that Non-Performing Loans are unable to moderate (strengthen or weaken) the relationship between Loan to Deposit Ratio (LDR) and Return on Assets (ROA) at Village Credit Institutions (LPD) in Denpasar City.

According to Dewi (2022) non-performing or bad credit is the failure of the debtor to fulfill his obligation to pay the principal installments of the loan along with the interest agreed by both parties in the credit agreement. Good credit quality can increase LPD profitability, while low credit quality will reduce LPD profitability due to non-payment of credit interest which is the main profit of LPD (Nopiyani, 2021).The number of non-performing loans results in reduced funds or capital raised and increased credit risk. High credit risk will cause the LPD to reduce lending, this is because the funds that have been disbursed are not returned and the funds in the LPD will be held to maintain LPD liquidity.

However, the results of this study are not in line with the theory which states that the higher the non-performing loans, the lower the loan disbursement and impact on declining profitability. The discrepancy between the research results and this theory is because the LPD must be able to guard against the possibility of risk of loss arising from the movement of assets, especially in the form of lending. LPDs also have reserves for doubtful accounts which are reserves of funds used to deal with non-performing loans. The cause of credit quality inability (NPL) moderates the effect of lending (LDR) on profitability (ROA) because the LPD in Denpasar City in distributing loans has been determined by the precautionary principle based on the 5C and 7P criteria. The results of this study are in line with the results of research conducted by Amir & Choudhury (2023) which states that the ratio of non-performing loans cannot moderate the ratio of lending to profitability.

CONCLUSIONS AND SUGGESTIONS

In improving and maintaining credit quality that has current collectibility, by providing greward to customers so that they remain enthusiastic about paying credit on time.In addition, LPDs are advised to improve credit with substandard, doubtful and bad collectability, by giving punishment such as payment warning letters, calling customers to LPD offices, and if necessary, being able to withdraw collateral/loan guarantees to credit customers with bad status who can no longer pay credit, so that customers and LPD do not experience greater losses due to bad loans. LPDs in Denpasar City should be able to improve credit quality by increasing the application of the precautionary principle, 5C (character, capacity/cash flow, capital, condition, and collateral), and 7P (personality, party, purpose, prospect, payment, protability, and protection) in granting credit, so that losses caused by non-performing loans can be minimized.

SUGGESTION

The result of the research determination is 37.8%, so it is advisable to be able to examine other factors that can affect the profitability of the Village Credit Institution (LPD) in Denpasar City, such as company size, third party funds, bad loans and so on so as to get more accurate results regarding the factors that influence the profitability of Village Credit Institutions (LPD) in Denpasar City.

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