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RESEARCH ARTICLE

ENHANCING CREDIT RISK MANAGEMENT IN MICROFINANCE: A STUDY ON ADDRESSING NON-PERFORMING LOANS AT RUKUN IKHTIAR SAVINGS AND LOAN COOPERATIVE

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Abstract

The existence of financial cooperatives is crucial for supporting economic activities, particularly for small and medium-sized enterprises (SMEs). However, the increasing rate of Non-Performing Loans (NPLs) poses a significant risk to their sustainability. This study investigates the Rukun Ikhtiar Savings and Loan Cooperative (KSP RI), which is confronted with a persistent rise in non-performing loans (NPLs). Utilizing a dual approach, encompassing both quantitative and qualitative methods, this study assesses the financial performance and the efficacy of credit risk management at KSP RI. The quantitative analysis found that NPL, Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and Operating Expenses to Operating Income (BOPO) significantly affect Return on Asset (ROA), which highlights KSP RI's financial performance against increasing NPLs. Qualitative analysis using the Five C's credit framework, identified weaknesses in lending procedures, leading to the extension of credit to unqualified borrowers. To address this issue, the study recommends, implementing stricter lending policies with Five Cs framework, enhancing staff capacity through training and utilizing technology to improve risk monitoring. These findings provide insights for KSP RI and other microfinance institutions in strengthening credit risk management and provide a framework for future research..

Keyword: Cooperative Saving and Loan, Credit Risk Management, Five C's Analysis, Financial Performance

Introduction

In Indonesia, cooperatives, particularly Savings and Loan Cooperatives (KSPs), serve as fundamental microfinance institutions designed to promote shared prosperity and alleviate economic disparities. Legally framed by the Law No. 25 of 1992 and further elaborated in Government Regulation No. 9 of 1996, these cooperatives operate under a mandate to bolster economic empowerment among their members and contribute broadly to national economic development. KSPs, akin to credit unions in other regions, are uniquely positioned as primary cooperative entities where all activities directly serve their members' financial needs.

Financial institutions involved in lending, such as savings and loan cooperatives (KSPs), face various risks, with credit risk being the most significant. The potential failure of borrowers to meet their financial obligations, also known as Non-Performing Loans (NPL), is a risk that can result in significant losses and threaten the overall stability and sustainability of financial institutions. For microfinance institutions in Indonesia, such as savings and loan cooperatives, which primarily serve the financial needs of their members, managing non-performing loans (NPLs) is a challenge.

Rukun Ikhtiar Savings and Loan Cooperative (KSP RI), a prominent cooperative in Bandung, benefits from its strategic location, making it accessible to members, including micro and small business owners. However, the COVID-19 pandemic severely impacted its members' borrowing capacity. Many SMEs in Bandung faced declining sales, leading to difficulties in repaying loans. Kompas.com reported that widespread store closures in Pasar Baru Bandung resulted in mass layoffs, further affecting borrowers' financial stability.

During the pandemic, numerous members, particularly those engaged in small and medium-sized enterprises (SMEs) in Bandung, encountered a substantial decline in sales and encountered challenges in meeting their loan obligations to KSP RI. For instance, as reported by Kompas.com, "The numerous shop closures and bankruptcies in Pasar Baru Bandung also led to the termination and furloughing of thousands of shop employees." The pandemic resulted in a substantial drop in revenue for business owners, severely impairing their ability to fulfill loan repayment obligations.

This issue has been a significant contributing factor to the steadily increasing number of defaults experienced by KSP RI over the years. KSP RI categorizes loan performance into three classifications: loans overdue by approximately one month are considered 'doubtful,' loans overdue for four to six months are categorized as 'substandard,' and loans unpaid for more than seven months are classified as 'default.' Data from 2014 to 2023 reveals a significant rise in default loans.

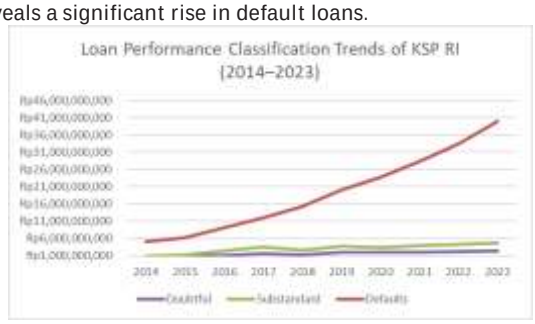

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Fig 1. Non-Performing Loan Chart 2014-2023

From Figure 1, there has been a significant increase in the number of defaults, substandard loans, and doubtful loans at KSP RI over the observed period. Between 2014 and 2023, the value of defaults rose sharply, from Rp 4.3 billion in 2014 to Rp 35.2 billion in 2023. This steep growth underscores the escalating challenges in managing non-performing loans at KSP RI. However, although the financial pressures stemming from the COVID-19 pandemic contributed to the sharp rise in defaulted loans starting in 2019, the data suggests that these issues had already been developing over the previous years. The consistent upward trajectory in defaults should have signaled the need for stronger credit risk management measures well before the pandemic exacerbated the situation.

Therefore, it is important for financial institutions to have good risk management to avoid financial losses. The study conducted by Ekinci & Poyraz (2019), concluded the significance of credit risk management rises as a result of the fact that credit risk influences performance. Financial performance refers to an organization's ability to achieve its financial goals by effectively managing resources, generating revenue, and controlling expenses. It is typically assessed through key indicators such as profitability, liquidity, efficiency, and solvency, which reflect how well a company utilizes its assets to sustain operations and drive growth (Ross, Westerfield, & Jaffe, 2021).

Agbana et al. (2023) emphasize that effective credit risk management requires proactive assessment, comprehensive evaluation, strict monitoring, and timely recovery measures. Strong regulatory frameworks, skilled personnel, and advanced technology further enhance these practices. This is reflected in loan policies, particularly the Five C's credit analysis—character, capacity, collateral, capital, and condition. Given that financial vulnerability is closely tied to risk management, the Five C's significantly influence organizational performance (Yhip & Alagheband, 2020). As a well-established and empirically validated framework, it mitigates adverse selection by ensuring lenders conduct thorough due diligence, aligning credit decisions with risk appetite to minimize non-performing loans (Oseni, 2023).

Izzalqurny et al. (2022) found that while the implementation of the Five C's remained consistent before and during the COVID-19 pandemic, post-pandemic credit assessments should become more rigorous, aiming to reduce errors in lending decisions and strengthen risk mitigation. Moreover, the establishment of clear regulatory frameworks, the presence of highly competent personnel, and the integration of advanced technological infrastructure are essential for enhancing credit risk management practices. This is reflected in the steps and policies in the loan sector, namely the process of granting loans carried out through Five C credit analysis.

The increasing unpaid loans at KSP RI highlight weaknesses in its credit risk management system, posing risks to financial stability and regulatory compliance. Addressing these deficiencies requires a structured evaluation of lending procedures and risk mitigation strategies.

While research on credit risk primarily focuses on banks and microfinance, limited studies explore its impact on savings and loan cooperatives. Given their distinct operational structures, understanding how credit risk influences KSPs' financial performance is essential. Therefore, this study aims to provide insights into effective loan monitoring and credit risk management to enhance financial sustainability in cooperatives.

Method

This study employs a mixed-methods approach, integrating quantitative financial analysis with qualitative borrower assessment using the Five Cs framework. According to Creswell & Creswell (2022), mixed-methods research combines numerical data with contextual insights, offering a more holistic understanding of complex issues. Quantitative analysis provides measurable financial impacts, while qualitative data explores borrower behavior and risk assessment practices. By applying this approach, the study aims to comprehensively examine the rising Non-Performing Loans (NPLs) at Rukun Ikhtiar Savings and Loan Cooperative and identify effective risk mitigation strategies.

This research requires both primary and secondary data. Secondary data was collected from KSP Rukun Ikhtiar's quarterly financial reports from 2014 to 2023, while primary data was obtained through semi-structured interviews with the treasurer, secretary, and staff. These interviews aimed to explore the cooperative's lending policies, procedures, and financial performance in response to rising bad debts.

To analyze financial performance, secondary data from financial statements was examined using multiple linear regression, assessing the relationship between Non-Performing Loans (NPLs), Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and Operating Expenses to Operating Income (BOPO) with Return on Assets (ROA). Financial ratios are widely used to evaluate an institution's financial stability and risk exposure. According to Yhip & Alagheband (2020), ratios alone may lack meaning, but when properly interpreted with an understanding of their limitations, they become valuable tools for predicting and explaining financial performance. The use of ratios is further explained below.

Non-Performing Loans (NPL) represent loans that have been overdue for at least 90 days, indicating credit risk and loan repayment challenges (Bhowmik, 2024). According to Supriyanto (2022), NPLs are categorized into substandard loans, doubtful loans, and defaults. A higher NPL ratio signals increased financial instability and ineffective loan recovery processes. The NPL ratio can be measured by the following formula (SEOJK.03/2020):

$$CAR = \frac{Equity\ Capital}{Risk\ Weighted\ Assets\ (RWA)}\ x\ 100\%$$

$$NPL = \frac{Non-Performing\ Loans}{Total\ Loans} x\ 100\%$$

Capital Adequacy Ratio (CAR) measures a financial institution's ability to absorb potential losses and maintain financial stability. In savings and loan cooperatives, CAR is calculated by comparing weighted capital with Risk-Weighted Assets (RWA) (Yusuf & Surjaatmadja, 2018). A high CAR suggests strong financial resilience but may also indicate underutilization of capital in revenue-generating activities (Subagyo, 2021). After each is calculated based on the risk weight, the following formula is used:

$$LDR = \frac{Total\ Loans}{Total\ Deposits} x\ 100\%$$

Loan to Deposit Ratio (LDR) evaluates the proportion of loans disbursed relative to total deposits and own capital. An optimal LDR ensures a balance between lending activity and liquidity management (Andrianto, Firmansyah, & Fatihuddin, 2019). However, an excessively high LDR may increase liquidity risks, reducing the institution's ability to meet short-term financial obligations (Puspitasari et al., 2021). To calculate the Loan to Deposit Ratio (LDR), the following formula is used:

$$NIM = \frac{Net\ Interest\ Income}{Total\ Earning\ Asset} x\ 100\%$$

Net Interest Margin (NIM) measures the efficiency of a financial institution in generating net interest income from its earning assets. A higher NIM reflects the cooperative's ability to optimize interest income on loans and manage deposit costs effectively. This ratio directly influences profitability and financial sustainability. This ratio can be calculated using the following formula:

$$BOPO = \frac{Operational\ Cost}{Operational\ Income} x\ 100\%$$

Operating Expenses to Operating Income (BOPO) assesses cost efficiency by comparing operating expenses to income. A high BOPO ratio indicates inefficiency in financial management, negatively impacting overall profitability (Zikri et al., 2023). Lower BOPO values suggest better cost control, contributing to improved financial performance.

Return on Assets (ROA) serves as the primary profitability indicator, reflecting how efficiently a cooperative utilizes its assets to generate income. In the context of savings and loan cooperatives, ROA is calculated by comparing surplus before tax to total assets (Supriyanto, 2022). A higher ROA suggests greater financial efficiency, improving the institution's sustainability. The Return on Asset Ratio is calculated as follows:

$$ROA = \frac{Net\ Profit}{Total\ Asset}\ x\ 100\%$$

Before performing multiple linear regression analysis, this study conducts classical assumption tests to ensure that the regression model meets the necessary statistical requirements. The classical assumption tests include normality, multicollinearity, heteroscedasticity and autocorrelation test. Once these assumptions are validated, the regression model is applied to analyze the impact of financial ratios on cooperative performance. The regression model assesses the relationship between NPL, CAR, LDR, NIM, BOPO, and the dependent variable ROA. The general equation for the regression model is:

$$ROA=\beta_0+\beta_1NPL+\beta_2CAR+\beta_3LDR+\beta_4NIM+\beta_5BOPO+\varepsilon$$

Where:
ROA = Return on Assets (dependent variable)
NPL = Non-Performing Loans
CAR = Capital Adequacy Ratio
LDR = Loan to Deposit Ratio
NIM = Net Interest Margin
BOPO= Operating Expenses to Operating Income
β_0 = Intercept
$\beta_1,\beta_2,\beta_3,\beta_4,\beta_5$ = Regression coefficients
ε = Error term

The regression analysis is performed using EViews9 software, setting the significance level at 5%. The analysis includes several hypothesis tests: the T-test, which evaluates the individual impact of each independent variable (NPL, CAR, LDR, NIM, BOPO) on ROA; the F-test, which assesses the collective influence of all independent variables on ROA; and the R-squared (R^2) analysis, which measures how much of the variance in ROA is explained by the independent variables.

The quantitative analysis of these financial ratios provides an objective evaluation of KSP Rukun Ikhtiar's financial health amid rising credit risk. Additionally, qualitative data from semi-structured interviews was analyzed using an interview-based approach to assess the cooperative's loan approval procedures within the Five Cs framework (Character, Capacity, Capital, Colleteral, Condition).

The Five Cs of Credit is a well-established and empirically validated methodology that establishes criteria for credit analysis, thereby mitigating the adverse selection problem. It ensures that lenders engage in comprehensive due diligence, aligning with their risk appetite to minimize non-performing loans (Oseni, 2023).

Integrating these methods allows for a comprehensive understanding of how credit risk affects cooperative performance, highlighting both financial trends and decision-making processes.

Results and Discussion

The data passes a number of classic assumption tests, that includes the following:

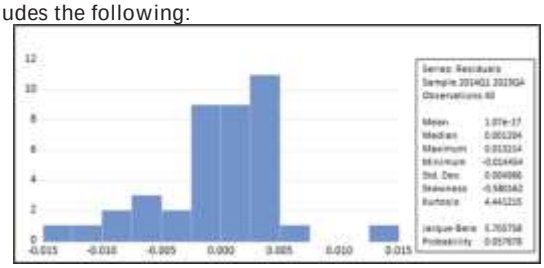

Fig 2. Normality Test Result

Normality test is conducted to ensure that the residuals in the regression model are normally distributed.

The Figure shows the Jarque-Bera test findings, which had a probability value of 0.057678. This probability above the 0.05 criterion, hence the null hypothesis, which states that the residuals are normally distributed, cannot be rejected. As a result, it may be concluded that the residuals of this regression model meet the normality assumption.

Second, multicollinearity test is used to determine whether or not there is a deviation from the classic assumption of multicollinearity, that is, the presence of a linear relationship between the independent variables in the regression model multicollinearity is employed.

Table 1. Multicollinearity Test Result

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.000735	1038.583000	NA
X1	0.000006	5.579044	2.36662
X2	0.000526	727.308900	1.420934
X3	0.000025	28.030580	6.024926
X4	0.002512	30.946710	6.084442
X5	0.000455	114.398400	2.074317

Source: E-views 12 Processing Result

From the table 1, the Variance Inflation Factor (VIF) on table above, all independent variables have a VIF value below 10, so it can be concluded that there is no significant multicollinearity problem in this regression model.

Third, heteroskedasticity test with the white test occurs when the variance of residuals is not constant.

Table 2. Heterosedasticity Tests

Test	Value	Probability Test	P-Value
F-statistic	2.134165	Prob. F (20,19)	0.0522
Obs*R-squared	27.679000	Prob. Chi-Square (20)	0.1172
Scaled explained SS	18.574970	Prob. Chi-Square (20)	0.5496

Source: E-views 12 Processing Result

Based on the White Test results for heteroscedasticity on table 2, the Obs*R-squared value is 28.00014 with a corresponding probability of 0.1094, which is greater than the significance threshold of 0.05. These results confirm that the regression model fulfills the assumption of homoscedasticity, ensuring the reliability of the estimates and making the model appropriate for further analysis and interpretation.

Last, autocorrelation in the residuals up to lag 2 based on the findings of the Breusch-Godfrey Serial Correlation LM Test.

Table 3. Autocorrelation Test Result

Test	Value	Probability Test	P-Value
F-statistic	0.231490	Prob. F (2,32)	0.7947
Obs*R-squared	0.570472	Prob. Chi-Square (2)	0.7518

Source: E-views 12 Processing Result

Based on table 3, the F-statistic value of 0.231490 has a probability of 0.7947, which is greater than 0.05. This indicates that there is no significant autocorrelation based on the F-statistic. Furthermore, the Obs*R-squared value of 0.570472 with a probability of 0.7518 is also greater than 0.05. Hence, this result indicates that the model does not have a significant autocorrelation problem up to lag 2.

After all the classic assumption tests are fulfilled, then the researchers process the data to determine a partial and simultaneous influence between the dependent and independent variables.

Table 4. T-Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.055014	0.027103	2.029845	0.0503
X1	-0.007258	0.002416	-3.004554	0.0050
X2	-0.020287	0.022937	-0.884463	0.3827
X3	0.010448	0.004990	2.815181	0.0081

X4	0.281549	0.050120	5.617479	0.0000
X5	-0.053072	0.021325	-2.488731	0.0179

Source: E-views 12 Processing Result

In conducting the regression analysis to examine the impact of various financial ratios on the Return on Assets (ROA), this study assesses each variable using T-test analysis. The impact of Non-Performing Loans (NPL, represented as X1) shows a statistically significant negative effect on ROA with a probability value of 0.0050. This result contradicts the findings of Kertyasih et al. (2023), who observed a positive effect of NPL on profitability within savings and loan cooperatives in Denpasar City. However the research conducted by Satiawati & Munandar (2020), Yuhasril (2019), Widyastuti & Aini (2021), in line with this research that non-performing loans have a negative and significant effect on ROA.

The significant p-value highlights that an increase in NPL is associated with a decrease in ROA, indicating that higher NPL levels lead to elevated credit risk and reduced interest income, thereby lowering overall profitability. Additionally, increased NPL levels necessitate the allocation of larger provisions for bad debts, further impacting financial performance.

Concerning the Capital Adequacy Ratio (CAR, represented as X2), the analysis reveals that CAR does not significantly influence ROA, as indicated by a probability value of 0.3827. This finding challenges previous studies such as those by Anggreni & Rahyuda (2021) and Monsuru Alani et al. (2022), which reported a positive impact of CAR on ROA. In this analysis, a high CAR suggests that excessive capital allocation might limit the cooperative's ability to maximize the use of its productive assets, thereby depressing net income from operational activities.

For the Loan to Deposit Ratio (LDR, represented as X3), the findings show a highly significant positive effect on ROA, with a probability value of 0.0081. This underscores that an efficient LDR enhances profitability by facilitating better management of lending activities without compromising liquidity. This aligns with the results of Sutami et al. (2019), Permana et al., (2022) and Dian Widyantini, (2023) which demonstrated a positive impact on ROA.

The analysis of Net Interest Margin (NIM, represented as X4) presents a significant positive impact on ROA, with a probability value of 0.0000. A higher NIM indicates the cooperative's efficiency in managing its earning assets, leading to an increase in interest income relative to the interest expenses. This is consistent with findings by Anggreni & Rahyuda (2021) in their study on Micro Finance Institutions in Kintamani Bali, which also highlighted the positive effect of NIM on ROA. In addition, Puspitasari et al., (2021) in said that the increase in NIM had an effect on the increase in ROA because the profit generated by the bank increased.

Lastly, the Operational Cost to Operating Income ratio (BOPO, represented as X5) shows a significant negative impact on ROA with a probability value of 0.0179. This demonstrates that high operational costs diminish profitability, underscoring the necessity for enhanced efficiency and better management of operating expenses. This finding resonates with the observations of Sutami et al. (2019) and Yoga Permana et al. (2022) in their respective studies on cooperatives in Badung Regency, where a high BOPO was linked to reduced profitability. These results collectively highlight the importance of effective credit risk management, stringent operational cost control, and optimized asset utilization to enhance the financial stability and performance of cooperatives.

Table 5. F-Test Result

R-squared	0.934700
Adjusted R-squared	0.925097
S.E. of regression	0.005319
F-statistic	97.33507
Prob(F-statistic)	0.000000

Source: E-views 12 Processing Result

The analysis yielded an F-statistic value of 97.33507 with a p-value of 0.0000, decisively lower than the standard significance threshold of 0.05. This confirms that the independent variables—NPL, CAR, LDR, NIM, and BOPO collectively have a statistically significant impact on ROA, leading to the rejection of the null hypothesis that posits no joint effect of these variables on ROA.

The R-squared value of 0.934700 in this study indicates that the combination of the independent variables NPL, CAR, LDR, NIM, and BOPO explains 93.47% of the variation in ROA. The remaining 6.53% of the variation in ROA is due to other factors not included in the model.

Subsequently, a qualitative analysis was conducted using questions related to the Five Cs analysis, yielding the following results, the Five Cs Credit Analysis at KSP Rukun Ikhtiar highlights key deficiencies in the cooperative's lending procedures, contributing to a high Non-Performing Loan (NPL) rate.

Character assessment relies on brief interviews and document verification, failing to evaluate deeper behavioral traits. Despite tracking repayment histories for existing borrowers and savings consistency for new applicants, the lack of rigorous screening has led to prolonged defaults and cases of fraud, such as falsified loan authorizations.

Capacity evaluation is limited to self-reported income and expenses without verification mechanisms, making it difficult to accurately assess borrowers' financial ability to repay loans. The reliance on unverified financial documents increases the risk of lending to borrowers with insufficient repayment capacity.

Capital is assessed based on borrower savings and business health, but KSP RI lacks standardized capital requirements, leading to inconsistencies in lending decisions. While flexibility allows for customized loan policies, it also raises concerns about imprecise credit risk evaluations.

Condition analysis considers external economic factors, including macroeconomic trends and natural disasters. KSP RI adapts to changing conditions by adjusting loan terms, but the absence of a dedicated risk monitoring team reduces its ability to proactively manage external financial risks.

Collateral serves as a secondary repayment source, with KSP RI accepting land, buildings, and vehicles. However, allowing multiple borrowers to use the same collateral increases credit risk. Additionally, the lack of a structured collateral management system hampers accurate valuation and asset recovery.

Overall, the findings indicate that KSP RI's credit risk management approach lacks comprehensive borrower evaluation, leading to increased NPLs. Strengthening credit assessments, improving verification processes, and enhancing risk monitoring are essential to mitigating financial instability in the cooperative.

Having discerned the health of KSP RI through comprehensive data analysis and in-depth interviews, it became evident that there are significant challenges that need to be addressed to enhance the stability and sustainability of its operations. The interviews highlighted deficiencies in the existing credit assessment system and suboptimal risk management practices. While, risk management is an integral component of sound management and decision-making at every level within an organization. It is closely associated with the decision-making process that contributes to the achievement of the organization's overall objectives (Sa'diyah & Sujud, 2024).

To address these challenges, a structured implementation plan is proposed, integrating risk management strategies with qualitative borrower assessment improvements. First, a dedicated Risk Management Unit should be established to systematically monitor loan performance, track NPL trends, and develop mitigation strategies based on financial data and borrower profiles. Second, the adoption of a standardized 5C's Credit Analysis framework—Character, Capacity, Capital, Collateral, and Conditions—will improve borrower evaluation, reducing reliance on subjective judgment and enhancing lending decisions.

Furthermore, targeted staff training programs should be implemented to address knowledge gaps in credit risk management, ensuring consistent application of risk assessment methodologies. Lastly, a comprehensive monitoring system integrating Key Performance Indicators (KPIs) should be developed to track the effectiveness of lending strategies. These indicators should include financial ratios, borrower repayment behavior, and operational efficiency metrics, allowing KSP Rukun Ikhtiar to continuously evaluate and improve its credit risk management framework.

By integrating quantitative financial analysis with qualitative borrower insights, this business solution provides a holistic approach to mitigating credit risk and improving financial sustainability within Savings and Loan Cooperatives. Previous studies have extensively examined the impact of financial ratios on profitability in financial institutions.

Limitation Of The Study

This study is limited to KSP RI as a case study, analyzing its financial data from 2014 to 2023. It focuses on financial ratios and qualitative insights from cooperative management and loan officers but does not extensively examine external macroeconomic factors such as inflation, interest rates, or regulatory changes. Additionally, while the study highlights weaknesses in credit risk management, it does not offer a direct implementation plan for policy improvements. Despite these limitations, the research provides valuable insights into KSP RI's financial health and offers strategic recommendations for enhancing loan assessment and credit risk management.

Conclusions and Recommendations

Based on the results of the quantitative and qualitative analysis, the conclusions in this chapter are formulated as follows.

The results of multiple linear regression analysis partially show that Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) and Operating Costs to Operating Income (BOPO) ratios have an influence on ROA, while Capital Adequacy Ratio (CAR) has no influence on ROA:

1. NPL has a significant negative effect on ROA, which means that an increase in bad debts reduces the profitability of KSP RI. The higher the NPL at KSP RI, the greater the cooperative's financial burden due to decreased interest income.
2. CAR has no significant effect on ROA, which indicates that the cooperative's capital adequacy has not been optimally utilized to increase profitability.
3. LDR has a significant positive effect on ROA, confirming that the higher the loan-to-deposit ratio, the greater the potential for cooperative profits, as long as liquidity risk remains under control.
4. NIM has a highly significant positive effect on ROA, indicating that the greater the net interest margin earned by KSP RI, the higher the level of profitability.
5. BOPO has a significant negative effect on ROA, indicating that the higher the operating costs compared to the income generated, the lower the profitability level of KSP RI.

For the F-Test show that simultaneously, Non-Performing Loans (NPL), Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and Operating Costs to Operating Income (BOPO) have a significant influence on Return on Assets (ROA). This shows that the profitability and financial performance of KSP RI is highly dependent on credit risk management, fund disbursement policies, and cooperative operational efficiency.

Qualitative analysis through the Five Cs Credit Analysis approach found that the credit evaluation procedure at KSP RI still has weaknesses in several key aspects, which contribute to the high rate of bad debts. The main findings of each of the Five Cs elements are as follows:

1. Character: The evaluation of borrowers' character is still limited to interviews without a score-based scoring system, making it difficult to gauge the level of responsibility and intention of borrowers in repaying loans.
2. Capacity: The ability to repay assessment process still relies on the borrower's application form without any mechanism to verify the borrower's ability to repay.
3. Capital: There is no minimum capital standard that borrowers must have before being granted credit, making it difficult for cooperatives to assess borrowers' financial readiness.
4. Collateral: Collateral policies are still flexible, allowing one asset to be used as collateral for more than one borrower, which can complicate the liquidation process in the event of default.
5. Conditions: KSP RI actively monitors external conditions, but the mechanism for monitoring external economic conditions results in flexibility that is not considered long-term, which can affect borrowers' ability to repay.

These findings suggest that weaknesses in the application of the Five Cs have contributed to the increase in Non-Performing Loans (NPLs). Therefore, improved credit evaluation procedures through stricter implementation of the Five Cs can help reduce the risk of non-performing loans and improve the quality of cooperative loans.

Recommendation for future research, they could focus on evaluating the long-term impact of these strategies on the financial health and NPL rates of cooperatives. A comparative analysis with other savings and loan cooperative institutions could also be conducted to uncover best practices and areas for further improvement. In addition, future research could analyze the integration of advanced technologies such as AI in cooperative credit management to improve predictive analysis and decision-making processes. Finally, assessing how changes in the loan process affect member satisfaction and retention will provide valuable insights for continuous improvement and enhanced member services.

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