



# ***CREDIT RISK MANAGEMENT PRACTICES AND ITS IMPACT ON RURAL BANK'S FINANCIAL PERFORMANCE***

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**Abstract :** Credit risk management in banks has become a critical concept that determines banks' survival, growth, and profitability, not only as a result of the industry's current financial crisis. The BSP requires that financial institutions under its supervision have credit risk management systems that are effective and appropriate for their credit risk-taking activities.

The goal of this research is to find out how credit risk management affects rural bank profitability in Central Luzon. From 2016 to 2020, the researcher examined the annual financial statements of eighteen rural banks (five years). The linear regression model was employed in the estimation process. The model used profitability indicators such as Return on Equity (ROE) and Return on Asset (ROA), as well as a credit risk management indicator known as Capital Adequacy Ratio (CAR).

Board of Directors, Internal Auditors/Compliance Officers, Managers, and Loan Officers were among those who responded to the survey. Out of the sixty-four member banks of the Confederation of Central Luzon Rural Bankers, eighteen (18) rural banks were chosen as a sample. Questionnaires for the survey were distributed via Google Forms, email, and Facebook Messenger.

This is a quantitative descriptive research that utilized the correlation approach to describe the impact of the credit risk management practices on the financial performance of the rural banks in Central Luzon.

The statistical tool that was used in this study was linear correlation. This statistical tool analyzed how Credit Risk Management practices correlates to the financial performance of rural banks in Central Luzon. The bank's financial performance was measured by the Return on Asset (ROA) and Return on Equity (ROE), wherein:  $ROA = \text{Annual Net Income} / \text{Total Assets}$ ;  $ROE = \text{Annual Net Income} / \text{Shareholders' Equity}$  and

the bank's Capital Adequacy Ratio (CAR). Secondary Data was acquired in the Bangko Sentral ng Pilipinas Data Center.

The study revealed that Credit Risk Management Practices have no significant impact on the rural bank's financial performance. Credit Risk Management Practices have insignificant impact on CAR, ROE and ROA. Previous research findings show that the relationship between CAR, ROA, and ROE is not significant.

The following recommendations are hereby offered out of the result of the aforesaid findings and conclusions: Banks should consider the indicators of non-performing loans/Gross loans portfolio. It is also recommended that Non-Performing Loans (NPLs) will be used as one of the credit risk indicators.

The study sought to find the impact of credit risk management practices on the financial performance of rural banks in Central Luzon and recommend that similar research should be done but with a specific focus on Non-Performing Loan/Total Loan Portfolio as one of the variables of Credit Risk Management.

Further, this study will help Rural banks improved its operation by minimizing the credit risk aspect. This will minimize the number of banks placed under the Prompt Corrective Action (PCA) through proper credit risk management that will reduce the Past Due ratio or its Non-Performing Loan. Early supervisory interventions prompt banks to address their weaknesses in a timely manner. The purpose is either to put banks back on a sound footing or to mitigate the consequences of a failure..

The researcher came up of developing a Credit Risk Management Assessment Plan that can be used by the Internal Auditors and Compliance Officers of the member rural banks of Central Luzon.

## **INTRODUCTION**

Different countries have issues with bank failure (Lall, 2014). A probability or threat of damage, injury, liability, loss, or any other negative occurrence caused by external or internal vulnerabilities that can be avoided through preemptive action is defined as risk (Bizuayehu, 2015). Credit risks are thought to have far-reaching implications in addition to affecting loan financial performance (Kibor, 2015). Likewise, credit risk reigns supreme over all others (Asfaw & Veni, 2015). One of the most important risks that banks face is credit risk. Non-performance by a borrower is what causes credit risk. It can be caused by either an inability or a refusal to perform according to the pre-contractual agreement (Bizuayehu, 2015). Credit risk will always be a concern for banks.

Banking involves dealing with risk. Banks are central players in the financial system between borrowers and depositors. The banks' primary role is to make money by providing credit. One of the greatest challenges in this industry is their credit risk. The overall financial health of a bank can be gauged by examining the credit quality of the institution, according to a study by Boahene, et al (2012). Poor credit quality or loan quality leads to bank failures, as poor credit quality or loan quality is the main source of income for a bank. The Basel Committee on Banking Supervision (2000) found that banks face serious challenges because of the lack of stricter lending standards for borrowers and their creditors, as well as inadequate loan portfolio risk management.

The Philippine Banking system is comprised of commercial banks, universal banks, thrift banks, rural banks, and cooperative banks. The small towns and rural areas of the Philippines are reliant on rural banking. Family-owned and operated rural banks are a common sight in rural areas and according to the PDIC as of April 2021, there were only 434 rural banks still in operation. The PDIC data was used to derive these numbers in this report. Moreover, to ensure that all of the financial institutions under the Bangko Sentral ng Pilipinas supervision maintain appropriate credit risk management practices and has mandated that the financial institutions should use comprehensive credit risk management systems that are appropriate to their credit risk-taking activities. Credit risk management should be at the heart of bank operations in order to maintain financial stability. The definition of credit risk management based on Investopedia refers to the system process and controls that a company has in place to ensure the efficient collection of customer payments and the risk of non-payment.

Financial statements are the result of a model of the firm created by management, accountants, and tax authorities. Various companies used different models, which means they handle similar events differently. This is possible because GAAP allows for some flexibility in how events are recorded. In practice, shortcut procedures are frequently used. Many analysts are fixated on accounting figures that may or may not accurately reflect true economic values. Complex relationships are frequently assessed using simple measures. For example, some analysts use the ratio to predict whether short-term creditors will be paid in full and on time (Oludhe, 2011).

Risk management is a systematic approach to identifying, analyzing, assessing, rating, monitoring, controlling, and communicating risks associated with any bank's activity, function, or process in order to avoid cheaters or minimize losses while increasing opportunities. It should address all risks associated with the organization's past, present, and especially future activities in a systematic manner (Stavroula, 2019). Credit risk is assessed by examining commercial bank financial performance in an attempt to mitigate the effects of credit defaults. Commercial banks' financial health is dependent on their ability to manage credit risk effectively. Commercial banks may be particularly interested in awareness of the importance of identifying, measuring, monitoring, and controlling credit risk, as well as ensuring that they have adequate capital to cover these risks. (Bhattarai, 2016).

Internal weaknesses in financial institutions, such as management inefficiency, can also cause credit risk in banks. A lack of management affects liquidity, resulting in an increase in nonperforming loans (Mwaurah, 2013). Furthermore, the ratio of total non-performing loans to total gross loans is represented by the non-performing loan (NPL) on a financial institution's balance sheet. A variety of internal and external factors have an impact on banks' credit risk performance.

As cited in (Naceur and Omran, 2011), internal factors are bank-specific determinants, whereas external factors are determinants related to the economy (Mwaurah, 2013). Despite the fact that deteriorating credit quality is the most common cause of poor financial performance, proper credit management is a precondition for any financial institution's stability and continued profitability (Gatuhu, 2013).

According to Olawale Luqman (2014), loans and advances, as well as non-performing loans, are important factors in determining a bank's asset quality. Ineffective credit risk management reduces bank profits, lowers asset quality, and raises credit risk.

According to BSP Circular 855, the bank should only fund projects that are economically desirable. The projects are expected to be found outside of the Bank, as well as through pilot projects and project study evaluations.

The primary goal of financial institutions, according to the Bank International Settlements report, is to collect deposits and extend loans to the public, businesses, and governments to fund spending in all three areas—consumer, investment, and capital expenditure. This keeps the economy going. Customers may fail to repay principal and/or interest on a loan facility due to unfavorable economic conditions and other factors, posing a credit risk to the lender. Banks use loan loss provision estimates as a credit risk management tool to reduce expected losses.

According to the Principles for the Management of Credit Risk, credit risk is still the leading cause of major banking problems. Other major causes include poor portfolio risk management, a lack of attention to changes in economic or other circumstances, and lax credit standards for borrowers and counterparties.

Furthermore, because the amount of loans on banks' balance sheets increases the risk of loan default due to deteriorating economic conditions, which makes borrowers unable to repay, banks must maintain a large amount of Loan Loss Provisionings to prepare for possible loan losses (Laeven & Majnoni, 2013).

According to GDS Link Inc. (2015), implementing a credit risk management strategy can benefit lenders while also providing borrowers with manageable loans, resulting in increased financial security. It is critical to understand the credit risk management process, best practices, and techniques before developing a risk assessment solution.

The BSP requires that financial institutions under its supervision have credit risk management systems that are effective and appropriate for their credit risk-taking activities.

Credit risk, according to Erika Spucháková, et al (2015), is the risk that a borrower or counterparty will default on a contract's terms. Credit risk management is all about maximizing a bank's risk-adjusted return. Banks must oversee the entire portfolio as well as individual credits or transactions in order to properly deal with credit risk throughout the portfolio and within individual credits or transactions. The interrelationship between credit risk and other risks should be a primary consideration for banks when making credit decisions. It is an important part of a comprehensive risk management strategy and crucial to the long-term success of a financial institution. Borrowers must show their ability to repay future loans.

It was referred to as a borrower's creditworthiness in a paper by (Richard E. et al 2018). It looks at the borrower's past and current debt behavior to see if they will be able to repay their debt in the future. Lenders will also take into account not only the personal information provided by a borrower, but also the amount of money requested and the length of the agreement. These factors, when considered together, paint a clear picture of the borrower, making it easier for lenders to assess the loan's risk level. Credit risk management has traditionally been done without taking other important factors into account.

Credit risk refers to the possibility of losing money if a borrower defaults on a loan or fails to meet contractual obligations. The main risk of lending is that the lender will not be able to collect the owed interest and principal. This situation will stifle cash flow

and raise collection costs. Excess cash flows could be used to provide credit risk protection. When credit risk rises, the lender can help mitigate the risk by increasing the coupon rate, which boosts cash flow.

While it is impossible to predict who will default in credit risk management, it is possible to reduce the severity of the impact of that decision. Interest payments to the borrower or issuer are compensation for a lender or investor taking on credit risk. According to the Risk Management Association, understanding the borrower is the first step in reducing the risk of default. To obtain a credit risk profile, a typical strategy is to perform a credit analysis by analyzing the "Five Cs of Credit." Borrowers are expected to perform well in the future based on their payment history and current financial situation.

While a permanent or temporary closure of the company is a risk, it is also possible that fraudulent actions by the human resources department or the resignation of an employee could put the company at risk. When it comes to protecting against corporate risk, having proper credit accreditation in place is a good start. Credit checks should always be conducted using the Credit Management Association of the Philippines (CMAP) and/or Negative File Information System (NFIS).

The borrower's background is one factor used in credit risk management. According to the Risk Management Association, non-financial risks should also be thoroughly examined. Lenders should examine their own financial capabilities in order to better understand the risk of lending. Lenders should compensate themselves for the risk while also ensuring that they have reliable systems in place to keep track of the loan.

Finally, continuous risk management is an important credit risk best practice. Examining risk based on a single or a few factors (such as credit history and income) ignores whether the lender can be trusted to honor the terms of a loan in the event of a default, as well as the current state of the economy, which may have an impact on the borrower's ability to pay.

In general, credit risk management has not developed a robust feedback mechanism when it comes to financial success, as a result of ineffective loan appraisal procedures in lending institutions, which may lead to the financing of bad projects and subsequent defaults. The ability and knowledge of loan officers, as well as their capacity to judge borrowers and the incentive packages available to them, all have an impact on repayment performance. Defaults are frequently caused by improper repayment schedules and a lack of flexibility. Similarly, when the repayment process is complicated, borrowers are more likely to delay payments.

In this study, the researcher can help in the creation of a new set of policies that were flexible enough to meet the needs of potential loan clients, resulting in a good administrative setup that could improve credit lending and administration. Rural banks could guide these practices. These would also be in accordance with the regulating body's policy; all banks develop their own credit policies and procedures, which help them provide different types of credit to their loan customers within each credit policy. Knowing the outlook of loan clients was crucial in reshaping each bank's credit policy and procedures.

## NEED OF THE STUDY.

This study's findings will have the following implications and significance:

1. The research will provide the foundation for the regulatory policy framework to mitigate the financial system's exposure to credit risk for regulators and policymakers.
2. For investors, this study will help them understand the factors that influence the returns on their investments.
3. For rural banks, this study will provide insight into the credit risk attributes that may need to be incorporated into their investment decision processes. The study will broaden not only the researchers' understanding of risk management, but also the public's exposure to the banking industry.

These findings will be used as reference material by future researchers interested in conducting additional research.

## RESEARCH METHODOLOGY

The descriptive correlational research design was utilized in this study to determine the impact of Credit Risk Management on financial performance. The data gathered in the study were obtained from two sources: Published Financial Statements of rural banks covering the year-end report from 2016 to 2020 which will be obtained on the BSP Data Center Data. The study will include rural banks in Central Luzon.

A quantitative method approach of research was followed to describe the impact of the Credit Risk Management on the Banks Financial Performance.

### 3.1 Population and Sample

There were at least two (2) respondents for each bank. The respondents of the study will be the Board of Directors, Internal Auditors/Compliance Officers, Managers, and the Loan Officers. A sample of eighteen (18) rural banks were selected out of sixty-four (64) member banks of the Confederation of Central Luzon Rural Bankers. Survey questionnaires were floated using the google form that were sent via email.

### 3.2 Data and Sources of Data

The researcher used of standardized research questionnaire crafted from the source Tad and Shibiru. (2020), Credit risk management and profitability: empirical evidence on Ethiopian commercial banks. This was distributed to participants via google form and email. Secondary data were obtained from the BSP Data Center Data. On the other hand, the credit risk management practices were obtained from each rural bank who participated in the study. The study included eighteen (18) rural banks out of sixty-four (64) member rural banks of the Confederation of Central Luzon Rural bankers. The time period for this study is five (5) months. There were three (3) respondents from each bank and was selected purposively. The identities of the respondents were hidden.



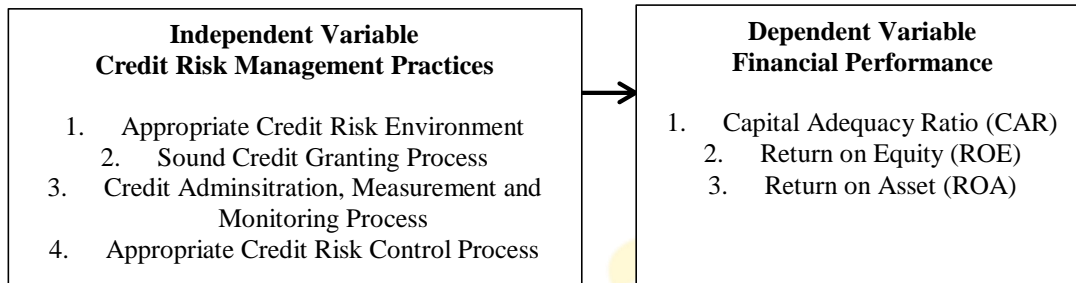
### 3.3 Theoretical/Conceptual Framework

The lesson of the 2017-2018 financial crisis has reminded regulators of the existence of moral hazard and forbearance in bank regulation (Feess & Hege, 2012, p.1043). Many banks failed during the crisis, while many others, including some of the world's largest, were only able to survive because of the substantive government "bailout" (Feess & Hege, 2012, p.1043).

Prior to the Basle Accord, large banks in major countries appeared to have insufficient capital in relation to the risks they were taking, particularly given the aggressive competition for market share in the international market (Federal Reserve Release, 2002). According to the Basel Regulations, the evolution has demonstrated the importance of credit risk management in the operations of banks.

The Basle Accord was founded on a credit risk measurement in most banks that specialize in commercial lending and related activities. As a result, one of the most important aspects that banks must consider is capital to absorb risks.

Capital ratios are introduced to demonstrate the strength of risk management in order to harmonize the different levels of capital approaches among countries. As a result of the inspiration provided by the critical role of capital ratio, they have begun to use indicators to assess the strength of financial institutions.



### 3.4 Statistical tools and econometric models

The statistical tool that will be used in this study is Linear Correlation. This statistical tool analyzed how Credit Risk Management practices correlate to the financial performance of rural banks in Central Luzon. The bank's financial performance will be measured by the Return on Asset (ROA) and Return on Equity (ROE), wherein:  $ROA = \text{Annual Net Income} / \text{Total Assets}$ ;  $ROE = \text{Annual Net Income} / \text{Shareholders' Equity}$  and the bank's Capital Adequacy Ratio (CAR). Secondary Data was acquired in the Bangko Sentral ng Pilipinas Data Center.

## IV. RESULTS AND DISCUSSION

The descriptive correlational research design was utilized in this study to determine the impact of Credit Risk Management on financial performance. There were at least two (2) respondents for each bank. The respondents of the study will be the Board of Directors, Internal Auditors/Compliance Officers, Managers, and the Loan Officers. A sample of eighteen (18) rural banks were selected out of sixty-four (64) member banks of the Confederation of Central Luzon Rural Bankers.

The following null hypothesis was subjected to testing at a .05 level of significance and was accepted/rejected. Credit Risk Management practices do not significantly impact financial performance.

The research aims to investigate the overall impact of credit risk indicators on banks' financial performance in Central Luzon by identifying credit risk indicators and financial performance ratios over the time period (2016-2020), thus, investigating the overall and sub-total impact of credit risk indicators on banks' financial performance by using certain partial credit risk indicators.

The researcher was able to answer the following questions: How does the Credit Risk Management Practices impact the financial performance in Selected Rural Bank in Central Luzon?

1. What is the demographic profile of the respondents in terms of:
  - 1.1 Position; and
  - 1.2 No. Of years in experience?
2. How may the credit risk management practices be described in terms of:
  - 2.1 Appropriate Credit Risk Environment;
  - 2.2 Sound Credit granting process;
  - 2.3 Credit administration, Measurement, and monitoring process; and
  - 2.4 Appropriate credit control process?
3. To what extent does Credit Risk Management practices impact the financial performance using the following indicator:
  - 3.1 Capital Adequacy Ratio (CAR);
  - 3.2 Return on Equity (ROE); and
  - 3.3 Return on Asset (ROA)?

4. Is Credit Risk Management Practices has a significant impact on the Financial Performance of Rural Banks?

In light of the findings of the study, the following conclusions were drawn: Most of the respondents of Bank Personnel were Loan/Credit Officer and Internal Auditor/Compliance Officer and have 10 to 15 years of experience.

Financial Profile. One rural bank got the highest average total assets amounting to 5.2 billion pesos and on the contrary, another rural bank has only 303 million pesos of its total assets. The average asset size of rural banks in Pampanga is at a 1.4 billion level. It can be considered that rural banks in Central Luzon are substantially backed up by capital to support their operations. The highest average net income that has been posted by a rural bank in Central Luzon is 652 million and the lowest is eight hundred thousand pesos (Php 893,000). There is a wide gap between the highest earners and the low earners among rural banks in Pampanga. Although the income is just proportionate to their assets. The average rural bank in Pampanga would earn around 45 million pesos a year. The highest stockholders' equity also belongs to the top grosser rural bank in terms of income. That rural bank has a stockholders' equity of 1.1 billion pesos. Considerably, these two financial metrics goes hand in hand. The lowest stockholders' equity is at 44

million has also the lowest net income. The average stockholders' equity among rural banks in Central Luzon is a 45.6 million pesos.

### 1. Demographic profile of respondents

The respondents were selected according to the credit risk management structure under the BSP Circular 855 Section 178.3, credit risk management structure, the board of directors shall oversight the implementation of the effectiveness of credit risk management practices. Senior-Management shall ensure that credit risk-taking activities are aligned with the implementation of the credit risk management. Loan/Credit Officer is a front office function as categorized in the BSP circular shall perform credit originating and provide support in the overall credit administration.

Distribution of Bank Personnel's Position, out of 54 respondents, Loan/Credit Officer, and Internal Auditor/Compliance Officer has the highest frequency of 18, with a percentage of 33%, followed by Manager having a frequency of 16 with a percentage of 30%. The least frequency is the Board of Directors having a frequency of 2, with a percentage of 4%. This implies that most of the Bank Personnel are Loan/Credit Officer and Internal Auditor/Compliance Officer.

Out of 54 respondents, in terms of the Distribution of Bank Personnel's Year of Experience, the 10 to 15 years of experience has the highest frequency of 23, with a percentage of 43%, followed by 5 to 10 years of experience having a frequency of 21, with a percentage of 39%. The least frequency is 1 year to 5 years having a frequency of 10, with a percentage of 18%. This implies that most of the Bank Personnel have 10 to 15 years of experience.

### 2. Credit Risk Management Practices

The findings revealed that credit risk management practices does have an insignificant effect on both ROE and ROA.

Based on the study of Ayertey Odonkor, Alexander, (2018), the results of their study showed that, rural banks that have implemented rigorous Credit Risk Management Practices were exposed to few challenges in managing credit risk as compared to rural banks with poorly implemented credit risk management policies. This study was also supported by Odonkor, (2018). In his study showed that, rural banks that have implemented stringent Credit Risk Management Practices were faced to few challenges in managing credit risk as compared to rural banks with poor credit risk management policies.

In the study of Olobo, (2021), the study revealed that Credit Risk Management Practices has a positive correlation between bank performances. Based on the researches of (Guna, R., & Chhetri. 2021), (Tangngisalu et.al, 2020), and (Li, Zu 2014) Non-Performing Loans has a significant effect on the both ROE and ROA while CAR has an insignificant effect

**2.1 Establishing an appropriate credit risk environment.** The Appropriate Credit Risk Environment has a Composite Mean of 3.52, interpreted as "Always". This implies that the respondents answered "Always" feedback or practices were consistently observed on Appropriate Credit Risk Environment.

The result reveals that there is no significant impact between the appropriate credit risk environment and the financial performance. This was supported by the study of (Mendoza and Rivera 2017) that the Credit Risk Management Environment has a negative relationship with the banks financial performance. Also in the research of (Olobo,et.al 2021) revealed that the Credit Risk management Environment has a negative impact on the banks financial performance.

According to the website of Central Bank van Aruba, in order to create an appropriate credit risk environment, the institution must have a clear credit risk strategy and adequate credit risk policies in place. The strategy and policies should reflect the institution's risk tolerance and the level of profitability that it expects to achieve by taking various credit risks.

**2.2 Sound Credit granting process.** The Sound Credit granting process have a Composite Mean of 3.75, interpreted as "Always". This implies that the respondents have "Always" feedback or practices were consistently implemented on Sound Credit granting process. The result reveals that there is no significant impact between Sound Credit Granting Process and financial performance.

This was in compliance with the BSP Circular 855 which states that a sound credit granting process entails careful examination by the supervised entity of each credit applicant's ability to meet his obligations. To analyze the financial status and credit worthiness, sufficient information must be obtained about the borrower.

**2.3 Credit Administration, Measurement, and Monitoring process.** The Credit administration has a Composite Mean of 3.59, interpreted as "Always". This implies that the respondents have "Always" feedback or practices were regularly implemented on Credit administration. On measurement and monitoring process the respondents have an "Often" feedback or practices are frequently observed. The result reveals that there is no significant impact between Credit Administration, Measurement, and Monitoring Process, and financial performance.

**2.4 Appropriate Credit Control Process.** The Appropriate credit control process have a Composite Mean of 3.84, interpreted as "Always". This implies that the respondents have "Always" provide feedback or consistently implemented on appropriate credit control process. The result reveals that there is no significant impact between Credit Control Process and financial performance.

**3. Significant impact Between Credit Risk Management Practices and Financial Performance.** Based on the foregoing result of the study, it depicts that Credit risk management practices have "Always" or consistently been observed by the rural banks.

**3.1** Credit Risk Management Practices does not have a significant impact on the banks' Capital Adequacy Ratio (CAR).

**3.2** Credit Risk Management Practices does not have a significant impact on the banks' Return on Assets (ROA).

**3.3** Credit Risk Management Practices does not have a significant impact on the banks' Return on Equity (ROE).

**4. Is Credit Risk Management Practices has a significant impact on the Financial Performance of Rural Banks.**

The findings revealed that Credit Risk Management practices has no significant impact financial performance of Rural Banks. Thus, this study accepts the hypothesis and reject the null hypothesis.

## Conclusions

Rural Banks in has a clear written credit risk management policy in place with the board of directors having oversight responsibility for its execution. Credit risk management should be at the center of banks operations in order to maintain financial stability. Credit risk management includes the system process and control which a company has in place to ensure the efficient collection of customer payment and the risk of non-payment. To achieve the goal of the bank's wealth maximization, banks should manage their assets, liabilities and capital efficiently. In doing this, credit policy should set out the bank's lending philosophy, specific procedures and means monitoring the lending activity.

The study revealed that Credit Risk Management Practices have no significant impact with the rural bank's financial performance. This was supported by the study of Mendoza & Rivera (2017) that credit risk management practices has a negative impact with profitability. But this result was contrary to Aruwa and Musa (2012) who found that the rate of capital to total weighted risk assets has a positive impact while interest rate risk negatively affects the banks' financial performance. Moreover, Kurawa and Garba (2014) shows in their findings that credit risk management as measured by capital adequacy variable has a significant positive impact on the financial performance, and also is in consistence with results of Ogboi and Unuafé (2013) which revealed that impactive credit risk management has a positive impact on bank's financial performance.

According to Lukman (2014), there is a significant relationship between bank performance (profitability) and credit risk management (in terms of loan performance). Loans and advances, as well as non-performing loans, are important factors in determining a bank's asset quality. Some of the recommendations made in this study are that management should be cautious in establishing a credit policy that will not have a negative impact on profitability, and that they should also understand how credit policy affects the operation of their banks in order to ensure judicious utilization of deposits and profit maximization. Improper credit risk management reduces bank profitability, lowers asset quality, and increases loan losses and non-performing loans, all of which can lead to financial distress.

Credit Risk Management Practices does not have a significant impact on CAR, ROE, and ROA. Previous research findings show that the relationship between CAR, ROA, and ROE is not significant. This is in accordance with the research of Li and Zu (2014) and Tangngisalu, et al (2020). They also state that the higher the Non-performing Loan is, the less the available capital for banks to invest.

The empirical findings of the study of Alshatti (2015), shows that there is a positive impact of the credit risk indicators of non-performing loans/Gross loans ratio on financial performance, and a negative impact of Provision for Facilities loss/Net facilities ratio on financial performance. While, there is no impact of the Capital adequacy ratio and the credit interest/Credit facilities ratio on banks' financial performance when measured by ROA.

This is in agreement with Li and Zou (2014) who found that Non-performing loans/Gross loans have positive impacts on the financial performance of firms, as measured by ROA and ROE, and with Abdelrahim (2013) and Li and Zou (2014) who concluded in their separated studies that the capital adequacy ratio has no impact on credit risk management, and with Boahene, Dasah and Agyei (2012) who found that some of the credit risk indicators have a positive impact on banks' financial performance. Several studies have shown that credit risk has a negative impact on profitability. When Staikouras and Wood (2004) studied the determinants of profitability of 685 banks in thirteen (13) European economies using Ordinary Least Squares (OLS) and a fixed-impact model of regression, they discovered that credit risk has a significant negative impact on the ROA. Similarly, Ali, et al (2011) discovered that credit risk has a negative impact on ROA when they investigated 22 commercial banks in Pakistan. This finding is consistent with Kargi's (2014) study, which concluded that credit risk has a significant negative impact on ROA based on a study of six (6) Nigerian banks. Similarly, in a study of 17 banks in Macedonia, Iloska (2014), it was identified that loan loss provision as a driver of profitability had a negative relationship with ROA. Furthermore, Erina and Lace (2013) and Abbas et al. (2014).

## Recommendations

The following recommendations are hereby offered out of the result of the aforesaid findings and conclusions.

Based on the findings, the researcher recommends that banks should improve their credit risk management practices in order to increase profits. Banks should also establish adequate credit risk management policies by imposing strict credit estimation before granting loans to customers, and banks should design an impactive credit risk management system. Credit Risk management as a structural requirement needs to be enhanced while balancing the business requirements with controls. Rural bank should work in partnership with credit reference bureaus in the Philippines. This will enable the rural bank to effectively access adequate information on loan applicants and identify credit worthy loan applicants there by mitigating credit risk exposures. The rural bank should consider creating a loan recovery department that will be solely responsible for recovering overdue loans. The rural bank should ensure that credit officers monitor customers regularly to ensure that credits accessed by borrowers are used for the intended purpose.

Return on Asset (ROA) and Return on Equity (ROE) were used as proxies for financial performance indicators. It is recommended that Non-Performing Loans (NPLs) will be used as one of the credit risk indicators. The estimation results showed that there is a negative impact between credit risk and ROA as well as between credit risk and ROE. The result shows that there is a relationship between credit risk management and profitability of Rural Banks in Central Luzon. Accordingly, banks should concentrate more on credit risk management, especially on the control and monitoring of non-performing loans. In addition, managers should focus more on modern credit risk management techniques.

The study sought to assess the impact of credit risk management practices on the financial performance of rural banks in Central Luzon and recommend that similar research should be done but with a specific focus on Non-Performing Loan/Total Loan Portfolio as one of the variables of Credit Risk Management.

Further, this study will help Rural banks improved its operation by minimizing the credit risk aspect. This will minimize the number of banks placed under the Prompt Corrective Action (PCA) through proper credit risk management that will reduce the Past Due ratio or its Non-Performing Loan. Early supervisory interventions prompt banks to address their weaknesses in a timely manner. The purpose is either to put banks back on a sound footing or to mitigate the consequences of a failure..

Moreover, the researcher encourages rural banks Board of Directors to increase their profitability through improved CRM. Before lending to consumers and banks, the rural banking sector must develop appropriate CRM strategies and policies based on a



thorough credit appraisal; an appropriate CRM mechanism must be developed, and the credit awards system must be thoroughly reviewed, properly informed, and used to repay loans. Rural banks would develop and implement strategies to improve their performance and competitiveness while limiting their exposure to lending risk. The researcher came up of developing a Credit Risk Management Assessment Plan that can be used by the Internal Auditors and Compliance Officers of the member rural banks of Central Luzon.

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