Journal of Finance and Accounting

Effect of Loan Portfolio Management on Financial Performance of Banking Institutions in Rwanda Case Study of Compagnie Générale de Banque (COGEBANQUE)

Athanase Komezusenge

ISSN: 2616-4965

Stratford Peer Reviewed Journals and Book Publishing
Journal of Finance and Accounting
Volume 8||Issue 4||Page 61-76 ||April||2024|
Email: info@stratfordjournals.org ISSN: 2616-4965

Effect of Loan Portfolio Management on Financial Performance of Banking Institutions in Rwanda Case Study of Compagnie Générale de Banque (COGEBANQUE)

Athanase Komezusenge
[1]Master of Business Administration in Accounting and Finance, University of Kigali, Rwanda

***How to cite this article*: Komezusenge A. (2024). Effect of Loan Portfolio Management on Financial Performance of Banking Institutions in Rwanda Case Study of Compagnie Générale de Banque (COGEBANQUE). *Journal of Finance and Accounting. Vol* 8(4) pp. 61-76 https://doi.org/10.53819/81018102t2380**

Abstract

This study was carried out in COGEBANQUE, to examine the effect of loan portfolio management on financial performance of banking institutions in Rwanda, through identifying the effect of credit risk management, assessing the effect of loan appraisal, analysing the effect of loan monitoring on financial performance in COGEBANQUE, and determining the effect of loan recovery on financial performance, from 2020 up to 2023. Portfolio theory, loan pricing theory, Camel theory and agency theory were developed. This analytical descriptive study was conducted on 74 staff namely manager, credit officer and credit recovery officer of COGEBANQUE from all branches, who were purposively selected, to respectively answer to questionnaire for a descriptive, regression and correlation analysis, with the help of SPSS computer packages. The study revealed that loan recovery ($\beta4 = 0.692$), loan appraisal ($\beta4 = 0.653$), risk credit management ($\beta4 = 0.424$) and loan monitoring ($\beta4 = 0.692$), with all $p<0.05$, had a significant positive affect on financial performing of COGEBANQUE, what was concretized by the fact that the return on asset was 4% in 2020 and 5% in 2021, then 3% in 2022 and the return on equity was 12% in 2020 and 14% in 2021, then 10% in 2022. Results for first objectives positive perceptions collectively suggest that respondents believe COGEBANQUE employs sound credit risk management strategies, fostering confidence in the financial performance of the institution. Secondly, overall positive outlook on COGEBANQUE's loan appraisal process, with respondents recognizing its thoroughness, clarity, transparency, and effective communication, though opinions vary regarding its direct impact on the bank's financial performance. Thirdly, an overall positive outlook on COGEBANQUE's loan monitoring practices, with participants acknowledging the bank's reactiveness, effective communication, and support in loan management, though opinions vary slightly regarding the direct impact on financial performance. Lastly, overall positive outlook on COGEBANQUE's loan recovery practices, with participants acknowledging the bank's effectiveness, transparency, and ethical considerations in loan recovery, though opinions vary slightly regarding the direct impact on financial performance. The study concluded that loan portfolio management had effect on financial performance of banking institutions in Rwanda. It was recommended for banking institutions, in Rwanda, to enhance Transparency and Communication in Credit Risk Management, Strengthen Thoroughness and Clarity in Loan Appraisal, Optimize Proactive Loan, Monitoring Strategies, Improve Ethical Considerations in Loan Recovery and Implement Swift Actions for Issue Resolution.

Key words: *Credit risk management, Loan appraisal, Loan monitoring, Loan recovery and Financial performance.*

1. Introduction

The study "Effect of Loan Portfolio Management on Financial Performance of Banking Institutions" has its origins in many parts of the world and dates back to the early 2000s when notable advancements in the financial industry occurred. Following the global financial crisis of 2008, banks all around the globe had previously unheard-of difficulties in overseeing their loan portfolios, which led to a reassessment of risk-reduction and financial performance-boosting tactics. The crisis made clear how important efficient loan portfolio management is to the longterm viability and stability of financial institutions (Owizy, 2021).

Since then, technological improvements, changing regulatory environments, and volatile economic situations have all had an ongoing impact on loan portfolio management methods for financial institutions worldwide. The complex relationship that exists between risk management, lending choices, and financial success has drawn the attention of both academics and business professionals. It is now critical for financial institutions to comprehend the complex link between loan portfolio management techniques and financial performance as they work to adjust to shifting market circumstances. (Addai, 2019)

Much attention is given to the lending activity, especially in periods of a stable economic environment because a substantial amount of banks income is earned on loans which contribute significantly to the financial performance of banks. According to the World Bank Survey in 2019 by PricewaterhouseCoopers, interest income from loans increased by 32% from $102,993m in 2017 to $255,623m in 2018.Thus, the figures point to the fact that loans contribute immensely to the financial performance of banks in the world. (Margrabe, 2008)

The economic growth of a country, region, continent, and globally in general is vitally influenced by the commercial banks trading, which are the most important financial savings and lending, mobilization and financial resource allocation institutions in an economy. In the modern economy, commercial banks have a myriad of functions (Zeller, 2001). Firstly, they provide a safe deposit for money and other valuables. Secondly, they lend money to borrowers partly because they charge interest on the loans, which is a source of income for them, and partly because they usually lend to commercial enterprises and help in bringing about development. Thirdly, they provide safe and non-inflationary means for debt settlements using cheques, in that no cash is actually handled. This is particularly important where large amounts of money are involved. Fourthly, they act as agents of the central banks in dealings involving foreign exchange on behalf of the central bank and issue travelers' cheques on instructions from the central bank. Finally, they offer management advisory services especially to enterprises, which borrow from them to ensure that their loans are properly utilized. (Hermes, 2017).

The dissertation about how to manage loan portfolios, especially in microfinance organizations, has also spread across Africa. Banking institutions have been associated with effective implementation of programs; interest rates, loan sizes, monitoring, appraisal, and client selection were major factors that could lead to loan default. It was revealed that growth of loans and advances in the loan portfolio management slowed down between end of 2016 and end of 2017. Compared to the 41% increase in industry loans and advances to GHS12,817 million at end of 2016, there was only 31% growth in industry loans to GHS16,847 million, in Ghana, (Addai, 2019).

In Sub-Saharan, Banking institutions have far-reaching economic benefits, but for countries to obtain long-term benefits, the financial system ought to be inclusive and all inventions that make formal financial loan services accessible and available at affordable cost to all segments of the population have to be inclusive. If the marginalized and the vulnerable have access to financial products such as savings facilities, loans, insurance services, credit and financial education, this will enhance financial performance and the capital mobilization efforts of banks, especially based on its loan portfolio management, (Demirgüç-Kunt, 2012)

Effect of Loan Portfolio Management on Financial Performance of Commercial Banks in Rwanda, as one of the developing countries located in the East Africa. Since 1991, the existing literature revealed that there was a positive and significant effect on loan risk management and financial performance of commercial banks in Rwanda ($\beta = 0.204, p<0.05$). This implies that a unit change in loan risk management enhances financial performance by 0.204 units. Therefore, the government of Rwanda is currently pursuing an ambitious program of loan portfolio managem,ent in banking institutions and its sustainable financial performance. This ambitious plan is articulated in the government's development in the roadmap vision 2050, which was developed wide-ranging consultations after all constituencies, (MINECOFIN, 2019).

In Rwandan organizations portfolio theory provides a context to help understand the interaction of systematic risk remand. It has helped to shape how institutional portfolio are managed and fostered the use of passive investment management techniques. It led to the use of portfolio management in numerous other areas, especially in project management as more and more organizations move toward adopting a management by projects approach. Rwandan banking sector is also exposed to Different types of Risks mentioned above, through the National Bank of Rwanda (BNR) the government has set some tools and strategies to make sure that Loan Exposure Risks are mitigated. According to National Bank of Rwanda (2020), most of Rwandan financial institutions had a cut dawn in the process of loan Granting in the last quarter of the year 2018 up to first quarter 2019 and this drastic dawn word trend is suspected to be associated with Inability to apply right credit risk Management techniques. The aim of this research study is to analyze the relationship between proper loan portfolio management of COGEBQNQUE and its financial performance. COGEBANQUE being one of commercial banks in Rwanda is also exposed to the same risks, thus served as a case study, (MINECOFIN, 2019).

In Rwanda, people being committed in business systems and at the same time catalysts to Rwanda's economic development, the banking institutions with the collaboration of clients in the district found it important to establish a scheme that would facilitate these institutions' financial performance and motivate clients during managing loan services to fulfill what the Government expects of them. Offering loans at competitive interest rate and good portfolio management are the core activities of banking institutions. Throughout this study, taking into account COGEBANQUE, the impact of loans portfolio management on the financial performance of Banking institutions had to be examined.

1.1 Problem statement

The purpose of this study is to examine the effect of loan portfolio management on the financial performance of banking institutions in Rwanda. Specifically, the study aims to analyze the relationship between loan portfolio management practices (such as credit risk assessment, loan monitoring) and financial performance of banking institutions in Rwanda. Through this analysis, the study intends to provide insights into the effectiveness of loan portfolio management as a strategy for improving the financial performance of banking institutions in Rwanda, and to identify potential areas for improvement in loan portfolio management practices within the banking industry. (Emmanuel, 2017). However, the way credit risk is managed greatly determines the performance of such a bank. Many banks that failed to manage their credit risk through loan portfolio management very well have performed poorly while those ones that managed them properly have had good profits.

Loan Performance of banks has attracted many researchers' minds. This is because some banks have gone under while others are facing serious default or low loan uptake (Owizy, 2021). Studies carried out by Rukwaro, (2011), Kitaka, (2016), Korir (2011), Mokogi, (2003) Kisala, (2014) and Kibor et al, (2015) have shown a high diminishing rates among the MFIs however, loan portfolio management practices for commercial banks in Rwanda are not known because from literature this type of information has not yet been documented in Rwanda. Studies have been done in other countries and some studies in commercial banks in Rwanda and Sacco's but none of the studies has been done in commercial banks in Rwanda given their unique nature of providing services to the unbanked population and eradicating poverty. This paper opens a platform for a study to be carried out to fill the gap in knowledge through studying the impact of loan portfolio management on financial performance in commercial banks in Rwanda.

Though there are notable efforts to examine the link between banks' loan portfolio management policy guidelines and financial performance, no conclusive evidence has been provided to examine how loan portfolio management policy guidelines affect financial performance for banking institutions in Rwanda. On the other hand, loans should be the heartbeat of all financial institutions, to form the largest source of operating income. Despite of its strong contribution to the financial performance of banking institutions, commercial banks are still exposed to shocks that have the potential ruining all the positivity in its financial performing in Rwanda, (Emmanuel, 2017). This is the issues for which this research study had to examine the effect of loan portfolio management on financial performance of banking institutions in Rwanda, particularly with COGEBANQUE.

1.2 Research objectives

The general objective of this study was to examine the effect of loan portfolio management on financial performance of banking institutions in Rwanda. Specifically, the study aimed to:

- To identify the effect of credit risk management on financial performance in COGEBANQUE.
- To assess the effect of loan appraisal on financial performance in COGEBANQUE.
- To analyse the effect of loan monitoring on financial performance in COGEBANQUE.
- To determine the effect of loan recovery on financial performance in COGEBANQUE.

2. Literature Review

Credit risk management

Rötheli, Tobias F., (2017), studied the Impact of Credit Risk Management on Financial Performance: Evidence from European Banks. The study found a positive relationship between credit risk management practices and financial performance in European banks. Effective credit risk management, including credit risk assessment, loan monitoring, and loan recovery, was associated with improved profitability and reduced loan losses.

Boujelbene, Younes, (2014) examined the relationship between credit risk management practices and financial performance of commercial banks in Lebanon. It revealed that sound credit risk management, including proper loan appraisal, monitoring, and recovery, significantly contributed to better financial performance, including higher profitability and lower default rates.

Researcher: Kharchenko, Nataliya, (2015) explored the relationship between credit risk management practices and financial performance of banks in Ukraine. It found that banks with robust credit risk management systems, including comprehensive credit assessment, monitoring, and recovery mechanisms, demonstrated better financial performance in terms of profitability, asset quality, and liquidity.

Loan appraisal

Nkusu, Mwanza, (2016) examined the relationship between Loan Appraisal and Performance of SMEs in Zambia. The study used a mixed-method approach, combining both quantitative analysis and interviews with SME owners. It analyzed loan appraisal practices and financial performance indicators of SMEs in Zambia. The study found a positive relationship between effective loan appraisal practices and the financial performance of SMEs. Improved loan appraisal techniques, such as thorough credit analysis, risk assessment, and collateral evaluation, were associated with lower default rates and improved profitability. It recommended that financial institutions should enhance their loan appraisal procedures by incorporating comprehensive credit analysis techniques, evaluating both financial and non-financial factors, and providing appropriate training to loan officers

Islam, Rafikul and Ahmed, Mohiuddin (2019) examined the relationship between loan appraisal practices, default risk, and financial performance: Evidence from Bangladesh. The study employed a quantitative approach and analyzed data from a sample of banks in Bangladesh. It revealed that effective loan appraisal, including thorough credit evaluation, risk assessment, and cash flow analysis, significantly reduced default risk and contributed to better financial performance of banks. It also highlighted the importance of incorporating qualitative factors, such as industry analysis and borrower integrity, in the loan appraisal process. The study recommended that banks should strengthen their loan appraisal mechanisms by adopting advanced credit evaluation techniques, considering both quantitative and qualitative factors, and providing regular training to loan officers.

Loan monitoring

Akhtar, Shumi, et al. (2020) investigated the relationship between loan monitoring, credit access, and financial performance. The study used a mixed-method approach, combining qualitative interviews and survey data from SMEs in Bangladesh. The study revealed that effective loan monitoring, facilitated by local institutions such as trade associations and microfinance institutions, positively influenced credit access and financial performance of SMEs. Close monitoring, including regular site visits, borrower counseling, and support, improved repayment behavior and enhanced financial performance and it recommended that financial institutions should collaborate with local institutions to strengthen loan monitoring mechanisms for SMEs. It emphasized the importance of building trust and providing ongoing support to borrowers through effective monitoring practices.

Arellano, Manuel and Debrun, Xavier (2005) examined loan monitoring practices and financial performance indicators in various countries. The study utilized panel data analysis and found that robust loan monitoring practices, including timely recognition of loan losses and adequate provision for loan loss reserves, were associated with better financial performance of banks. Effective monitoring reduced the likelihood of unexpected loan losses and improved profitability. The study recommended that banks should implement prudent loan monitoring practices, including regular loan portfolio reviews, accurate estimation of loan loss provisions, and timely recognition of potential credit risks.

Loan recovery

Bose, Indranil, et al. (2015) examined the relationship between loan recovery practices, nonperforming loans (NPLs), and financial performance. The study employed a quantitative approach and analyzed data from a sample of banks in India. It found a significant negative relationship between NPLs and financial performance of banks. Effective loan recovery practices, including proactive debt restructuring, loan rescheduling, and collateral enforcement, were associated with reduced NPLs and improved profitability. The study recommended that banks should focus on strengthening their loan recovery mechanisms by adopting early warning systems, establishing dedicated recovery units, and utilizing innovative debt recovery methods to minimize NPLs and enhance financial performance.

Guler, Ismail and Satiroglu, Kemal (2019) utilized panel data analysis and examined the impact of credit risk management practices, including loan recovery, on the financial performance of deposit banks in Turkey. The study revealed that effective loan recovery practices, such as timely and efficient debt collection, workout arrangements, and collateral liquidation, had a positive impact on the financial performance of banks. Reduced loan losses and improved asset quality contributed to enhanced profitability, the study recommended that banks should prioritize loan recovery efforts by establishing dedicated recovery units, adopting advanced recovery techniques, and ensuring proper documentation and legal procedures for debt collection.

This is to show that lending growth positively relates to banks equity, profitability, liquidity, and deposition. This also reflects on the fact that economic upturn lending by commercial banks will tend to expand significantly however banks will experience poor performance in the downturn as nonperforming loans increases.

2.1 Theoretical review

This section explores the various theories and models that can explain the impact of loan portfolio management on financial performance of banking institutions. Several theories were advanced; these include; portfolio theory, loan pricing theory, Camel theory and Agency theory.

Portfolio theory

Since the 1980s, companies have successfully applied modern portfolio theory to market risk. Many companies are now using value at risk models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to credit risk has lagged (Margrabe, 2008).

Companies recognize how credit concentrations can adversely impact financial performance. As a result, a number of institutions are actively pursuing quantitative approach to credit risk measurement. This industry is also making significant progress toward developing tools that measure credit risk in portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. Portfolio quality ratios and productivity indicators have been adapted (Margrabe, 2008). The combination of these developments has vastly accelerated progress in managing loan risk in a portfolio context.

Traditionally, organizations have taken an asset-by-asset approach to credit risk management.

While each company's method varies, in general this approach involves periodically evaluating the quality of credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses. The foundation of the asset-by-asset approach is a sound credit review and internal credit risk rating system. This system enables management to identify changes in individual credits, or portfolio trends in a timely manner.

Based on the changes identified, credit identification, credit review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner. While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses. Therefore, to gain greater insight into credit risk, companies increasingly look to complement the asset-by-asset approach with a quantitative portfolio review using a credit model (Margrabe, 2008).

Companies increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected losses sufficiently by pursuing a portfolio approach. One weakness with the asset-by-asset approach is that it has difficulty identifying and measuring concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to credit extension, or to a group of correlated creditors. (Rufai, 2013)

Portfolio theory can be related to the topic of the effect of loan portfolio management on the financial performance of a banking institution, such as COGEBANK. Portfolio theory involves the idea of diversifying investments to minimize risk and maximize returns. In the context of loan portfolio management, the application of portfolio theory would involve carefully selecting and managing a mix of loans with different characteristics to achieve a balance between risk and profitability. By diversifying the loan portfolio and effectively managing it, the banking institution can potentially enhance its financial performance and mitigate potential risks.

Loan Pricing Theory

Banks cannot always set high interest rates. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of the banking relationship (Stiglitz and Weiss, 1981).

If banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates. Once these borrowers receive the loans, they may develop moral hazard behavior or so-called borrower moral hazard since they are likely to take on highly risky projects or investments (Chodecai, 2004).

From the reasoning of Stiglitz and Weiss, specify that in some cases we may not find that the interest rate set by banks is commensurate with the risk of the borrowers.

In the context of loan portfolio management, the application of loan pricing theory is crucial. By properly pricing loans, the banking institution can balance the profitability of the loan portfolio with the level of risk associated with each loan. This theory helps the institution in setting interest rates that adequately compensate for the risk taken and covers the cost of funds, while also remaining competitive in the market. Effective loan pricing ensures that the banking institution can generate sufficient revenue from interest income to cover operational expenses, maintain profitability, and achieve financial performance goals. Therefore, considering loan pricing theory in the context of loan portfolio management is essential for assessing the impact on the financial performance of the banking institution, such as COGEBANK.

Camel theory

In order to evaluate banks' overall financial condition, CAMELS supervisory rating system is built and introduced first in USA for onside monitoring. Now, it is used both onsite and off-site monitoring purposes. The CAMEL acronym stands for Capital adequacy, Asset quality, Management, Earning and Liquidity. Regulators created an additional measure, Sensitivity, to evaluate market risk associated with changing interest rates and other factors (Kaya, 2001).

In recent years one of the most used models for the estimation of a bank performances and soundness is represented by the CAMELS framework. Actually, the analytical framework is based on the CAMELS rating system, a device created by federal banking regulators to assess the overall performance of banks. CAMELS ratio model is very suitable and accurate to be used as a performance evaluator banking industries and to predict the failure rate (Lalon, 2015).

To assess the performance of the bank is necessary to report the financial reports usually consists of a balance sheet, income statement, cash flow statement, statement of changes in equity and notes to the financial statement. Some data from financial ratios are often compared to CAMELS in correctly identifying or predicting crisis events but sometimes, the relevant factors behind future failures or rating downgrades are satisfactorily captured by judiciously constructed risk sensitive summary statistics of conventional balance sheet data. (Lalon, 2015)

In relation this study, CAMEL theory is highly relevant. Loan portfolio management directly impacts several components of the CAMEL framework. By considering CAMEL theory, including the specific components, in the context of loan portfolio management, one can evaluate the overall impact on the financial performance of a banking institution like COGEBANK.

Agency Theory

The theory was developed by Jensen M., (1976) and recognizes the incomplete information about the relationship, interests or work performance of the agent described as adverse selection and moral hazard. Moral hazard and adverse selection affect the output of the agent in two ways; not doing exactly what the agent is appointed to do, and not possessing the requisite knowledge about what should be done. According to Anderson, Francis & Stokes (1993), Agency theory describes firms as necessary structures to maintain contracts, and through firms, it is possible to exercise control which minimizes opportunistic behavior of agents.

In order to harmonize the interest of the agent and the principal, a comprehensive contract is written to address the interest of both the agent and the principal; they further explain that the relationship is further strengthened by the principal employing an expert to monitor the agent. This affects the overall performance of the relationship as well as the benefits of the principal in the form of cash residual. (Owizy, 2021);

Budgeting assessment is one of many mechanisms used in business to address the agency problem. Others include financial reporting, financial control, audit committees, and external audits (Owizy, 2021).

Agency theory is another relevant concept to consider when examining the effect of loan portfolio management on the financial performance of a banking institution like COGEBANK. Agency theory focuses on the relationship between principals (such as shareholders or owners) and agents (such as managers or loan officers) within an organization. By considering agency theory in the analysis of loan portfolio management, one can better understand the potential challenges, conflicts, and strategies to mitigate them, thereby influencing the financial performance of the banking institution, such as COGEBANK.

3. Research methodology

A mixed-methods research approach was employed to gather both quantitative and qualitative data, providing a comprehensive understanding of the effects of loan portfolio management on the financial performance of banking institutions, with a specific focus on COGEBANQUE. A descriptive survey design was used in this study where, in the context of credit risk management and financial performance, this study involved gathering and analyzing data to describe the current state of credit risk management and their effect on financial performance. the researcher typically collected data from a specific bank or financial institution, such as COGEBANQUE, and focus on describing the existing practices and their outcomes.

The researchers opted to sample 28 branches of COGEBANQUE, in Rwanda. The sample size used for the study also consists of COGEBANQUE staff members including 1 manager, 1 credit officer and 1 credit recovery officer at each branch, what makes the total of 74 employees. In this study the researcher selected 28 managers, 28 credits officers and 28 loan recovery officers, who are in number of 74 for detailed study. This sample size was assumed by the researcher to be representative of the entire population.

The research instruments were tested for validity and reliability. Questionnaires, as a primary data collection method, were designed to align with the research objectives, utilizing a mix of close-ended and open-ended questions, primarily based on a Likert scale. Documentary review supplemented the primary data collection process, enhancing the depth of information acquired. For reliability, the Cronbach's alpha values for various variables were calculated, all surpassing the acceptable threshold of 0.7, indicating strong internal consistency. Editing, coding, and tabulation processes were employed to ensure data quality, consistency, and organization.

Data analysis involved Statistical Package for Social Science (SPSS V 21.0) for quantitative analysis. Descriptive statistics like frequencies, percentages, mean scores, and standard deviation were employed. Inferential statistics, including Pearson correlation analysis and multiple regression analysis, were conducted to establish relationships between loan portfolio management and financial performance of banking institutions in Rwanda. Ethical considerations were a priority, ensuring confidentiality by avoiding the disclosure of respondents' identities and maintaining strict confidentiality of sensitive information throughout the study.

4. Findings

This chapter delves into the study's findings and provide their interpretation, drawing from the analysis of the data gathered through questionnaires. The study scrutinizes the influence of between loan portfolio management on financial performance of banking institutions in Rwanda, employing correlation analysis to unveil the associations between loan portfolio management and financial performance of banking institutions in Rwanda. Additionally, regression analysis is leveraged to elucidate both the individual and collective impacts of between loan portfolio management on financial performance COGEBANQUE in Rwanda.

Correlation analysis Results

The correlation matrix presented below provides valuable insights into the complex interrelationships among Credit risk management, Loan appraisal, Loan monitoring, Loan recovery, and Financial performance. This matrix quantifies both the strength and direction of the connections between these crucial variables, offering a clearer understanding of their interconnected nature.

Table 1: correlation analysis

		Credit risk management	Loan appraisal	Loan monitoring	Loan recovery	Financial performance
Credit risk management	Pearson Correlation	1	.210	-.065	.017	.737
	Sig. (2-tailed)		.073	.582	.884	.047
Loan appraisal	Pearson Correlation	.210	1	-.116	-.096	790
	Sig. (2-tailed)	.073		.323	.416	.021
Loan monitoring	Pearson Correlation	-.065	-.116	1	.172	.569
	Sig. (2-tailed)	.582	.323		.142	.023
Loan recovery	Pearson Correlation	.017	-.096	.172	1	.865
	Sig. (2-tailed)	.884	.416	.142		.016
Financial performance	Pearson Correlation	.865	.790	.569	.737	1
	Sig. (2-tailed)	.047	.021	.023	.016	
	N	74	74	74	74	74

Source: Field data, September, 2023

Table 1. shows that that the correlation coefficient of 0.737 reflects a robust positive linear association between credit risk management and financial performance. Moreover, the p-value (0.047) indicates that this correlation is statistically significant, suggesting that the observed relationship is unlikely to have occurred due to random chance. This statistical significance strengthens the notion that credit risk management has a meaningful impact on financial performance.

And also, it reflects the Pearson Correlation coefficient between the loan appraisal process (considered as the independent variable) and financial performance (the dependent variable). The coefficient stands at 0.790, indicating a robust and positive linear relationship between the two. This suggests that as the efficiency of the loan appraisal process increases, a corresponding enhancement in financial performance tends to occur. The associated p-value (Sig. 2-tailed) of 0.021 is notably below the conventional threshold of 0.05. A higher correlation value generally indicates a more pronounced relationship. In this case, the substantial coefficient suggests a robust connection between effective loan appraisal and favourable financial outcomes.

Moreover, it shows that the correlation coefficient of 0.569 highlights a substantial and positive linear relationship between financial performance and loan monitoring. This suggests

Stratford Peer Reviewed Journals and Book Publishing
Journal of Finance and Accounting
Volume 8||Issue 4||Page 61-76 ||April||2024|
Email: info@stratfordjournals.org ISSN: 2616-4965

that as the effectiveness of loan monitoring practices improves, a corresponding enhancement in financial performance tends to occur. The p-value of 0.023 indicates that this correlation is statistically significant, reinforcing the notion that this relationship is highly unlikely to be a result of chance.

Lastly, it indicates that the correlation coefficient of 0.865 implies a strong and affirmative linear relationship between loan recovery and financial performance. This suggests that when loan recovery mechanisms operate effectively, it is likely to lead to improved financial performance. The p-value of 0.016 adds weight to this assertion by establishing the statistical significance of this correlation.

Therefore, the findings suggest that all four components of loan portfolio management (Credit Risk Management, Loan Appraisal, Loan Monitoring, and Loan Recovery) are positively correlated with Financial Performance. This indicates that as these management practices improve, financial performance tends to improve as well. Moreover, the statistical significance of these correlations (indicated by the low p-values) suggests that these relationships are significant.

Regression analysis

Regression analysis was used to examine the relationship between financial performance, in terms of dependent variable, and loan portfolio management, in terms of independent variables in order to understand how changes in the independent variables are associated with changes in the dependent variable.

Table 2. Summary model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.630[a]	.396	.140	.03213

a. Predictors: (Constant), Loan recovery, Loan appraisal process, Credit risk management, Loan monitoring.

Source: Field data, August, 2023

Table 2. shows that the coefficient of determination (R Square) is 0.396. This value indicates that approximately 39.6% of the variability in the dependent variable (Financial performance) can be explained by the combined effects of the independent variables (Credit risk management, Loan appraisal process, Loan monitoring, and Loan recovery). The Adjusted R Square is 0.140. This adjusted value takes into account the number of independent variables and provides a better indication of how well the model fits the data. the Standard Error of the Estimate is 0.03213. This value reflects the average distance between the actual values of the dependent variable and the predicted values by the model. The multiple correlation coefficient (R) is 0.630. This coefficient reflects the strength and direction of the linear relationship between the independent variables (Credit risk management, Loan appraisal process, Loan monitoring, and Loan recovery) as a group and the dependent variable (Financial performance). This value indicates a moderate-to-strong positive correlation.

Therefore, this correlation coefficient reinforces the idea that the interplay between credit risk management, loan appraisal process, loan monitoring, and loan recovery significantly influences the financial performance of COGEBANQUE. Consequently, the findings suggest that the model, including these independent variables, has a strong explanatory power for financial performance. The multiple correlation coefficient and R Square values reflect the model's ability to capture a considerable portion of the variation in financial performance,

https://doi.org/10.53819/81018102t2380

making it a valuable tool for understanding the impact of these variables on COGEBANQUE's financial outcomes.

Table 3. Analysis of variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.466	4	1.866	12.608	.000[b]
1 Residual	10.183	69	.148		
Total	17.649	73			

a. Dependent Variable: Financial performance
b. Predictors: (Constant), Loan recovery loans from defaulting borrowers., Credit risk management, Loan monitoring, Loan appraisal.
Source: field data, September, 2023

Table 3 reveals the statistical significance of the regression model in predicting Financial Performance (F(4, 69) = 12.608, p < 0.001). The model, comprising the independent variables (Constant, Loan Recovery, Credit Risk Management, Loan Monitoring, and Loan Appraisal), significantly explains the variability in Financial Performance. The relatively high F-value
(12.608) and exceptionally low p-value (p < 0.001) indicate that this relationship is highly significant. This suggests that at least one of the independent variables has a substantial impact on Financial Performance. In summary, the model, inclusive of these variables, provides a statistically robust framework for understanding and predicting Financial Performance, underscoring its importance in assessing the impact of Loan Portfolio Management on a financial institution's overall performance.

Table 4. Regression model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Internal for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	31.667	.476		66.527	.000	.717	2.617
Credit risk management	.424	.129	.423	3.286	.031	-.234	.283
1 Loan appraisal	.653	.215	.509	3.037	.037	-.623	.237
Loan monitoring	.599	.155	.579	3.864	.023	-.409	.211
Loans recovery	.692	.187	.560	3.700	.026	-.464	.281

a. Dependent Variable: Financial performance.
Source: Secondary data, August, 2023

Table 4 shows that the constant term, indicated as "(Constant)" in the table, possesses an unstandardized coefficient of 31.667. This constant term indicates the expected value of the dependent variable (Financial performance) when all independent variables are zero. The t-value of 366.527and significance level of 0.000 suggest that this constant term has a statistically significant impact on the model. So, the intercept coefficient (β0) represents the expected value of the dependent variable (Financial performance) when all independent variables are zero. In this context, it's 31.667.

The unstandardized coefficient for credit risk management is 0.424. The associated standardized coefficient (Beta) of 0.423 suggests a moderately positive relationship between credit risk management and financial performance. The t-value of 3.286 and significance level of 0.031 imply that this relationship is statistically significant, and the coefficient of credit risk management (β1) is 0.424.

The unstandardized coefficient for loan appraisal is 0.653. The standardized coefficient (Beta) of

0.509 suggests a strong relationship between loan appraisal and financial performance. The tvalue of 3.037 and significance level of 0.037 indicate that this relationship is statistically significant. So, the coefficient of loan appraisal (β2) is -0.653

The unstandardized coefficient for loan monitoring is 0.599. The standardized coefficient (Beta) of 0.579 suggests a moderately positive relationship between loan monitoring and financial performance. The t-value of 3.864 and significance level of 0.023 indicate that this relationship is statistically significant. The coefficient of loan monitoring (β3) is 0.599.

The unstandardized coefficient for loan recovery is 0.692. The standardized coefficient (Beta) of 0.560 suggests a moderately positive relationship between loan recovery and financial performance. The t-value of 3.700 and significance level of 0.002 indicate that this relationship is statistically significant, and the coefficient of loan recovery (β4) is 0.692

Therefore, $Y= 31.667+0.424X1+0.653X2+0.599X3+0.692X4$, means that the constant term (β0) of 31.667 suggests that when all independent variables are zero (or absent), the estimated financial performance is 31.667. Therefore, positive coefficient of Credit Risk Management (β1 = 0.424) indicates that higher effectiveness in managing credit risk tends to lead to improved financial performance, and coefficient of Loan Appraisal (β2 = 0.653) implies that more loan appraisal practices may have impact on financial performance, then, the positive coefficient of Loan Monitoring (β3 = 0.599) suggests that proactive loan monitoring contributes positively to financial performance while, the positive coefficient of Loan Recovery (β4 = 0.692) indicates that effective loan recovery mechanisms tend to enhance financial performance.

Therefore, study hypothesis one (H01) stated that there should be no significant effect of credit risk management on financial performance in COGEBANQUE. Multiple regression results indicated that credit risk management had significant effect on financial performance of COGEBANQUE ($\beta = 0.424$ at $p<0.5$) Hypothesis one was therefore rejected. The results indicated that a single increase in credit risk management in regard to loan portfolio management will lead to 0.424 unit improvement in financial performance of COGEBAQUE.

Subsequently, the observed statistically significant correlation challenges the initial hypothesis that proposed no significant effect of loan appraisal on financial performance in COGEBANQUE. Instead, the data suggests that a meaningful association does indeed exist with, ($\beta = 0.653$ at $p<0.5$). Therefore, the correlation table's outcomes indicate a noteworthy linkage between the loan appraisal process and financial performance in COGEBANQUE. This highlights the potential importance of effective loan appraisal practices in contributing to favorable financial outcomes.

Furthermore, the outcome aligns with the research objective of analyzing the effect of loan monitoring on COGEBANQUE's financial performance. The highly significant correlation supports the premise that vigilant loan monitoring practices can potentially contribute to favorable financial outcomes for the bank. Given the β=0.599 and the associated p-value of 0.023, we reject the null hypothesis Ho3 that there is no significant effect of loan monitoring on financial performance in COGEBANQUE. The significant correlation coefficient suggests a robust and positive relationship between loan monitoring practices and financial performance.

Lastly, this outcome resonates with the research objective of analyzing the impact of loan recovery on COGEBANQUE's financial performance. The substantial correlation approves the notion that well-executed loan recovery practices could substantially affect the bank's financial outcomes. Given the substantial β of 0.737 and the associated p-value of 0.026, the null hypothesis Ho4 is rejected, which suggests no significant effect of loan recovery on financial performance in COGEBANQUE. The highly significant correlation implies a strong connection between effective loan recovery mechanisms and the bank's financial performance.

5. Conclusion

Overall, the research findings collectively affirm the crucial role of loan portfolio management in influencing COGEBANQUE's financial performance. Effective credit risk management, loan appraisal, monitoring, and recovery practices all contribute significantly to the bank's financial outcomes. These outcomes align with previous studies, further solidifying the understanding that meticulous loan portfolio management positively impacts financial performance. Conclusively. Loan portfolio management has a positive significant effect on financial performance of banking institutions in Rwanda.

6. Recommendations

Based on the findings of the study, several recommendations can be made to enhance banking institutions’ loan portfolio management practices and subsequently improve its financial performance. These recommendations are aligned with the specific objectives of the study and the corresponding findings:

- COGEBANQUE should improve the transparency of credit risk management practices by providing clearer and more comprehensive information to borrowers.
- COGEBANQUE should focus on further strengthening the thoroughness of the loan appraisal process, particularly by considering crucial factors such as financial position, collateral, and repayment capacity.
- COGEBANQUE should Continue the proactive approach to loan monitoring, ensuring regular updates and effective communication about loan obligations.
- COGEBANQUE should strengthen ethical practices in the loan recovery process, ensuring fairness and adherence to ethical standards.
- COGEBANQUE should ensure prompt actions are taken to address any issues or concerns related to loan repayment.

References

Achou, T. F. (2018). Bank performance and credit risk management. Universitu of Skodve School of Technology and Society.

Addai, B. a. (2019). The Impact of Delinquent Loans on Financial Performance of Banks in Ghana. British Journal of Economics, Management & Trade.

Araga, A. (2021). Bank Lending and administration II. Lagos: National Open University of Nigeria.

Dang, U. (2021). The CAMEL rating system in banking supervision: A case study of Arcada. Journal of Management and Business Research.

Demirgüç-Kunt, A. a. (2012). Financial inclusion in Africa. Washington, DC: The World Bank.

Emmanuel, A. O. (2017). Loan Portfolio Risk Management and Financial Performance of Financial Institutions in Rwanda. Kigali: Finance and Accounting Option of Mount Kenya University.

Fiorillo. (2016). Forecasting non-performing loans in Barbados. *Journalof Business, Finance and Economics in Emerging Economies*.

Haripriya, V. (2017). Credit Risk Portfolio management in Microfinance institutions. International Journal of Engineering Technology Science and Research.

Hermes, L. a. (2017). The Determinants of bank interest. and. Journal of International Money and finance.

I., B. (2016). Credit Portfolio Management Practices and Their Implications . New York : Financial Stability Review.

Institute, C. (2023). Evaluating Quality of Financial Reports. Retrieved from cfainstitute.org: https://www.cfainstitute.org/

Kashyap, K. R. (2020). Kashyap, K. RajaBanks as liquidity providers: An explanation for the coexistence of lending and deposit-taking. The Journal of Finance.

Kaya. (2001). How bank managers anticipate non-performing loans evidence from Europe, US, Asia and Africa. Applied Finance and Accounting, .

Kipngetich S. and Muturi, W. (2015). Effect of Credit Risk Management on Financial Performance.

Lalon, R. M. (2015). Credit Risk Management (CRM) Practices in Commercial Banks of Bangladesh: A Study On Basic Bank Ltd. International Journal of Economics, Finance and Management Sciences.

Maki, V. T. (2014). Determinants of nonperforming loans: The case of Eurocone. . Panoeconmicus.

Margrabe, W. (2008). Bank Performance and Credit Risk Management. University of Skovede.

MINECOFIN. (2019). Financial Sector Development: UmurengeSaving and Credit Cooperatives. Kigali.

Myob. (2023,). Ethics in accounting: 6 principles to follow. Retrieved from myob.com: https://www.myob.com/

Owizy, S. O. (2021). Assessment of effectiveness of internal control in government ministries; A study of Benue State ministry of finance. Benue State University.

Paul Kiama Thiongo, K. M. (2019). Paul Kiama ThEffect of Loan Portfolio Growth on FinancialPerformance of Commercial Banks in Kenya. Technical University of Mombasa.

Rufai. (2013). Efficiency of Credit Risk Management on the Performance of Banks in Nigeria Union Bank PLC.

SAA. (2021). Bank Lending and administration II. lagos: University of Nigeria.

Santosh, C. a. (2016). What is Know Your Customer (KYC)? Thailand.