Credit risk management: An imperative for profitability of Centenary Bank Kabale Branch

Aluonzi Burani¹, Byamukama Eliab², Eton Marus³, Tushemereirwe Charity⁴

Kabale University, Uganda¹⁻⁴

<u>baluonzi@kab.ac.ug</u>¹, <u>ebyamukamampora@kab.ac.ug</u>², <u>emarus@kab.ac.ug</u>³, <u>charityariho@gmail.com</u>⁴



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Abstract

Purpose: This study focuses on establishing the effect of credit risk management on the profitability of the Centenary Bank Kabale Branch. Credit Risk Management was operationalized as credit risk identification, risk assessment, and risk control, while profitability was operationalized as Return on Equity, Return on Assets, and Non-Performing Loans.

Research methodology: The study population comprised of 140 respondents. A sample size of 103 respondents was obtained using the Krejcie and Morgan 1970 table for sample determination. This study adopted a mixed method approach. Quantitative data were collected using Self-Administered Questionnaires and analyzed using Pearson's linear correlation coefficient. Qualitative data were collected through in-depth interviews and analyzed using content analysis.

Results: The findings indicate that the majority of the respondents were male, aged 31–40 years, and bachelor's degree holders. Risk identification (r=0.882), risk assessment (r=0.776), and risk controls (r=0.829) have a significant positive relationship with profitability at the central bank.

Limitations: The limitations include bias from the respondents and the study being conducted in only one branch, making generalization difficult.

Contribution: These investigations have informed Centenary Bank managers of the importance of credit risk identification, risk assessment, and risk control. Managers should focus on mitigation measures to reduce risks, create a credit risk assessment team to evaluate risks, establish strategies, and prioritize risk management practices by implementing policies in place. The findings contribute to the literature on credit risk management in terms of the central bank.

Novelty: Previous similar research only studied how environmental accounting is implemented in a hospital and did not compare its implementation before, during, and after a pandemic.

Keywords: Credit Risk Identification, Risk Assessment, Risk Control, Profitability, Centenary Bank

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1. Introduction

Profitability and adequate capital are key factors in determining the stability of the banking industry (Wang, Ding, Yu, & Zhao, 2020). The provision of credit facilities to clients is a major source of bank revenue (McKee & Kagan, 2018). However, the profitability of Commercial Banks has been questioned recently. For example, the profitability of private banks fell by more than 30% worldwide due to the global financial crisis of 2008. According to Alabdullah (2022), in addition to the legal instruments

issued by the National Bank, commercial banks have also established a Credit Department to manage the credit risks associated with loans. Despite these measures, according to Gabriel, Victor, and Innocent (2019), credit risks are drastically rising and are becoming uncontrollable since there is a lack of risk source identification, risk assessment, and risk control.

In Uganda, Commercial Banks have long been exposed to impairment losses on loans and advances owing to weak credit risk management practices. This has led to the collapse of some Banks such as Green Land Bank, Global Trust Bank, National Bank of Commerce and Crane Bank (Opiding 2018). Other Commercial Banks closed by the Central Bank of Uganda include the Green Land Bank, Cooperative Bank, National Bank of Commerce, Gold Trust Bank, and Teefe Bank (Hasabubwenje 2020). Some banks closed their branches to curb the effects of low profitability. For example, the Tropical Bank closed the Mbarara and Mbale Branches (Kirinya 2020).

In the case of Centenary Bank and Kabale Branch in particular, Protase (2022) points out that the increase in the ratio of Non-Performing Loans to total credits indicated an increase in credit risk. Similarly, Nathan, Ibrahim, and Tom (2020) pointed earlier that in Centenary Bank Kabale Branch, the loan growth in the year 2011 to 2012 reduced from 13.7% to 3.2%, 2015 to 2016 reduced from 19.7% to 3.7%. The decrease in credit growth is due to the fear of making losses arising from the accumulation of NPLs, which can easily lead to bank insolvency.

Many studies have been conducted in the credit management and profitability fields. Such studies include liquidity ratio and profitability (Huang, Liu, & Ren, 2018); Non-Performing Loan Ratios, Capital Asset Ratios, the ratio of client loans to short-term financing, and Loan Loss Provision Ratios (Nelson, 2020); Client Appraisal and Credit Risk Control (Isaac, 2021); Collection Policy (Omar, Muturi, & Samantar, 2018); payable accounts, accounts receivable, and financial leverage (Al-Eitan, Khanji, & Saraireh, 2023); and loan loss vision, risk adjustment margin, and risk management systems (Kaitibi, Ganawah, Yokie, Jalloh, & Koroma, 2017).

Others studies include Nyabyenda and Murekeyimana (2022) on credit risk control, credit appraisal and debt collection policy; Mafumbo (2020) on credit policy, capital adequacy and credit risk control; Bakashaba, Lutaaya, and Arinaitwe (2022) on default payments and credit risk; Afriyie, Yusheng, Kaodui, Caesar, and Owusu-Akomeah (2018) on strategies of credit risk management like elimination of bad debts, state of the economy, quality of staff, credit appraisal, financial stability of the customers and Dunyoh, Ankamah, and Kosipa (2022) on total loan to total assets, Non-Performing Loans to total loans, GDP growth rate and Interest rates. From these studies, it is imperative to conduct the current study because its interest is risk identification, risk assessment, and risk control, the gap of which has not been investigated by earlier researchers and more so in the Centenary Bank Kabale Branch.

1.1 Problem Statement

Commercial banks in Uganda have established various credit risk management practices, including credit risk identification, credit assessment, and credit risk control, hoping to improve Loan Performance (BoU, n.d.). However, commercial banks have experienced poor Loan Performance over the years, resulting in an upward scale of writing off portfolios at risk and bad debts (BoU, n.d.). Profitability is important for any commercial bank to attain its going concern or continuity in business, and commercial banks being at the center of the financial sector can disrupt the entire economy if their inherent challenge- credit management—is not handled properly. Capital adequacy is a determinant of profits in commercial banks (Tosin and Otonne, 2019). However, this is not the case on the ground. For example, the centenary bank 's profitability decreases every year.

The bank attained an increase in return on equity (ROE) of 28.3 % in 2019 from 24.8 % in 2018 (BoU, n.d.). However, the centenary's yearly after-tax profits declined by 28% from Ush. 38.1 billion to Ush. 24.8 billion- between June 2013 and June 2014, while its NPLs increased from 4.0% to 5.8%. From June 2015 to June 2016, when the highest increase in NPLs was reported (from 4.0% to 8.3%), annual

after-tax profits reduced from Ush.44.3 billion to Ush.37.6 billion (15.12% reduction) in the same period.

The issue is worsening despite efforts to lower the amount of non-performing loans at the Kabale branch of the Centenary Bank. Return on assets, return on, and non-performing loans have a negative impact on bank profitability. This has been linked to credit risk identification, credit risk assessment, and credit risk control. Zeng (2012) observes that such situations lead to locking resources in unsuccessful ventures and makes it challenging for commercial banks to finance new, commercially viable ventures and threatens the going concern of commercial banks. It is on this background this study is being conducted to analyze the effect of credit risk management on profitability of commercial banks in Uganda, a case study of Centenary Bank Kabale.

1.2 Research Objectives

- 1. To examine the effect of credit risk identification on profitability of Centenary Bank Kabale branch
- 2. To analyze the effect of credit risk assessment on profitability of Centenary Bank Kabale branch
- 3. To establish the effect of credit risk control on profitability of Centenary Bank Kabale branch

2. Literature review

2.1 Theoretical Review

This study was anchored in the Credit Risk Theory (Merton, 1974) propounded by Robert Merton. The theory is derived from Merton's default risk model, built on the borrower's failure to meet his or her contractual obligations. According to G. Liu, Mirzaei, and Vandoros (2014) the theory is concerned with the financial losses resulting from the deteriorating credit worthiness of the borrower to pay. In terms of extending credit facilities, the risks include loss of principal and loss of interest that may be completely or partially unpaid by the lender (Graham & Coyle, 2000). Researchers such as Owojori, Akintoye, and Adidu (2011) posit that lenders charge high interest rates to cover the losses resulting from failure to meet transactional obligations by borrowers. Almustafa, Nguyen, Liu, and Dang (2023) observed that banks have provided guidelines for extending credit facilities. Therefore, Credit Risk Theory is relevant to this study because it provides the constructs under investigation (credit risk identification, credit risk assessment, and credit risk control) as part of the guidelines, albeit the risk of lending and meeting the business objective or profitability.

2.2 Credit Risk identification and profitability

According to Wachira (2017), identification of credit risk is the most crucial component of credit risk management. According to Barton et al. (2002), credit risk management is concerned with consciously designed techniques to review, analyze, and determine the probability or possibility of risks involved in extending credit facilities to borrowers. Al- Tamimi and Al- Mazrooei (2007) point out that the techniques used in credit risk identification include analyzing the credit worthiness of the borrower, standards, and rating the risk. Kargi (2011) adds this to the list of borrowers' financial statements. Other approaches to credit risk identification include proposal review, checking credit applications, borrower characteristics, credit history (Geitangi, 2015), and communication, documentation, and contextualization (Segal, 2011). It has been established that risk management indicators and control activities are in a good category in predicting profitability (Agustin & Bayunitri, 2020).

Kalui and Kiawa (2015) observed that, in Kenya, microfinance institutions use techniques such as credit risk identification, monitoring credit risk, and assessing credit risks as a measure of checking clients' credit worthiness. Y. Liu, Brahma, and Boateng (202arguenes that risk identificationsidersunt early and ongoing detection of events that might ultimately hinder the performance banksnks from attaining their goals of profit maximization. This entails expressing concern and documenting it. The source of these events may originate from within or outside the Banks (Belas, Gavurova, & Toth, 2018). Githaiga (2015) agrees with the importance of credit risk identification and suggests that banks that apply modern approaches, especially credit risk identification, can easily discover mistakes or errors in the early stages of credit risk management. Management needs to avoid the use of excessive credit for its potential

negative effects on the firm's value over the long term, as investors may react negatively (Oranefo & Egbunike, 2023).

Empirical studies conducted by other researchers, such as Olobo, Karyeija, Sande, and Khoch (2021), have indicated that there is a significant relationship between credit risk identification and bank performance (r = 0.932 at p-value). The study further indicates that credit risk identification contributes to 35.8% of the bank performance changes. Similarly, the results obtained by Francis, Caleb, and Eton (2022) found out that credit risk identification and loan performance are positively and significantly related with r = .601 and sig. <.05. Their findings suggest a linear relationship between credit risk identification and loan performance. This means that the more banking institutions identify potential risks, the higher the chances of registering for performing loans. A study conducted by Remy and Njeru (2020) on the influence of credit risk identification on financial performance indicates that credit risk identification is crucial for tracking bank risks. Kimotho and Gekara (2016) reveal a positive association between credit risk identification and financial performance.

Other studies in congruence with the aforementioned ones include James and Lorna (2019), who realized that credit risk management has a strong relationship with salary loan performance. He measures credit risk management in terms of credit risk identification, credit risk assessment, and credit risk monitoring. Shkolnyk, Brychko, Pakhnenko, Semenoh, and Kremen (2017) in Pakistan observed that growth in the financial sector particularly in banks was much influenced by credit risk detection including identification by 46%. These findings demonstrate the importance of credit risk identification for bank growth. Mutembei and Gitonga (2022) realized that credit risk identification significantly influenced loan repayments. This is because credit risk identification lies in the threshold of 0.0174–0.05, demonstrating the relationship between credit risk identification and loan payback. All these studies have not been related to profitability particularly but to general financial performance and loan repayment. Second, the studies have not been conducted in Kabale district, more so Centenary Kabale Branch, hence leaving a gap to conduct this study.

2.3 Credit risk assessment and profitability

According to Ma, Hou, and Zhang (2021), credit risk assessment is a methodical procedure that aims at comprehending the nature of risks and ascertaining the degree of risk that could have an impact on an organization's profitability. Identifying and analyzing risks is the main goal of assessments so that they can be regulated and controlled (Phuong, Huy, & Van Tuan, 2020). The likelihood of obtaining targeted results is a factor that bank managers should consider when determining costs, schedules, and performance goals. According to Bouteille and Coogan-Pushner (2021), risk assessment is the phase of the management's problem definition that identifies and examines prospective events in terms of the likelihood of potential effects. The best practice requires that after risks are identified, they should be evaluated for their potential impact and the likelihood that they will materialize and boost bank profitability (Finger, Gavious, & Manos, 2018). Kithinji (2010) outlines some credit appraisals or assessments to include collateral, character, capacity, and capability since the factors take into consideration income, capacity to repay, average expenditure in a month, dependents, history of employment, and years served.

According to Yang, Wu, Zhang, Hong, and Dong (2020), numerous empirical studies on risk assessment have been conducted with an emphasis on quantifying and reducing risk in the operations of commercial banks. For example, Ali and Oudat (2020) find that in the United Arab Emirates, the profitability of domestic banks increases rapidly because of their thorough assessment of credit risks in lending compared to foreign banks. Huang et al. (2018) noted that commercial Banks carefully consider credit analysis and valuation. Their study demonstrated that credit risk evaluation and analysis have a significant and advantageous impact on loan portfolio performance. Isa, Choong, Fie, and Rashid (2018) advances that to generate profits, commercial Banks must be proficient at gathering savings and turning them into assets. Khemakhem and Boujelbene (2018) agree with the aforementioned arguments by emphasizing that effective financial intermediation stimulates favorable economic growth and,

therefore, Commercial Banks must conduct their own credit risk assessments of the projects they finance in order to streamline the process.

Other studies that have emphasized the importance of credit risk management include Yegon, Sang, and Cheruiyot (2014), who realized that credit risk assessment measured in terms of financial breakeven, leverage, and ratio for leverage provides an opportunity for the optimization of the financial viability and structure of a company. Financial viability is a key factor in profitability decisions. Catherine (2019) argued that credit risk appraisal or assessment is a key factor in determining bank profitability and survival. Her study on the effect of credit risk management on financial performance revealed that credit risk management factors, including credit risk assessment, contribute to 97% of changes in financial performance, including profitability.

Similarly, Abdelaziz, Rim, and Helmi (2022) asserts that client's financial situation should be assessed in order to determine capacity when defining product offers and putting regulations in place for the common loans. Bank administration should carefully consider all potential risk variables, including debtors' income and debt levels, credit history, credit score, credit size, and guarantee values. Muhindi and Ngaba (2018) argue that bank management must determine whether there are operational procedures and controls in place for support purposes, such as gathering unresolved documents such as spousal approvals and official papers for indemnification coverage. From the reviewed literature, it is evident that most of the studies were not conducted in Uganda and more so in Centenary Kabale Brank, hence the need to conduct this study.

2.4 Credit Risk Control and Profitability

According to Y. Liu et al. (2020), credit risk control is one of the elements of credit risk management. Other methods include identification and assessment. Therefore, Credit risk managers ensure that the risk associated with credit transactions is measured, scrutinized, checked, and controlled (Cui et al. 2018). This ensures that credit risks are tolerably recognized, weighed, and subject to controls that effectively lower credit risk. Commercial Banks must have acceptable measurement, appraisal, and reporting frameworks. Commercial bank stockholders may use their authority to demand information to evaluate the effectiveness of risk controls implemented by the management of commercial banks (Singh et al., 2021).

According to PwC (n.d.), credit risk control is concerned with effective and efficient approaches acceptable to all organizations' stakeholders to harness collective efforts in activities of credit risk management, including creating credit risk awareness, strategies of operating and decision making, and assurance for risk taking. In terms of commercial banks, Rukundo (2018) views credit risk control as securitization and diversification of loan portfolios. Therefore, a well-designed and strong credit risk control system is fundamental because it guides decisions on credit worthiness (Boahene, Dasah, & Agyei, 2012; Catherine, 2019).

Credit control is a financial control system used by businesses, especially those in the manufacturing sector, to ensure that sales are made using liquid resources or cash (Boahene et al., 2012). Considering the complexity and extensive nature of work in the banking sector, a well-disciplined and very strong credit control system would represent a good foundation for credit risk management, as it guides any credit decisions (Catherine, 2019). Maliisa (2013) argues that credit risk control includes the determination of interest in credit facilities, the use of collaterals, and limiting credit facilities.

Empirical studies on the relationship between credit risk control and profitability include those by Nyabyenda and Murekeyimana (2022), in which credit risk control contributes 73.8 percent to profitability in terms of ROA and 72.2 percent to profitability in terms of ROE. Mbiti et al. (2018) suggest that security and credit protection policies lead to increased profitability. Control environment and monitoring controls bear a significant effects on financial accountability while control activities do not (Eton, Fabian, & Benard, 2022).

Shieler, Emenike, and Amu (2017) show that diversification is primary in controlling credit risk and improving financial performance. The technique is most appropriate in situations where the loan portfolio can be diversified to various sectors in the economy, which has many benefits compared to others. Similarly, Mafumbo (2020) observed that credit risk control significantly (p= 0.049) affects the performance of commercial banks. Olobo et al. (2021) reveals that credit risk control has a significant relationship with bank performance with r=0.977 at p-value = 0.000 and influences Asset Quality by ($\beta=0.371$ and p=0.000). Francis et al. (2022) is in agreement with the fore mentioned studies. His study reveals a strong and significant relationship between credit risk control and loan performance, since r results = .684; sig. <.05, which is strong and positive.

A study conducted by Y. Liu et al. (2020) on credit risk and bank profitability in Nigeria found that 100% increase in non-performing loans reduced profitability as shown by Return on Assets (ROA) by 6.4%. According to research, Nigerian Banks should strengthen their capacity for credit analysis and loan supervision. The study further indicates that 8% of banks apply credit limits, assessments, and different retrieval strategies to regulate credit risk. Similarly, Lekwauwa and Bans-Akutey (2022) established that Loan portfolios had an effect on banks profitability

Similar studies, such as those of Du, Liu, and Lu (2021), reveal that identifying NPLs, enforcing proper assessments, and making loan loss provisions help reduce loan risks. Olobo et al. (2021) adopting cross sectional design with a sample size of 124 realized that credit risk control contributes to 37.1% changes in Asset Quality by ($\beta = 0.371$ and p = 0.000). Similarly, Francis et al. (2022) realized a strong relationship between credit risk control and loan performance (r = .684; sig. <.05). Most of these studies relate credit risk management to financial performance, leaving a gap on credit risk management to profitability and, in particular, to commercial banks in Uganda.

3. Research methodology

This study was conducted at the Centenary Bank of Kabale Branch. The study population comprised 140 respondents, including branch managers, supervisors or administrators, banking assistants, loan officers, and borrowers. Using Krejcie and Morgan (1970) table of Sample determination, a sample size of 103 respondents was obtained. A proportionate sampling technique was used to distribute the sample sizes into the different categories of respondents. Borrowers were selected using convenience sampling (Amin, 2005).

This study adopted both qualitative and quantitative research approaches (mixed-method research). Quantitative designs, such as a descriptive design, were adopted to describe the nature of the phenomenon under study. A correlational design was adopted to explain the extent of the relationship between study variables (Ellis & Levy, 2009). The researcher also adopted a cross-sectional survey design because it helps collect the required data in a relatively short period, thus saving time and resources (Bordens & Abbott, 2011). The qualitative design adopted was phenomenological inquiries that helped describe the phenomenon under study (Paraskevas & Saunders, 2012).

Data were collected from respondents using both Self-Administered Questionnaires and Interview techniques. In terms of quality control, a content validity test was conducted, yielding a Content Validity Index (CVI) of $0.8 \ge 0.7$, indicating that the instruments were valid (Amin, 2005). Using Cronbach's alpha method, the instruments were subjected to a reliability test yielding a result of $\alpha=0.9 \ge 0.7$, meaning the items or the instruments were reliable (Kothari, 2004). Quantitative data were analyzed using Pearson's Linear Correlation Coefficient, as provided in SPSS. Qualitative data were analyzed using content analysis and common themes were generated.

4. Result and discussion

4.1 Socio-Demographic Characteristics of the Respondents

The sociodemographic characteristics covered in this section included gender, age, and educational level of the respondents. In terms of gender, 43.6% of respondents were female and 56.4% were male. In relation to age, the majority of the respondents were between the age bracket of 31 and 40 (39.8%),

followed by respondents who were above the age of 40 (36.9%), and the respondents who lay between the age bracket of 18 and 30 (23.3%). Education-wise, the majority of the respondents were bachelor's degree holders (60.4%), followed by postgraduate degree and diploma holders (28.8), and lastly few diploma holders (18.8%).

4.2 Correlational Results of Variables

The objective of this study was to examine the effect of credit risk management on the profitability of the Centenary Bank Kabale Branch Uganda. Credit risk management was conceptualized as credit risk identification, credit risk assessment, and credit risk control. Return on Assets (ROA), Return on Equity (ROE) and Non-Performing Loans (NPLs) served as metrics for measuring profitability. The relationships between the constructs of the independent and dependent variables are presented below:

4.2 1 The relationship between Credit risk identification and profitability

The study hypothesizes a significant relationship between credit risk identification and profitability. The results of this study are presented in Table 1.

Table 1. Results of the correlation Analysis between Credit Risk identification and profitability.

Variables		·	Profitability	Risk identification
Profitability		Pearson Correlation Sig. (2-tailed) N Pearson Correlation Sig. (2-tailed) N Risk	1	.882**
				.000
			103	103
Credit Identification	Risk		.882**	1
			.000	
			103	103

^{**.} Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data 2023

It is evident that from Table 1, there is a positive significant correlation between risk identification and profitability (r = .882, p < 0.01). This finding implies that an improvement in credit risk identification leads to an increase in the profitability of commercial banks. This finding supports the views of one respondent in emphasizing the need for creidt risk identification.

Credit Risk Identification is considered an early and ongoing detection of events that can ultimately prevent banks from achieving their objective of profit maximization. This viewpoint can assist banks in understanding investors' worries and deciding how to respond to them.

The results indicate that credit risk identification is related to the profitability of commercial banks, particularly the Kabale Branch. Bank managers should, therefore, always emphasize the practice of risk identification. These findings are in agreement with Alfadli and Rjoub (2020), who opine that the bank committee in charge of identifying hazards should identify risks by brainstorming on what would prevent commercial banks from being profitable. The findings again suggest that credit risk identification is meant to assist managers in systematizing, rationally planning, and controlling the use of resources to guarantee the meeting of financial goals, that is, to maximize profits. These findings are supported by prior studies such as Wachira (2017) and Barton et al. (2002); Al-Mazrooeind Al-Mazrooei (2007) and Geitangi (2015). The findings reveal a relationship between credit risk identification and profitability. Other studies, in agreement with these findings, include that by Olobo et al. (2021); Francis et al. (2022); Remy and Njeru (2020) and Kimotho and Gekara (2016).

4.2.2 The relationship between Credit risk Assessment and profitability

The second objective was to determine the effect of credit risk assessment on the profitability of the central bank Kabale branch. Table 2 presents the findings of this study.

Table 2. Results of correlation Analysis between Credit Risk Assessment and profitability

		Profitability	Credit Risk assessment
De Califfe	Pearson Correlation Sig. (2-tailed)	1	786**
Profitability	N N		.000
	Pearson Correlation	103	103
	Sig. (2-tailed)	.786**	
Credit Risk Assessment		.000	
		103	103

^{**.} Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data 2023

It is evident from Table 2 that there is a significant positive correlation between credit risk assessment and profitability (r= .776, p< 0.01). This finding indicates that risk assessment significantly affects profitability. These findings are in agreement with the responses of key informants. One of the key informants said:

"When we are conducting risk assessment, we try to understand the possible risks that will occur during the transaction. The risks that will affect our performance can be referred to as profitability. The basic objective of such assessments is to identify and analyze risks so that they can be managed and controlled. We consider issues such as selection expenses, time tables, and performance targets.

The findings suggest that if credit risks are properly assessed by bank officials, risks will be reduced, and profits will increase. The procedure and the activities involved in credit risk assessment, such as appraising the collateral, character, capacity, and capability income, capacity to repay, average expenditure in a month, dependents, history of employment, and years served, need to be given proper attention. This will reduce the chances of loss and non-payment, thereby attaining the profitability goal. These findings were in agreement with those reported by Ma et al. (2021), Bouteille and Coogan-Pushner (2021), Finger et al. (2018) and Kithinji (2010).

Furthermore, this study suggests a significant relationship between credit assessment and profitability. This finding emphasizes the importance of credit risk assessment. Prior studies such as those conducted by Yang et al. (et0), Wang e,,t al. (2020) anet al.. agreein agreement with the findings of the current study.

4.2.3 The relationship between Credit risk control and profitability

This study also aimed to establish the relationship between credit risk control and profitability in the Kabale branch. Pearson's product-moment correlation coefficient was used to determine the relationship between the variables, as indicated in Table 3.

Table 3. Correlation analysis between credit risk control and profitability

Profitability	Credit Risk Control

	Pearson Correlation	1	.829**
Profitability	Sig. (2-tailed)		.000
	N	103	103
	Pearson Correlation	.829**	
Credit Risk Control	Sig. (2-tailed)	.000	.000
	N	103	103

^{**} Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data 2023

Table 3 shows that there is a significant positive correlation between credit risk control and profitability (r=.829, p<0.01). This means that when credit risks are properly handled, banks will realize an increase in profitability. These findings correlate with the qualitative findings. For example, one respondent said,

The Century Bank Kabale Branch has credit risk control mechanisms in place to prevent unfavorable outcomes. This strategy aids in boosting profitability within the central bank's operating and planning frameworks.

Similarly, another respondent said,

"It is the role of the Centenary Bank's credit risk managers to ensure that the advance risk is calculated, examined, looked for, and handled to boost earnings. Centenary Bank has a respectable measurement, evaluation, and reporting framework in place to ensure that credit risks are tolerably recognized, weighed, and subject to controls that significantly reduce credit risk. The shareholders of the CBT consistently exercise their rights to information to assess the efficacy of the risk controls adopted by the bank's management.

This study establishes that risk control affects the profitability of centenary banks at the Kabale branch. The study also discovered a positive and significant relationship between credit risk control and profitability. The qualitative findings from key informants confirmed and reinforced the quantitative findings. These findings are confirmed and supported by other researchers and scholars that risk control affects bank profitability at the Kabale branch. This is in agreement with Y. Liu et al. (2020) whose study asserts that that credit risk management in the banking industry includes risk identification, analysis, control, and assessment. It involves identifying probable risk factors, assessing their influence, observing the actions that generate the identified risk factors, and implementing control mechanisms to prevent undesirable consequences. Within the operating and planning framework of a commercial bank, this approach is helpful. Credit risk managers are responsible for ensuring that the risk associated with the advance is measured, scrutinized, checked, and controlled (Cui et al., 2018). To ensure that credit risks are tolerably recognized, weighed, and subject to controls that effectively lower credit risk, commercial banks must have acceptable measurement, appraisal, and reporting frameworks. Commercial bank stockholders may use their authority to demand information to evaluate the effectiveness of risk controls implemented by the management of commercial banks (Singh et al., 2021). The executives' annual report to shareholders aids in evaluating control procedures and guidelines (Lisa & Hermanto, 2021). This study examines how regulation is applied, which is important for banking arrangements that present multiple products and services because management superiority is critical in the case of credit lending in emerging economies.

Furthermore, the findings of this study are incongruent with those of Nyabyenda and Murekeyimana (2022). (2018); Kalu, Shieler, and Amu (2018); Olobo et al. (2021) and Y. Liu et al. (2020).

5. Conclusion

5.1 Findings of the study

The study concludes that credit risk management, with its constructs of credit risk identification, assessment, and control, impacts the profitability of commercial banks. It is therefore imperative for bank managers, credit risk managers, and credit risk committees that ever structures are created in banks to put a lot of emphasis on the issues of identifying risks, assessing risks, and taking control measures when extending credit facilities to customers or borrowers.

5.2 Limitations

There could be an issue of bias because some of the responses were collected using Self-Administered Questionnaires. However, an error margin of only 5% was achieved. Second, the study was conducted in one branch, and views from other branches would yield different results due to variations in economic activities, especially if the branches located in the cities were involved.

5.3 Suggestions

These investigations have informed branch managers about the importance of risk identification, risk assessment, and risk control. Therefore, managers should focus on risk identification and mitigation measures to reduce these risks, create a risk assessment team to evaluate risks, establish strategies, and prioritize risk management practices. Second, the policy board should come with policies on credit risk management that credit officers should strictly adhere to.

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References

- Abdelaziz, H., Rim, B., & Helmi, H. (2022). The interactional relationships between credit risk, liquidity risk and bank profitability in MENA region. *Global business review*, 23(3), 561-583.
- Afriyie, S. O., Yusheng, K., Kaodui, L., Caesar, A. E., & Owusu-Akomeah, M. (2018). Credit risk management system of commercial banks: an analysis of the process.
- Agustin, E. D., & Bayunitri, B. I. (2020). The influence of risk management to credit lending. *International Journal of Financial, Accounting, and Management*, 2(1), 65-77.
- Al-Eitan, G. N., Khanji, I. M., & Saraireh, S. A. (2023). Trade Credit Management and Profitability of Jordanian Manufacturing Firms. *Risks*, 11(1), 16.
- Al- Tamimi, H. A. H., & Al- Mazrooei, F. M. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *The Journal of Risk Finance*, 8(4), 394-409.
- Alabdullah, T. T. Y. (2022). Management accounting insight via a new perspective on risk management-companies' profitability relationship. *International Journal of Intelligent Enterprise*, 9(2), 244-257.
- Alfadli, A., & Rjoub, H. (2020). The impacts of bank-specific, industry-specific and macroeconomic variables on commercial bank financial performance: evidence from the Gulf cooperation council countries. *Applied economics letters*, 27(15), 1284-1288.
- Ali, B., & Oudat, M. S. (2020). Financial risk and the financial performance in listed commercial and investment banks in Bahrain bourse. *International Journal of Innovation, Creativity and Change*, 13(12), 160-180.
- Almustafa, H., Nguyen, Q. K., Liu, J., & Dang, V. C. (2023). The impact of COVID-19 on firm risk and performance in MENA countries: Does national governance quality matter? *PloS one*, 18(2), e0281148.
- Amin, M. E. (2005). Social science research: Conception, methodology and analysis: Makerere University.
- Bakashaba, E., Lutaaya, J. M., & Arinaitwe, H. (2022). Credit Risk and Financial Performance of Selected Commercial Banks in Kampala District, Uganda. A Cross-sectional Study. *Student's Journal of Health Research Africa*, 3(12), 21-21.

- Barton, T. L., Shenkir, W. G., & Walker, P. L. (2002). *Making enterprise risk management pay off*: FT Press.
- Belas, J., Gavurova, B., & Toth, P. (2018). Impact of selected characteristics of SMES on the capital structure. *Journal of Business Economics and Management*.
- Boahene, S. H., Dasah, J., & Agyei, S. K. (2012). Credit risk and profitability of selected banks in Ghana. *Research Journal of finance and accounting*, 3(7), 6-14.
- Bordens, K. S., & Abbott, B. B. (2011). Research Designs and Methods: McGraw Hill Education (India) Private Limited.
- BoU. (n.d.). Annual Report. Retrieved from https://www.bou.or.ug/bouwebsite/FinancialStability/AnnualReport/Annual/index.html
- Bouteille, S., & Coogan-Pushner, D. (2021). *The handbook of credit risk management: originating, assessing, and managing credit exposures*: John Wiley & Sons.
- Catherine, N. (2019). Credit risk management and financial performance: a case of bank of africa (U) limited. *Open Journal of Business and Management*, 8(1), 30-38.
- Cui, J., Jo, H., & Na, H. (2018). Does corporate social responsibility affect information asymmetry? *Journal of Business Ethics*, 148, 549-572.
- Du, G., Liu, Z., & Lu, H. (2021). Application of innovative risk early warning mode under big data technology in Internet credit financial risk assessment. *Journal of Computational and Applied Mathematics*, 386, 113260.
- Dunyoh, M., Ankamah, E. T., & Kosipa, S. J. K. (2022). The impact of credit risk on financial performance: Evidence from rural and community banks in Ghana. *Hybrid Journal of Business and Finance*, 3(1).
- Ellis, T. J., & Levy, Y. (2009). Towards a Guide for Novice Researchers on Research Methodology: Review and Proposed Methods. *Issues in Informing Science & Information Technology*, 6.
- Eton, M., Fabian, M., & Benard, P. O. (2022). Are internal controls important in financial accountability?(Evidence from Lira District Local Government, Uganda).
- Finger, M., Gavious, I., & Manos, R. (2018). Environmental risk management and financial performance in the banking industry: A cross-country comparison. *Journal of international financial markets, institutions and money*, 52, 240-261.
- Francis, A., Caleb, T., & Eton, M. (2022). Credit Risk Management Practices and Loan Performance of Commercial Banks in Uganda.
- Gabriel, O., Victor, I. E., & Innocent, I. O. (2019). Effect of non-performing loans on the financial performance of commercial banks in Nigeria. *American International Journal of Business and Management Studies*, 1(2), 1-9.
- Geitangi, D. M. (2015). The relationship between credit risk management practices and the performance of loan portfolio of commercial banks in Kenya. University of Nairobi.
- Githaiga, J. W. (2015). Effects of credit risk management on the financial performance of commercial banks in Kenya. University of Nairobi.
- Graham, A., & Coyle, B. (2000). Framework for: Credit risk management: Global Professional Publishi.
- Hasabubwenje, D. (2020). Bank of Uganda needs to do more to prevent closure of banks. Nile Post.
- Huang, X., Liu, X., & Ren, Y. (2018). Enterprise credit risk evaluation based on neural network algorithm. *Cognitive Systems Research*, 52, 317-324.
- Isa, M. Y. M., Choong, Y. V., Fie, D. Y. G., & Rashid, M. Z. H. A. (2018). Determinants of loan loss provisions of commercial banks in Malaysia. *Journal of Financial Reporting and Accounting*, 16(1), 24-48.
- Isaac, M. (2021). Effect of Credit Management on Profitability of Selected Commercial Banks in Rwanda. *The International Journal of Business Management and Technology*, 5(6).
- James, K., & Lorna, M. (2019). Credit Risk Management and Salary Loan Performance in Commercial Banks in Uganda: A Case Study of Stanbic Bank Uganda Limited. *Management and Economic Journal*, 3(9), 659-667.
- Kaitibi, D. B., Ganawah, E. T., Yokie, M. A., Jalloh, M., & Koroma, B. M. (2017). Impact of efficient credit management on profitability of commercial banks in Sierra Leone. *Open Journal of Business and Management*, 6(1), 139-150.

- Kalu, E. O., Shieler, B., & Amu, C. U. (2018). Credit risk management and financial performance of microfinance institutions in Kampala, Uganda. *Independent journal of management & production*, 9(1), 153-169.
- Kalui, F. M., & Kiawa, E. (2015). Efects of Credit Risk Management Procedures on Financial Performance among Microinance Insituions (MFIs) In Kenya: A Case of MFIs in Nairobi County. *Internaional Journal of Humaniies Social Sciences and Educaion*, 2(3), 81-103.
- Kargi, H. S. (2011). Credit risk and the performance of Nigerian banks. *Ahmadu Bello University, Zaria*. Khemakhem, S., & Boujelbene, Y. (2018). Predicting credit risk on the basis of financial and non-financial variables and data mining. *Review of Accounting and Finance*, 17(3), 316-340.
- Kimotho, D., & Gekara, M. (2016). Effects of Credit Risk Management Practices on financial performance of Commercial banks in Kenya. *International journal of economics & finance*, 2(3), 116-189.
- Kirinya, A. (2020). Tropical Bank Set to Close Mbale, Mbarara Branches. Retrieved from https://ugandaradionetwork.net/story/tropical-bank-set-to-close-mbale-mbarara-branches
- Kithinji, A. M. (2010). Credit risk management and profitability of commercial banks in Kenya.
- Kothari, C. R. (2004). Research methodology: Methods and techniques: New Age International.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Lekwauwa, N., & Bans-Akutey, A. (2022). Commercial banks' profitability and portfolio management in Ghana. *Annals of Management and Organization Research*, 3(4), 245-257.
- Lisa, O., & Hermanto, B. (2021). Analysis of Risk profile, Good corporate governance, Earnings, and Capital (RGEC) in Syariah commercial banks and conventional commercial banks. *e-Repository Dosen Universitas Gajayana Malang*.
- Liu, G., Mirzaei, A., & Vandoros, S. (2014). The impact of bank competition and concentration on industrial growth. *Economics Letters*, 124(1), 60-63.
- Liu, Y., Brahma, S., & Boateng, A. (2020). Impact of ownership structure and ownership concentration on credit risk of Chinese commercial banks. *International Journal of Managerial Finance*, 16(2), 253-272.
- Ma, Z., Hou, W., & Zhang, D. (2021). A credit risk assessment model of borrowers in P2P lending based on BP neural network. *PloS one*, 16(8), e0255216.
- Mafumbo, P. (2020). Credit management, credit policy and financial performance of commercial banks in Uganda. *International journal of business and management review*, 8(5), 68-99.
- Maliisa, T. (2013). Credit risk management and financial performance in housing finance Bank Uganda. Uganda Management Institute.
- Mbiti, J., Lugogo, F., & Keoch, R. (2018). Contribution of Credit Risk Management Strategies on Financial Stability: A Case of Commercial Banks in Kilifi County-Kenya. *European Journal of Business and Management*, 10(17), 1-12.
- McKee, G., & Kagan, A. (2018). Community bank structure an x-efficiency approach. *Review of quantitative finance and accounting*, 51, 19-41.
- Merton, R. C. (1974). On the pricing of corporate debt: The risk structure of interest rates. *The Journal of Finance*, 29(2), 449-470.
- Muhindi, K., & Ngaba, D. (2018). Effect of firm size on financial performance on banks: Case of commercial banks in Kenya. *International Academic Journal of Economics and Finance*, 3(1), 175-190.
- Mutembei, C., & Gitonga, M. N. (2022). Assessment of Credit Risk Identification on Loan Repayment Performance of Saccos in Imenti South Sub-county, Meru, Kenya. *Asian Journal of Economics, Business and Accounting*, 22(23), 326-334.
- Nathan, S., Ibrahim, M., & Tom, M. (2020). Determinants of non-performing loans in Uganda's commercial banking sector. *African Journal of Economic Review*, 8(1), 26-47.
- Nelson, O. N. F. (2020). The Impact of credit risk management on the profitability of a commercial bank: The case of BGFI bank Congo. *International Journal of economics and Finance*, 12(3), 21.
- Nyabyenda, R., & Murekeyimana, T. (2022). Assessing the Impact of Credit Management Practices on the Profitability of Manufacturing Companies in Rwanda. 10, 35-49.

- Olobo, M., Karyeija, G., Sande, P., & Khoch, S. (2021). Credit Risk Management Practices and Performance of Commercial Banks in South Sudan.
- Omar, M. A., Muturi, P., & Samantar, P. (2018). Effects of credit management practices on profitability of telecommunication companies in Garowe, Somalia. *International Journal of Social Sciences and Information Technology*, 4(5), 408-421.
- Opiding, A. (2018). Credit Risk Management and profitability in commercial banks in Uganda: A case study of Diamond trust bank. Uganda Management Institute.
- Oranefo, P. C., & Egbunike, C. F. (2023). Accounts Payable Turnover and Firm Performance of Quoted Manufacturing Firms in Nigeria. *International Journal of Accounting and Management Information Systems*, 1(1), 45-65.
- Owojori, A. A., Akintoye, I. R., & Adidu, F. A. (2011). The challenge of risk management in Nigerian banks in the post consolidation era. *Journal of Accounting and Taxation*, 3(2), 23-31.
- Paraskevas, A., & Saunders, M. N. (2012). Beyond consensus: an alternative use of Delphi enquiry in hospitality research. *International Journal of Contemporary Hospitality Management*, 24(6), 907-924.
- Phuong, N. T. T., Huy, D. T. N., & Van Tuan, P. (2020). The evaluation of impacts of a seven factor model on nvb stock price in commercial banking industry in vietnam-and roles of Discolosure of Accounting Policy In Risk Management. *International Journal of Entrepreneurship*, 24, 1-13.
- Protase, M. (2022). Credit Monitoring, Recovery Strategies and Performance of Commercial Banks in Uganda: A Case Study of Centenary Bank Kabale Branch. Kabale University.
- PwC. (n.d.). Credit Risk Management. Retrieved from https://www.pwc.com/la/en/risk-assurance/credit-risk-management.html
- Remy, B., & Njeru, P. (2020). Impact of Credit Risk Identification on the Financial Performance of Commercial Banks in Burundi: A Case of Study of BANCOBU and BCB. *Researchjournali's Journal of Finance*, 8(5), 2-8.
- Rukundo, A. R. (2018). Credit Management and Loan Performance in Selected Commercial Banks In Bujumbura, Burundi. Kampala International University, College of Economics and Management.
- Segal, E. A. (2011). Social empathy: A model built on empathy, contextual understanding, and social responsibility that promotes social justice. *Journal of social service research*, 37(3), 266-277.
- Shieler, B., Emenike, K. O., & Amu, C. U. (2017). Credit Risk Management and Financial Performance of Microfinance Institutions in Kampala, Uganda. *Journal of Banking and Financial Dynamics*, 1, 29-35.
- Shkolnyk, I. O., Brychko, M. M., Pakhnenko, O. M., Semenoh, A. Y., & Kremen, V. M. (2017). Introduction to finance: theory and practice.
- SINGH, S. K., BASUKI, B., & SETIAWAN, R. (2021). The effect of non-performing loan on profitability: Empirical evidence from Nepalese commercial banks. *The Journal of Asian Finance, Economics and Business*, 8(4), 709-716.
- Tosin, I. O., & Otonne, A. (2019). A comparative analysis of the determinants of profitability of commercial and microfinance banks in Nigeria. *International Journal of Financial, Accounting, and Management,* 1(3), 173-182.
- Wachira, A. K. (2017). Effects of credit risk management practices on loan performance of commercial banks in Nyeri County, Kenya. *European Journal of Economic and Financial Research*.
- Wang, F., Ding, L., Yu, H., & Zhao, Y. (2020). Big data analytics on enterprise credit risk evaluation of e-Business platform. *Information systems and e-business management*, 18, 311-350.
- Yang, Y., Wu, F., Zhang, Q., Hong, J., & Dong, C. (2020). Is it sustainable to implement a regional payment for ecosystem service programme for 10 Years? An empirical analysis from the perspective of household livelihoods. *Ecological Economics*, 176, 106746.
- Yegon, C., Sang, J., & Cheruiyot, P. (2014). Effects of financial risk management on firm's profitability: panel data econometrics of selected micro-financial institutions in Kenya. *Research Journal of finance and accounting*, 5(9).
- Zeng, S. (2012). Bank non-performing loans (NPLS): A dynamic model and analysis in China.