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Credit Management Processes and Financial Performance of Commercial Banks In Rwanda: A case of COGEBANQUE Plc

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Abstract:

Background: *This research study assessed the the effect of credit management process on performance of commercial banks in Rwanda with reference to Cogebanque Plc. The research design in this study was descriptive.*

Materials and Methods: *A sample size of 110 respondents was drawn from 152 employees working at Cogebank Plc Headquarters, using a simple random technique. The study used a purposive sampling technique to select respondents. Information was collected using a questionnaire administered to respondents. The study used a Statistical Package Product and Services Solutions SPSS-version 25.0 for data analysis.*

Results: *Finding showed that 62.6% of respondents agreed with the increase of Return on Assets in 2018, 53.2% for 2019, 58.3% for 2020, while 51.8% agreed with the increase of financial performance for 2021. Return on Equity, is well appreciated by respondents given that 62% agreed with the increase of Return on Equity that for the year 2018, 63.7% for 2019, 63.6% for 2020 and, 54.5% for 2021. Results to the first objective showed that when credit appraisal process is hold constant financial performance was 2788. Unit of credit appraisal process will stimulate a change of financial performance by a factor of 0.042 with p-value of 0.048. The researcher rejected the null hypothesis Ho1 and confirmed that there is significant, positive and weak correlation between credit appraisal process and financial performance of Cogebanque Plc. Results to the second objective showed that Credit Risk Control was hold constant financial performance of Cogebanque. was 2.883. Unit of credit risk control will increase financial performance of Cogebanque by a actor of 0.49 with ρ-value of 0.48. The researcher rejected the null hypothesis Ho2 and confirmed that there was significant, positive and weak correlation between credit risk control process and financial performance of Cogebanque. Findings to the third objective showed that when Credit Collection Policies was hold constant financial performance of Cogebanque was 4030. A unit of Credit Collection Policies will increase financial performance of Cogebanque by a factor of 0.068 with p-value of 0.047. Therefore, the researcher rejected the null hypothesis Ho3 and confirmed that there was a significant, positive and weak correlation between credit collection policies and financial performance in Cogebanque.*

Conclusion: *From the research findings, he study recommended Cogebanque Plc and other banks to scrutinize its credit management process asking to credit department staffs to identify their role in low level of financial performance. The Central Bank should establish policies helping banks to establish a set of rules of saving banks encountering difficulties related to catastrophes. Further researches should study the impact of the management of loan default on financial performance of banks and study the effect of credit risk management process on the financial performance of banks' customers.*

Key Words*: Credit management process, financial performance, commercial bank in Rwanda.*

I. Introduction

Credit management was a necessary process for a company involved on the credit business. If the process is done correctly, it ensures that customers pay for the services provided. Credit management processes are a company's strategies for ensuring that corporate credit levels are acceptable and effectively managed (Mafumbo, 2020). It denotes a component of credit management that includes credit analysis, credit rating, credit categorization, and reports. Good credit management is considered necessary for a continuing and stable financial institution against poor financial performance that happens with declining credit quality (Olabamiji & Michael, 2018). Well managing credit and levitating related risks help in improving financial performance (success) of financial institutions in general, commercial banks in particular, and boost borrowers' development.

The banking industry worldwide, in Africa in general and in Rwanda particularly, had been witnessing a lot of organisational fluctuations. These variations are meant for the enrichment of services for the betterment of its operators and for the benefit of the clients, investors as well as the economy at large. On worldwide side, credit management encounter different problems as incapacity to reach the exact information when it is desired, no group wide risk displaying framework, continuous rework and much duplication of effort and insufficient risk tools and cumbersome reporting (GDS, 2021).

Credit management and financial success are wide terms given that their influence on economy and development are paramount. On continent side, in Africa, in general and in Sub-Saharan Africa in particular, banking crises arising from credit booms may become an increasing source of concern for regulatory and supervisory authorities, to the extent that the interactions between credit and economic cycles become stronger, similar to the trends observed in the advanced economies. However, the relationship between bank competition and credit risk is less than straightforward (Brei, 2017). In the East African Region, the net loan portfolio in banking institutions enhanced by 13.3%, but there was a pre-tax decline that reduced by 19% between 2014 and 2015 due to further provisions for loans that add to and for the current credit risk not fulfilled and received (Kanchu & Kumar, 2017).

While providing credit as a main source of generating income, banks take into account many considerations as a factor of credit management which helps them to minimize the risk of default that results in financial distress and bankruptcy. This is due to the reason that while banks providing credit they are exposed to risk of default (risk of interest and principal repayment) which need to be managed effectively to acquire the required level of loan growth and performance.

Commercial banks in Rwanda try to assist the population by offering them loans (National Bank of Rwanda, 2018). Domestic lending also fell sharply as banks ran out of cash to borrow and the economy contracted below 7%. By 2011, the banking sector was profitable, liquidity increased and the ability to manage risk increased significantly (BNR, 2018). Statistics from the National Bank of Rwanda show that the increase in assets in the banking sector was helped by loans and advances (53.8%).

In Rwanda, for instance, it was deemed that Cogebanque Plc remains one of banking institutions which has not been acquired by other banks as it has been done to former commercial banks of Rwanda, former BANCOR, FINA BANK (Rwangombwa, 2019). Despite previous researches done on credit management and financial performance, it is unclear to understand the reason why banking institution with sound risk management practices and risk management skills still face constraints. That is why study must be done to help in understanding how to manage well credits and reach high financial performance.

The general research objective was to examine effect of credit management processes on financial performance of commercial banks in Rwanda. The specific research objectives were:

1. To determine effect of credit appraisal process on financial performance of Cogebanque Plc.
2. To examine the effect of credit risk control process on financial performance of Cogebanque Plc.
3. To evaluate effect of collection policies process on financial performance in Cogebanque Plc.

II. Theoretical Literature

Theoretical literature presents deep explanation of fundamental concepts of the research subject. In this regard, the research describes in deep credit management processes (credit appraisal process, credit risk control process, collection policies process) and performance of commercial bank. The chapter ends by giving a theoretical relationship between credit management processes and performance of commercial bank.

Credit appraisal includes procedures for requesting loans and requirements listed in the credit policy files of banks to help loan personnel in advancing credit to customers. This is one of the critical stages in loan processing since it evaluates data related to the financial strength and credit scoring of the client. The factors that are considered in loan approval include the background of the applicant, the reason for the application, the amount of loan required, the borrowers' amount and source of his contribution, terms of repayment for the borrower, the borrowers' proposed security, the location of the borrower's business, financial and technical appropriateness of the proposed credit (Jamil & Abdullah, 2014).

Shortly, factors considered in loan appraisal are the background of the applicant, the reason for the application, the amount of loan required, the borrowers' amount and source of his contribution, the terms of repayment for the borrower, the borrowers' proposed security, the location of the borrower's business and financial and technical appropriateness of the proposed credit. Moreover, it has found out that client appraisal was a reasonable instrument for credit and some components of mortgage were pertinent during appraisal that low performance of services in term of quality and client capacity for loan repayment. This emanates from defaulting attitudes, fraud, characteristics of clients. Obviously, it discovered that commercial banking institutions' human resources were able to attain high level of success in appraising their customer demands (Kimotho & Gekara, 2016).

The ultimate objective of banking institution is to maximize their profits with reasonable and quantifiable risks. The credits risk occurs when clients might not refund their credits. Credit risk

is not restricted only in loan products (Bessis, 2015). It is clear that credit risk management has a great importance in banking institutions since they rely heavily on the components of operational risks to provide the service to their customers (Thompson, MacGregor, & Calkin, 2016).

The components of credit risk control risk management include identification and the assessment of risks essential to the bank, and then, providing responses in a way that decreased their effects and optimization of the shareholders' value (Suren, 2016). Bessis (2010) identified that objectives of risk management are to study risks end, to purpose the follow up, and to evaluate them to assist other most of important abilities in a bank. Sometimes the poor quality of loan is owing to elements not attributed to the lending bank like adverse choice and risk (Jamil & Abdullah, 2014). For this last opinion, it has been significant to possess a recap of bank credit risk manifestation procedures for understanding framework of loans management.

Credit risk is the oldest form in the financial markets. If credit can be defined as "the expectation of a sum of money within some limited time", then credit risk is the chance that this expectation will not be met. Credit risk is defined as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Every financial institution bears a degree of risk when it lends to business and consumers and will experience some losses when certain borrowers fail to repay their loans as agreed (Silvia, 2015). Credit risk management holds many challenges. Those challenges are inefficient data management. This is an inability to access the right data when it is needed causes problematic delays. Other challenges are no group wide risk modelling framework. This challenge means that without it, banks can't generate complex, meaningful risk measures and get a big picture of groupwide risk. Constant rework also consists in analysis that can't change model parameters easily, which results in too much duplication of effort and negatively affects a bank's efficiency ratio. The insufficient risk tools through them banks can't identify portfolio concentrations or re-grade portfolios often enough to effectively manage risk.

Previous studies done on credit risk control focuses on the assessment of a group of conducive mechanism to prevent or reduce risks of non-performing loan, delaying loan repayment and other malpractices that may occur in the process of loan repayment. Mehmood and Mehmood (2017) did research on the effect of credit risk management by focusing on internal control system in order to attain the expected profit in term of RoE and RoA. The above authors evidenced that adequate understanding of pertinent risks that may lead to loan default would stimulate financial managers to formulate strategies that may be effective in copying with the identified risks. Another research was carried out by Shehzad et al., (2014) on credit control and financial performance among commercial banks. The study specified the role of credit loan management practices on loan repayment in banking sector.

Concernng credit collection policy, in order to be financially viable, banks should be sure with maximization of financial services quality relied on sure high portfolio excellence relied on 100% credit paid, or no performing loan (Abay et al., 2014). Mohammad (2014) observed that firms have adopted the arrear monitoring systems and stringent policy as the most efficient methods of loan collection. However, the study warned that, when lenient policy is adopted, the loan collection is very poor.

According to Parkin & Blade, (2015). the process of formulating loan collection policies is very importance owing to the fact that most of clients did not timely repay loans and other recognized

a high rate of default. Therefore, the public auction for defaulters would follow rigor procedures and phases in accordance with predetermined rules and regulations. Moreover, in a study done by Shehzad, (2014) it was felt that credit collection processes intended to improve loan recover and repayment process and attitude and reduce risks of default.

Loan approval timeframe is the amount of time applicants need from the loan to be disbursed or received. It is evaluated based on customer's position as shown in accordance with payment rate. Business Dictionary (2017) denoted that credit collection policies were considered as document that provides guidance, rules and regulations on credit requirements for the delivery of product and credit services, customer qualification criteria, collection procedures, and default actions.

Financial performance refers to the assessment of standard indicators of adequate, suitable and proper duties like time, productivity, profitability, reducing wastes and complying with rules and regulations. The performance itself denotes the metrics associated with the ways in which a request is handed or the way of doing something in a successful way. It is the results of all of the firm's functions and strategies (Wachira, 2015). There are many tools used in measuring financial performance of any business in general and commercial bank in particular. For this research, financial performance of a bank has been computed using different tools add ratios as Return on Equity (RoE) and Return on Assets (RoA).

RoE refers to measurement of income from shares of firm relying on their capital accumulated in the company (Ghazouani, 2016). The author evidences that an adequate success of any company is calculated and determined by return on equity that supports them to be aware of revenue ability of the company relying on its equity (Gutierrez, 2014). For Susan (2008), Return on Equity, or RoE, is a measurement of financial performance arrived at by dividing net income by shareholder equity. Because shareholder equity is equal to a business's assets minus its debts, RoE can also be considered the return on net assets. Return on equity is calculated as follows:

RoA refers to measures of how profitable a firm connected to total asset. The return on asset usually called the return on investment (RoI). It assesses the adequacy of the management in earning profit for the company relied on available assets (Ghazouani, 2016). Previous scholars argued that all banks necessitate having a proper and positive return on transaction and operations. The desired return on assets is often high, while whether a firm is capable to attain above 1% of annual Return on Asset, this implies the realization of high level of success (Shehzad et al., 2014). Return on assets is a metric that indicates a company's profitability in relation to its total assets. Management, analysts, and investors to determine whether a company uses its assets efficiently to generate a profit can use RoA (Susan, 2008). It is calculated by dividing a company's net income for a period by the value of the company's total assets.

Credit risk refers to the probability of loss due to a borrower's failure to make payments on any type of debt. Credit risk management is the practice of mitigating losses by understanding the adequacy of a bank's capital and loan loss reserves at any given time – a process that has long been a challenge for financial institutions (Ayadi, 2015).

For research gap identification, researcher consider that poor success continues to be a growing problem in banking institutions (Bessis, 2015). There was focusing on the level of loan performance in Rwanda where it was above 1% (Fluid Surveys University, 2015). Therefore, in 2018, banking institutions non-performing loans have been 14.9% and a mean of 11.4 % (Suren, 2016). In Rwanda, the recent collapse of some financial institutions collapsed due to poor lending processes between 2007 and 2009 (Kyalo, 2014).

Further, studies undertaken were not conclusive. Palacios et al., (2016) investigated effect of credit risk management processes on financial success of commercial banks in Liberia, but did not evaluate how credit management processes affect banks in term of RoE and RoA. According to Gaskin (2018) no correlation was show between credit management and banking success in Kenya. Parkin & Blade (2015) assessed effect of credit management on financial success of microfinance institutions in Kenya. However, previous researches have focused on the use of various methods and technical in collecting and analyzing information. Finally, Chatrchyan et al. (2014) adopted descriptive research design collecting only primary data. Previous researches did not evidence the way in which credit management processes like collection policies, customer appraisal and lending policies can influence financial performance. Therefore, the present research employed a descriptive research design with reference to Cogebanque Plc in the City of Kigali.

Conceptual framework

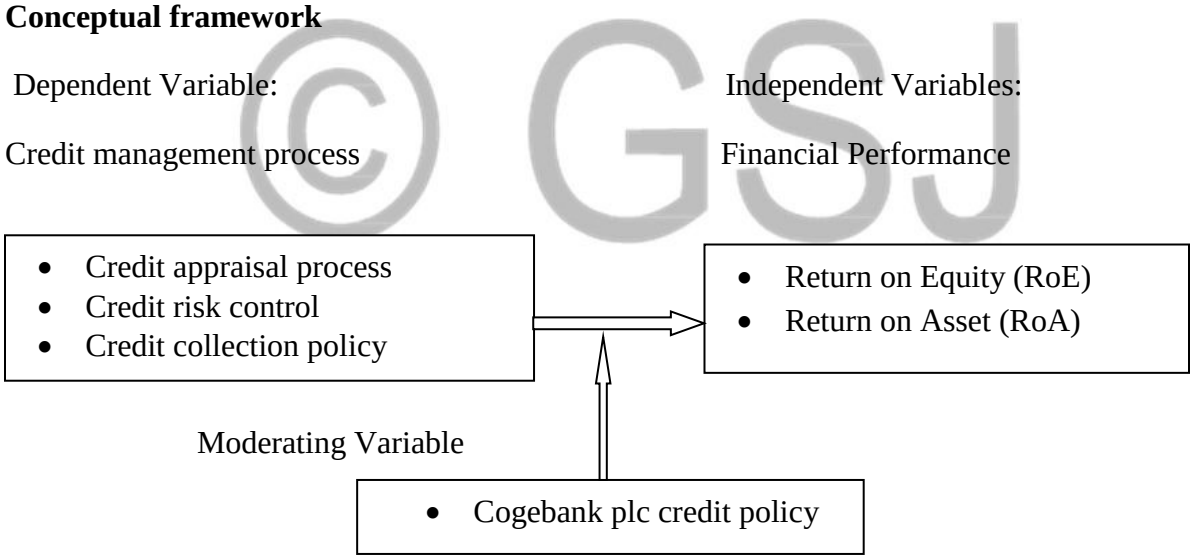

Figure 1: Conceptual framework

Source: Researcher, 2022

II. Research Materials and Methods

Research Design: A research design encompasses the method and procedures employed to conduct scientific research. The design of a study defines the study type and sub-type like research question, hypotheses, independent and dependent variables (Robson, 2002). The design of a study defines the study type (descriptive, correlational, semi-experimental, experimental, review, meta-analytic) and sub-type (e.g., descriptive-longitudinal case study), research problem, hypothesis, independent and dependent variables, experimental design, and, if applicable, data collection methods and a statistical analysis plan (Claybaugh et al., (2020).

Sample Size: This term refers to persons chosen from the entire target population for research in a way that they signify the larger group from which they were chosen. It was very crucial to make generalization of the features of the sample to the entire population (Creswell, 2013). It is a subgroup of the elements of the population selected for participation in the study (Jibril & Nwanmou, 2012). For the purpose of collecting relevant information, an appropriate sample was determined from target population. Since the target population is finite. The researcher adopted a formula of Yamane (1967):

$n = \frac{N}{1+N(e)2}$; Therefore, n=sample size, N= population size and e are precision error. Therefore, using this formula when e= 0.05 and N= 152

$n = 152 / [1 + 152 \times (0.05)^2]$

$n = 152/ 1 + 152 \times 0.0025$

$n = 152/ 1 + 0.38$

$n = 152 / 1.38$

The sample size n is 110.145. In this regard, the sample size was 110 respondents.

Data Collection Methods

This research collected information from primary and secondary data. The primary data source was obtained through self-administrated questionnaire and interview guide. The questionnaire that was applied is structured in design, to include closed ended questions. Furthermore, interview was employed to gather information to supplement information gathered through questionnaire. Secondary information was data gathered by making use of the existing data (Creswell, 2013). The main source was the review of internal documents that mainly comprise of credit risk reports, annual financial reports and all records containing relevant information.

Administration of Data Collection Instruments

Respondents were given questionnaire. This was mainly self-administered where the researcher gives the respondents the questionnaires and collected the responses the following day. This process took a period of two weeks due to delay of responses from some respondents. In addition, interview schedule was appropriately planned so as enable easy facilitation of interview with the senior staff.

For a study to be of real meaning it ought to apply valid and reliable instruments. Before actual research is done, the researcher has to make sure that the instruments are cheeked for validity and pre-tested to determine its reliability (Ochieng 2009). This have been done using the Content

Validity Index (CVI) coefficient. If the CIV ≥ 0.70, then the instrument would be valid. For this research, before administering the questionnaires, four (4) experts in research were selected to assess the relevant items of the questionnaire with the objectives of the research.

$$\mathbf{CVI=}\frac{\textbf{Total number of relevent items in the instrument}}{\textbf{Tota number of items in the instrument}}$$

The total questions of the questionnaire were 31. After getting the feedback of those researchers the relevant questions were 26 and 5 questions were irrelevant. Therefore, using the above relation of CVI, the calculation of validity of the questionnaire has given: CVI= 26 / 31 = 0.838 or 83.3%. The research questionnaire was valid because the calculated C.V.I of 0.838 is greater than 0.70 (Ochieng, 2009).

Table 1 The Reliability of the instrument

Reliability Statistics	
Cronbach's Alpha	Number of Items
0.812	31

Source: Researcher (2022)

Data Analysis Procedure

Information from respondents was edited, coded and tabulated relying to the items which coming from the study specific objectives and research questions. In this research. Information analysis was done using statistical product and services solutions version 25.0 for facilitating the analysis of the strong correlation between variables. Tables and charts were utilized for processing the data and the code. The researcher employed both descriptive and inferential statistics. In descriptive statistic, the study adopted mean and standard deviation while in inferential analysis both regression and correlational analysis were done. The result from analysis permitted to the author to assess and recapitulate results and evidences relying on specific objectives.

Ethical Consideration

When we engage ourselves in other peoples' lives, through research, ethical concern arises (Kvale, 1996). First of all, it is important to protect the participant's privacy and anonymity and to all personal and estimate information with care (Dowling, 2005). It was important to seek authorization for research from the university and the bank prior the process of collecting information. Participants were explained the ultimate goal of the study. Therefore, research instruments were distributed to them.

IV. RESULTS

The population in the interest of this study was 152 employees working in Cogebank Plc Headquarters according to Human Resource Department. A total of 110 respondents were involved in the study. 110 questionnaires have been administered, however, 109 of them were filled and returned which represents 99.1% response rate. The sample is representative as it is drawn from the relevant departments.

Demographic Characteristic of Respondents

The researcher collected socio-demographic information to provide baseline evidence with the intention to assess the effects of investment risk policies and the financial performance of Cogebank Plc. In the total survey 44% of respondents were female while 56% were of participants were male. This shows a sensitive representation of gender at Cogebank Plc. For age, it has been demonstrated that 18.1% were aged under 30 years old, 42.9 were between 30 and 40 years old, 29.1% were between 41 and 50 years old while the remaining 9.9% of respondents were 51 years and more. The big number of respondents (72% holding ages between 30 and 50 years) were mature and had enough experience, and they understand well banking services, hence their answers were accurate. The findings indicated that employees are sufficiently qualified within the field given that 2.18% had secondary certificate, 24.2% with diploma, 41.2% with bachelor's degree and 22.5% of respondents with master's degree. The respondents had enough experience given that 2.2% of participants demonstrated to have less than two years of experience, 18.1% had between 2 and 5 years, 53.3% with 6 and 9 years while 26.4% had more than nine years of experience in credit management processes and financial performance of Cogebanque Plc. Given that 79.7% of respondents had enough experience (of more than 6 years) in banking field, the answers received from respondents were reliable.

Presentation of findings on research objectives

The research was concerted along with three specific objectives. This section presents the findings along with these objectives.

Findings on objective one:

The first objective of this research was to determine the effect of credit appraisal process on financial performance of Cogebanque Plc.

Table 1 The effect of Credit appraisal process in credit management of Cogebanque Plc

The role of Credit appraisal process in credit management	SD 1	D 2	N 3	A 4	SA 5	Mean	Std
Client credit worthiness (capacity to repay & repayment history)	4.1	18.9	18.6	22.2	36.2	3.53	1.5
Bank ability	8.6	21	17.3	28.6	24.5	3.25	1.21
Collateral aspect	11.2	9.5	24	24.8	30.5	3.48	1.27
Ability to fulfil financial obligations	7.1	17.2	20.3	25.1	30.3	3.55	1.31

Source: Primary Data (2022)

According to data presented in Table 1, concerning the role of credit appraisal process in credit management of Cogebanque Plc, on the variable testing Client credit worthiness (capacity to repay & repayment history), the mean was 3.53 and standard deviation was 1.5. In total, 58.4% agreed with the role of worthiness process (capacity to repay & repayment history) in credit management of Cogebanque Plc in Rwanda. Concerning Bank ability, the mean was 3.25 and standard deviation was 1.21. In total, 53.1% agreed with the bank ability. For collateral aspect, the mean was 3.48 and standard deviation was 1.27. In total, 55.3% agreed with the collateral aspect. On ability to

fulfil financial obligations, the mean was 3.55 and standard deviation was 1.31. In total, 55.4% agreed with the fulfilment of financial obligations of Cogebanque Plc in Rwanda.

From, the above discoveries, the researcher concluded on his side that information provided by respondent was accurate and confirmed that Cogebank Plc respected components and policy related to credit appraisal.

Table 2 Correlation Analysis between Credit Appraisal Processes and Financial Performance

	Correlation	**Return on Equity**	**Return on Asset**
Credit worthiness	Pearson Correlation	.119	.049
	Sig. (2-tailed)	.048	.041
	N	*109*	*109*
Bank ability	Pearson Correlation	.025	.071
	Sig. (2-tailed)	.048	.041
	N	*109*	*109*
Collateral Aspects	Pearson Correlation	.121	.102
	Sig. (2-tailed)	.044	.045
	N	*109*	*109*
Ability to fulfill financial	Pearson Correlation	.121	.102
Obligations	Sig. (2-tailed)	.047	.048
	N	*109*	*109*

Source: Primary Data (2022)

Information depicted in Table 2 demonstrate a correlation between variables. For credit worthiness and RoE (r=0.119; p-value=0.048) and RoA (r=0.049, p-value=0.041). The above relationship was statistical positive but there were weak correlations given that their values were between 0 and 0.3 and p-value were <0.05. These results meant that the increase of credit worthiness effected lowly but positively the increase in RoE and RoA and vice versa.

Results on banks' ability demonstrated a positive link between bank ability and RoE (r=0.025, p=0.048) and RoA (r=0.071, p=0.041). The above relationship was statistical positive but there were weak correlations given that their values were between 0 and 0.3 and p-value are <0.05. These results meant that the increase of banks' ability affects lowly but positively the increase in RoE and RoA and vice versa.

On collateral aspect, RoE (r=0.121; p-value=0.044) and RoA (r=0.102, p-value=0.045). The above relationship was statistical positive but there are weak correlations given that their values were between 0 and 0.3 and p-values were <0.05. These results meant that the increase of collateral aspect affected lowly but positively the increase in RoE and RoA, and vice versa. Results on the correlation between ability to fulfill financial obligation and Return on Equity was (r =0.121, ρ-value = 0.047), and Return on Assets it was (r = 0.102, ρ-value = 0.048). The above relationship was statistical positive but there were weak correlations given that their values were between 0

and 0.3 and p-value were <0.05. These results meant that the increase of credit worthiness affected lowly but positively the increase in RoE and RoA and vice versa.

Table 3 Regression coefficients between Credit Appraisal Process and Financial Performance

Model		Unstandardized		Standardized	t	Sign. (%)
		B	Std. Error	Beta		
1	(Constant)	2.883	.416		6.925	.000
	Credit worthiness	.126	.056	.129	2.142	.033
	Bank ability	.035	.079	.026	.440	.046
	Collateral Aspects	.143	.064	.134	2.239	.026
	Ability to fulfill	.059	.053	.088	1.121	.028

a. Dependent Variable: Financial Performance
Source: Primary Data (2022)

Information presented in Table 4.4 evidenced that:

$Y= \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_{4+}\alpha$

$Y=2.883+0.129X_1+0.026X_2+0.134X_3+0.088X_4 + e,$

Where Y= Financial Performance,

α or e = error term,

β_0 = Constant,

$X_1 = 1^{st}$ element as credit worthiness,

$X_2 = 2^{nd}$ element as bank ability,

$X_3 = 3^{rd}$ element as collateral Aspects,

$X_4 = 4^{th}$ element as ability to fulfill financial obligation.

This study evidenced that regression of independent variables was associated with financial performance. For this section, researcher considered credit appraisal process and financial performance and demonstrated that components of credit appraisal as credit worthiness is weakly correlated with financial performance (b=0.129, p-value=0.033). This study implies that an increase in credit worthiness had positive but weak effect on financial performance of Cogebanque Plc. The bank ability was positive but weakly correlated with financial performance (b=0.026, p-value=0.046). It denoted that the bank ability had weak but positive impact on financial performance of Cogebanque Plc in terms of RoA and RoE. Collateral Aspects had also a positive but with weak effect, it is weakly correlated to financial performance (b=0.134, p-value=0.026). The results meant that collateral aspects affected positively but weakly financial performance of Cogebanque Plc in terms of RoA and RoE. On ability to fulfill financial obligation there was also a positive but weak effect, and it was positively correlated with financial performance (b=0.088, p-value=0.028). The results meant that the ability to fulfill financial obligations affected positively but weakly financial performance of Cogebanque Plc in terms of RoA and RoE.

Henceforth, the research on the effect of credit appraisal on financial performance of Cogebanque Plc showed that credit worthiness, the bank ability, collateral aspects, and ability to fulfil financial obligation at the level ($\alpha \leq 0.05$) confirmed that there was a significant, positive, weak (little) correlation between credit appraisal and financial performance.

Table 4 Univariate analysis of Credit Appraisal Process and Financial Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.788	.422		6.607	.000
	Credit Appraisal Process	.042	.060	.042	.701	.048

Source: Primary Data (2022)

The univariate analysis of credit appraisal process. $y = \beta 0 + \beta_1 X_1 + \varepsilon$ became Financial Performance = 2.788+0.042 credit appraisal process. This means that when credit appraisal process was hold constant, financial performance was 2.788. Unit of credit appraisal process stimulated a change of financial performance by a factor of 0.042 with ρ-value of 0.048.

Testing first hypothesis Ho_1:

In testing the Ho_1: *There is no significance effect of credit appraisal process on financial performance of Cogebanque Plc,* the researcher used information under Tables 2, Table 3 and Table 4. The study felt that correlation between credit appraisal process and financial performance at Cogebanque had p-value 0.048<0.05. Given that when p<0.05, the null hypothesis was rejected. Henceforth, the researcher rejected the hypothesis and carried out that there is a significant, positive but weak effect between credit appraisal process and financial performance of Cogebanque Plc.

Findings on objective two:

The second objective of this research was to assess the effect of risk control on financial performance through the following statement in Table 1

Table 5 Credit risk control process in credit management of Cogebanque Plc

Credit risk control process, N=109	SD %	D %	N %	A %	SA %	Mean	Std
Credit referencing	5.2	13	18.3	38.3	25.2	3.5	1.05
Past repayment records	6.2	20.4	20.4	26.9	26.1	3.4	1.21
Customer credit standing	5.9	17.2	18.6	34.9	23.4	3.52	1.19
Loan secularization / materialistic	6.5	17.1	21.6	29.6	25.2	3.34	1.18

Source: Primary Data (2022)

About the role of Credit risk control process in credit management of Cogebanque Plc, on the variable testing credit referencing, the mean was 3.5 and standard deviation was 1.05. In total, 63.5% agreed with the role of credit risk control process in credit management of Cogebanque Plc in Rwanda. Concerning the use of past repayment records, the mean was 3.4 and standard deviation was 1.21. In total, 53% agreed with how the Past repayment records were used in credit management of Cogebanque Plc. On customer credit standing aspect, the mean was 3.52 and standard deviation was 1.19. In total, 58.3% agreed with the Customer credit standing. Concerning loan secularization & materialistic aspect, the mean was 3.34 and standard deviation was 1.18. In total, 54.8% agreed with the loan secularisation and materialistic aspect.

Henceforth, the researcher concluded on his side that information provided by respondent was accurate and confirmed that Cogebank Plc respected components and policy related to credit risk process management.

Table 6 Correlation Analysis between Credit Risk Controls process and Financial Performances of Cogebanque Plc

		Return on Equity	Return on Assets
Credit referencing	Pearson Correlation	0.215	0.214
	Sign. (2-tailled)	0.048	0.034
	N	*109*	*109*
Past repayment records	Pearson Correlation	0.208	0.280
	Sig.(2-tailed)	0.029	0.031
	N	*109*	*109*
Customer credit standing	Pearson Correlation	0.223	0.237
	Sign(2-tailed)	0.031	0.036
	N	*109*	*109*
Loan secularization	Pearson Correlation	0.291	0.201
	Sig.(2-tailed)	0.023	0.024
	N	*109*	*109*

Source: Primary Data (2022)

Evidence depicted in table 6 demonstrated a correlation between variables. For credit referencing and RoE results were (r=0.215, p-value=0.048) and for RoA results were (r=0.214, p-value=0.034). The above relationship was statistically significant, positive and weak correlations given that their values were between 0 and 0.3 and p-value were <0.05. These results meant that the increase of credits referencing impacted positively but weakly the increase in RoE, RoA as financial performance indicators vice versa. For Past repayment records and RoE, results were (r= 0.208, p-value=0.029) while for Past repayment records and RoA results were (r=0.280, p-value=0.031). RoE and RoA were positively, significantly, weakly correlated to past repayment records. Since the p-value was < 0.05 implying that a change in past repayment records affected positively the increase in RoE and RoA and the vice versa.

There was a positive, weak correlation found between Customer credit standing and RoE given that (r=0.223*, p=0.031) and RoA (r=0.237*, p=0.036). Given that the ρ-value was <0.05, the relationship is statistically significant suggesting that an increase in Customer credit standing impacted positively and weakly RoE and RoA and the vice versa. For loan secularization and RoE results were (r= 0.291, p=0.023), and for RoA results were (r=0.201, p=0.024). This meant that the relationship between variable was statistically significant, positive and weak. Given that the ρ-value was <0.05 suggesting that an increase in loan secularization affected positively but m weakly RoE and RoA and the vice versa.

Table 7 Regression coefficients of Credit Risk Control & Financial Performance of Cogebanque Plc

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.788	.422		6.60	.000
	Credit referencing	.042	.060	.042	.701	.036
	Past repayment records	.025	.080	.019	.309	.047
	Customer credit standing	.107	.065	.100	1.64	.048
	Loan secularization	.035	.079	.026	.440	.046

Source: Primary Data (2022)

Basing on data presented in Table 8:

$$Y= \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_4+\alpha$$

$$Y=2.788+0.042X_1+0.019X_2+0.100X_3+0.026X_4+e,$$

The study demonstrated that regression of independent variables had significant, positive and weak effect on financial performance at Cogebanque Plc. It demonstrated that credit referencing was positively and weakly correlated to financial performance (b=0.042, p-value=0.036). It meant that an increase in credit referencing affect financial performance. Past repayment records were significantly, positively and weakly correlated with financial performance given that (b=0.019, p-value=0.047). Customer credit standing affected positively, weakly financial performance given that (b=0.100, p-value =0.048) and Loan Secularization affected positively, weakly financial performance given that (b=0.026, p-value=0.046).

Henceforth, the research on the effect of credit risk control process on financial performance of Cogebanque Plc showed that credit referencing, past repayment records, customer credit standing and loan secularization at the level ($\alpha \leq 0.05$), confirmed that there was a significant, positive and weak correlation between credit risk control process and financial performance.

Table 8 Univariate Analysis of Credit Risk Control process and Financial Performance of Cogebanque Plc

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.883	.416		6.925	.000
	Credit Risk Control	.047	.046	.049	2.142	.048

Source: Primary data (2022)

The regression equation $y = \beta 0 + \beta_2 X_2 + \varepsilon$
Becomes financial performance of Cogebanque = 2.883+0.049 Credit Risk Control.

This meant that when credit risk control process is held constant, financial performance of Cogebanque Plc was 2.883. Unit of credit risk control would increase the financial performance of Cogebanque Plc at 0.049 with p-value of 0.048.

Testing Second Null Hypothesis Ho_2
The second null hypothesis stated that H_{02}: *There is no significant effect of credit risk control process on financial performance of Cogebanque Plc*. According to the Table 6, Table 7 and Table 8, the results showed existence of significant, positive, weak effect of credit risk control process on financial performance of Cogebanque Plc as p-value is 0.048<0.05. Henceforward, the researcher rejected the hypothesis and concluded that there was significant, positive, weak correlation between credit risk control process and financial performance of Cogebanque Plc.

Findings on objective three
The third objective established the effect of risk monitor on financial performance. This effect was established using the following statements in Table 10.

Table 9 Credit Collection policy in credit management of Cogebanque Plc

Credit Collection policy N=109	SD %	D %	N %	A %	SA %	Mean	Std
Monitoring policies that are in arrears	11.8	13.9	12.4	44.1	17.8	3.42	1.26
Penalizing client for late payment	4.1	12.4	22.8	39.3	21.4	3.61	1.07
Stringent, severe & rigorous policies	8.3	11.8	17.5	37.3	25.1	3.59	1.21
Limiting access to repeated loan based	11.8	17.5	17.2	31.1	22.4	3.32	1.32
Lenient, human and compassionate policy	9.1	15.3	21.1	30.3	24.2	3.4	1.22

Source: Primary Data (2022)

According to data underneath the Table 9, related to the role of Credit collection policy as a component of credit management in Cogebanque Plc, on the variable testing monitoring policies

that were in arrears, the mean was 3.42 and standard deviation was 1.26. In total, 61.9% agreed with the role of Monitoring policies that were in arrears in credit management of Cogebanque Plc in Rwanda. Concerning the penalizing client for late payment, the mean was 3.61 and standard deviation was 1.07. In total, 60.7% agreed with how the penalties imposed to clients for late payments records were important in credit management of Cogebanque.

For stringent, severe & rigorous policies settled with aim to limit delays in repayment, the mean was 3.59 and standard deviation was 1.21%. In total, 62.4% agreed with how the Stringent, severe & rigorous policies imposed to clients with aim to limit late payments were important in credit management of Cogebanque Plc. On limiting access to repeated loan based, the mean was 3.32 and standard deviation is 1.32%. In total, 53.5% agreed with how Cogebanque Plc limited access to repeated loan based.

Concerning lenient, human and compassionate policy, the mean was 3.4 and standard deviation was 1.22%. In total, 54.5% agreed with how Cogebanque established and managed lenient, human and compassionate policy.

Table 10 Correlations between Credit Collection Policies and Financial Performance of Cogebanque Plc

		Return on Equity	Return on Assets
Monitoring policies that are in arrears	Pearson Correlation	.167	.193
	Sig.(2-tailed)	.047	.041
	N	*109*	*109*
Penalizing client for late payment	Pearson Correlation	.150	.159
	Sig.(2-tailled)	.042	.044
	N	*109*	*109*
Stringent policies	Pearson Correlation	.082	.068
	Sig.(2-tailed)	.041	.045
	N	*109*	*109*
Limiting access to repeated loan based	Pearson Correlation	.091	.073
	Sign. (2-tailed)	.031	.024
	N	*109*	*109*

Source: Primary Data (2022)

As indicated in Table 10, significant, positive and weak correlations were found between Monitoring policies that were in arrears and RoE given that (r=0.167, p=0.047), monitoring policies that were in arrears and RoA present significant, positive and weak correlation given that (r=0.193, p=0.041). All the above relationship was statistically significant since the p-value < 0.05 suggesting that therewa an increase in monitoring policies that were in arrears and these results increased weakly financial performance (RoE and RoA) of Cogebanque Plc and vice versa.

A significant, positive, and weak correlation was discovered between penalizing client for late payment and RoE (r=0.150, p=0.042), penalizing client for late payment and RoA (r=0.159, p=0.044). For RoE and RoA, penalizing client for late payment was statistically significantly,

positively and weakly correlated since the p-value was <0.05. These results imply that a change of penalizing client for late payment increased weakly the level of RoE and RoA and vice versa.

The significant, positive and weak correlation was seen between stringent policies and RoE (r = 0.082, p = 0.041), and stringent policies and RoA (r = 0.068, p = 0.045). Therefore, the correlation was significant since the p-value was <0.05 proposing that a variation of stringent policies enhances RoE and RoA and vice versa. Finally, significant, positive and weak link was also established between limiting access to repeated loan based and RoE (r = 0.091, p = 0.031), limiting access to repeated loan based and RoA (r = 0.073, p = 0.024).

Table 11 Coefficients of Regression between Credit Collection Policies and Financial Performance of Cogebanque Plc

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.030	.374		10.779	.000
	Monitoring policies that are in arrears	.059	.053	.088	1.121	.026
	Penalizing client for late payment	.109	.071	.094	1.552	.042
	Stringent policies	.017	.057	.018	.303	.045
	Limiting access to repeated	.014	.063	.046	1.023	.047

a. Dependent Variable: Financial Performance

Source: Primary Data (2022)

As shown in table 4.14:

$$Y= \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_{4+}\alpha$$

$$Y=4.030 +0.088\ X_1 + 0.094\ X_2 + 0.018\ X_3 + 0.046X_4+e,$$

Table 11 showed that regression of independent variable was positively associated with financial performance. It demonstrated that monitoring policies that were in arrears is positively and weakly correlated to financial performance (b=0.088, p-value=0.026). The study implies that an increase in credit collection policy did affect financial performance. Penalizing client for late payment was positively and weakly correlated with financial performance (b=0.094, ρ-value =0.042), meaning that penalizing client for late payment affect positively and weakly financial performance. Stringent policies were significantly, positively and weakly correlated with Financial Performance given that (b=0.018, ρ-value =0.045) and the same situation occurred for limiting access to repeated loan-based where results were (b=0.046, ρ-value =0.047) meaning that limiting access to repeated loan-based affected positively but lowly financial performance.

Table 12 Univariate analysis of Credit Collection Policies and Financial Performance of Cogebanque Plc

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.030	.374		10.779	.000
	Credit Collection Policies	.069	.053	.068	1.121	.047

Source: Primary Data (2022)

Regression equation $y = \beta 0 + \beta_3 X_3 + \varepsilon$ becomes Financial Performance of Cogebanque = 4.030+0.068 * Credit Collection Policies. This meant that when credit collection policies were held constant, financial performance of Cogebanque Plc was 4.030. Unit of credit collection policies enhanced financial performance in Cogebanque at 0.068 with ρ-value of 0.047.

Testing Third Hypothesis Ho_3

In testing the Ho3: *There is no significance relationship between collection policies process and financial performance in Cogebanque Plc*, the researcher used information under table 10, table 11 and table 12. The results showed that relationship between collection policies process and financial performance in Cogebanque had p-value is 0.047 < 0.05. This hypothesis denoted a significant, positive but weak relationship between collection policies process on financial performance in Cogebanque Plc. Therefore, the researcher rejected the null hypothesis saying that there was a significant, positive and weak correlation between credit collection policies and financial performance.

Table 13 Appreciation on the Return on Equity (RoE)

Dependent Variable	Appreciation of RoE as indicator of Financial Performance (FP)	Mean	Sd
Return On Equity (RoE)	FP increased given that RoE increased in 2018	3.42	1.26
	FP increased given that RoE increased in 2019	3.61	1.07
	FP increased given that RoE increased in 2020	3.6	1.21
	FP increased given that RoE increased in 2021	3.42	1.42

Source: Primary Data (2022)

According to information presented in Table 14, related to the appreciation of the Return on Equity and the credit management process in Cogebanque Plc, it revealed that in 2018, the mean was 3.42 and standard deviation was 1.26. Concerning the year 2019, the mean was 3.61 and standard deviation was 1.07. For the year 2020, the mean was 3.6 and standard deviation was 1.21. In total, On the year 2021, the mean was 3.42 and standard deviation was 1.42.

The interview and calculation done under next Table 15, basing on Cogebanque Plc financial statements, reinforced this information. Henceforward, the increase in Return on Equity played a positive role in increase of financial performance of Cogebanque Plc in Rwanda.

Appreciation on the Return on Assets in credit management of Cogebanque

Table 14 Appreciation on the Return on Assets (RoA)

Dependent Variable	**Appreciation of RoA**	**Mean**	**Sd**
Return On Assets (RoA)	FP increased given that RoA increased in 2018	3.4	1.12
	FP increased given that RoA increased in 2019	3.5	1.3
	FP increased given that RoA increased in 2020	3.38	1.17
	FP increased given that RoA increased in 2021	3.61	1.21

Source: Primary Data (2022)

According to information presented in Table 16, related to the appreciation of the Return On Assets and the credit management in Cogebanque Plc, it revealed that in 2018, the mean was 3.4 and standard deviation was 1.12. Concerning the year 2019, the mean was 3.5 and standard deviation was 1.3. For the year 2020, the mean was 3.38 and standard deviation was 1.17. On the year 2021, the mean was 3.61 and standard deviation was 1.21. The interview and calculation done as presented by the next Table 15 basing on financial statements as downloaded on cogebankplc.com reinforced the accuracy of this information.

Calculation of Return on Assets and Return on Equity of Cogebanque Plc

This sub-section presented how calculation of Return on Assets and Return on Equity of Cogebanque Plc confirmed what respondent said when responding to the questionnaire.

Table 15 RoA and RoE indicators for 2018-2021

Years	**2018**	**2019**	**2020**	**2021**
Values in Rwf (1USD≈1100 Rwf)	****1000 Rwf***	****1000 Rwf***	****1000 Rwf***	****1000 Rwf***
Share Equity	26,436,833	29,448,954	33,287,120	38,294,303
Total Asset	204,573,632	227,040,890	269,683,614	291,159,333
Net Income	3,335,028	4,012,631	3,838,164	5,007,183
RoE=Net Income / Shareholders equity	*0.13*	*0.14*	*0.12*	*0.13*
RoA=Net Income / Total Assets	*0.02*	*0.02*	*0.01*	*0.02*

Source: Cogebanque financial Statements, 2018-2021

For the period between 2018-2021, RoE increased at 0.13 for 2018, 0.14 for 2019, 0.12 for 2020 and 0.13 for 2021. For the period between 2018-2021, RoA increased at 0.02 for 2018, 0.02 for 2019, 0.01 for 2020 and 0.02 for 2021.

Calculations showed that RoE and RoA were positive for the whole period of the study (2018 to 2021). During the period of COVID-19, both indicators decreased gradually and at the end, they increased slowly. Even if these indicators of financial performance were varying, and had a little

proportion, they stay positive. Hence, the information provided by respondents were somehow accurate and true.

V. Conclusion

It can be concluded from the results that the extents of credit management process, therefore, credit appraisal, credit risk control process, and credit collection policy have a huge impact on the financial performance of Cogebank Plc. The examination was to research the effect of credit management process and financial performance using the return on equity and assets ratios as performance indicators. This goal was accomplished through a poll study.

Financial statements from Cogebank Plc and ratios computed confirmed that Cogebank Plc managed well credit respecting procedures, policies, hiring competent loan department staffs, and communicated well with customers even if the level of achievement was somehow medium because of COVID-19 pandemic and its consequences. Hence, to conclude it all, we said that the management might do all necessaries to boost the level of performance.

Gaps presented by different authors mentioned previously were bank poor success, increase of non-performing loans, perpetration of frauds and loss of assets due to weakness in credit control system, lack of link between credit control and corporate governance and the failure to clarify the main causes of weakness among banks. Those gaps have been filled by Cogebank Plc but difficult encountered limited the level of the success at a medium level. Cogebank Plc has been an emerging bank which was able to limit losses, decreased non-performing loans, lessened frauds and loss of assets, maintained the level of the link between credit management and the corporate governance, clarified and removed main causes of weakness of banks.

Recommendations

Based on results discussed in chapter four, gaps revealed and their limitations encountered, the research proposed the following recommendations.

Cogebanque and other banking institutions should scrutinize its credit management process and should ask to all employees of credit department and others to identify their role in medium level of financial performance with aim to see how to boost the level of performance. Cogebanque Plc should train the employees especially those involved on the implementation of existing credit policy. Cogebanque and other banking institutions should establish adequate credit risk environment, which could help banks under disaster period. The government of Rwanda through policies established by the Central bank should help banks to establish a set of rules, procedures and mechanism of saving banks encountering difficulties related to catastrophes. For further researches, studies should be done on how banks must behave under disaster periods and propose measures to limit losses, occurrence of non-repaid loans, and default with aim of the betterment of financial performance.

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