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Effect of Credit Risk Management Practices on Performance of Microfinance Banks in Rwanda, A Case Study of Unguka Bank Ltd

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Abstract: ***Credit risk is inherent in every credit engagement and every bank big or small has to manage it according to its size and operation because without credit risk management no lending institution can survive in the long run. The general objective of this research was to analyze the effect of credit risk management practices on performance of microfinance banks in Rwanda. Descriptive research design was chosen because it provided a means to contextually interpret and understand credit risk management practices in micro finance banks. The target population in this study was composed by 30 staff of Unguka Bank Ltd who is concerned with credit risk management. The researcher preferred to adopt a census where total population was considered as sample size. The survey questionnaire was used as the main data collection instrument and the secondary data were collected from previous annual audited financial statements relevant to the study. Descriptive and inferential statistics were used to find out the effect of credit risk Management Practices on Performance of Microfinance Banks in Rwanda, considering Unguka Bank Ltd as the case study. Statistical Package for Social Scientists was used to execute multiple linear regressions. The results are presented in tables for ease of understanding. The findings of this study will contribute to both knowledge building and improvement in regard to credit risk management and Bank performance. The researcher concluded a positive and significant relationship between credit risk identification and performance of Unguka bank because their p-value (0.000) is statistically significant at 5% level of significance. The study concluded a significant relationship between credit risk monitoring and control and Unguka bank performance. If the researcher considers the level of significance which is 0.05, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 5% level of significance. The researcher recommends the bank managers to put much effort in identifying credit risks so as to ensure effective credits disbursement. The study also recommends that microfinance institutions and banks in general should adopt credit monitoring as it was established to have a significant impact on bank performance. The researcher finally recommends that credit departments should be equipped with skilled credit officers who are able to analyze and detect the manipulated and distorted borrowers' financial statements.***

Keywords: Credit, Credit risk management, financial performance

1. Introduction

Credit is derived from a Latin word "credere" meaning trust. When a seller transfers his wealth to a buyer who has agreed to pay later, there is a clear implication of trust that payment will be made at agreed date. The aim of every profit-making organization like banks is to earn profit, stay in business for a long time, meet customers' demands and expectations, pay their debts when they fall due and satisfy the aims of stakeholders. The rapid changes taking place in the financial services industry here in Rwanda, as elsewhere in the world, have significant implications on how financial services govern and manage risk and more especially credit risk as mostly this has the biggest share of the total assets. Adequately managing credit risk in financial institutions (FIs) is critical for the survival and growth of the FIs. In the case of banks, the issue of credit risk is of even of greater concern because of the higher levels of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in (Opondo, 2014).

Banks are in the business of safeguarding money and other valuables for their clients. They also provide credit and payment services such as checking accounts, money orders and cashier's checks. Banks also may offer investment and insurance products and a wide whole range of other financial services (in accordance with the 1999 Financial Services Modernization Act by the US congress) which they were once prohibited from selling (by the Glass-Steagall or Banking Act of 1933 in the USA).Credit creation is the main income generating activity for the banks. But this activity involves huge risks to both the lender and the borrower. The risk of a trading partner not fulfilling his or her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of a bank's business. On the other hand, a bank with high credit risk has high bankruptcy risk that puts the depositors in jeopardy. Among the risk that face banks, credit risk is one of great concern to most bank authorities and banking regulators. This is because credit risk is that risk that can easily and most likely prompts bank failure. Microfinance is a source of financial services for entrepreneurs and small businesses lacking access to commercial banking and related services (Kirigo, 2014).

2. Statement of the Problem

Credit risk is inherent in every credit engagement and every bank big or small has to manage it according to its size and operation because without credit risk management no lending institution can survive in the long run. According to Essien (2005); the failure of most banks large and small to achieve their targeted profits emanate from huge bad debts which result from loan repayment default. What credit risk management processes have been established at the various banks to minimize loan repayment default? How do banks appraise loan propositions prior to lending out funds? What

monitoring mechanisms have been built into the credit risk management practices of banks to minimize bad debts? What other factors account for loan default by the business communities especially the SMEs. The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (Cornett, 2005). Banks use these deposits to generate credit for their borrowers, which in fact is a revenue generating activity for most banks. This credit creation process exposes the banks to high default risk which might lead to financial distress including bankruptcy. All the same, beside other services, banks must create credit for their clients to make some money, grow and survive stiff competition at the market place. The principal concern of this research will be to ascertain to what extent do micro finance banks manage their credit risks, what practices are employed and to what extent their performance can be improved by proper credit risk management practices.

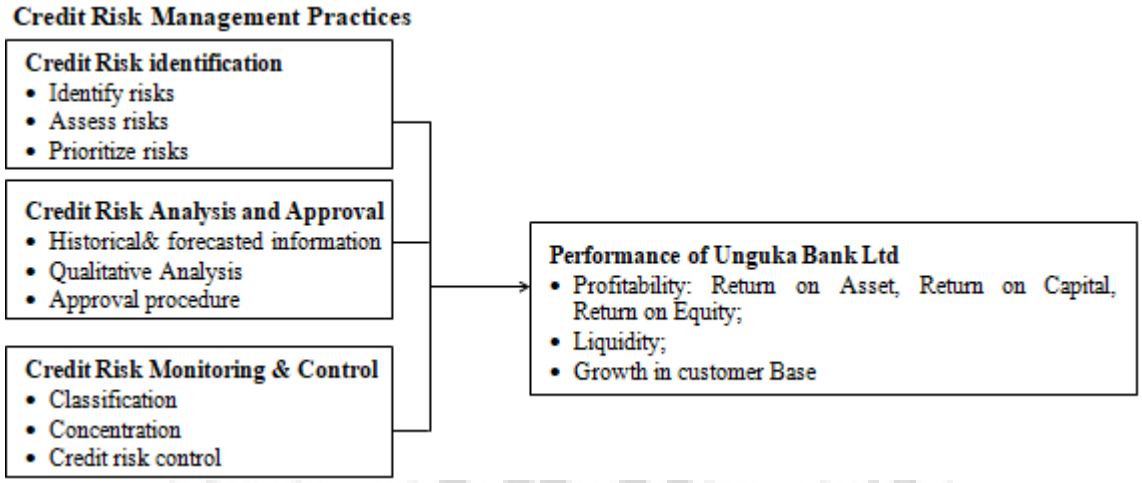
3. Objectives of the Study

The general objective of this research was to analyze the effect of credit risk management practices on performance of microfinance banks in Rwanda

3.1 Specific objectives

1) To identify the effect of credit risk identification on performance of Unguka Bank Limited;
2) To establish the role of credit risk analysis and approval on performance of Unguka Bank Limited
3) To assess the implication of credit risk monitoring and control on performance of Unguka Bank Limited

4. Conceptual Framework



5. Research Methodology

- **Research Design**: A descriptive survey was carried out in this study, descriptive research design was chosen because it provides a means to contextually interpret and understand credit risk management practices in micro finance banks.
- **Target Population:** The target population was 30 staff working under the above mentioned departments.
- **Sample Size**: During this research, the researcher preferred to adopt a census where total population was considered as sample size. Therefore, the sample size of the study was made of all 30 staff from Internal audit, Credit, Risk and compliance and finance departments of Unguka bank Limited
- **Data processing and analysis**: The collected data were firstly captured in Microsoft Excel, checked for completion and coded. The data for this study were analyzed quantitatively using percentages, frequencies and using linear regressions

6. Summary of Research Findings

Table 1: Descriptive Statistics on identification of the effect of credit risk identification on performance of Unguka Bank Limited

Indicators	N	Mean	Std. Deviation
Identify possible credit risks	30	1.40	.498
Identify &assess credit risks	30	1.67	.758
Prioritize credit risks	30	3.87	1.137
Valid N (listwise)	30		

Source: Field Data (2018)

FromTable1, the mean values for the first, second and third statements are1.4, 1.67 and 3.87respectively rounded off to 1, 2and 4 the codes for strongly agree, agree and strongly disagree. The standard deviation for all statements are above 0.5 meaning that respondents' answers on these statements were far different from the mean, in other words, their answers to the statement were heterogeneous. To mean that respondent' views to the above statements were varied.

Table 2: Correlation between credit risk identification and performance of Unguka Bank Limited

Variable		Credit Risk Identification	Bank Performance
Credit risk identification	Pearson Correlation	1	.548**
	Sig. (2-tailed)		.002
	N	30	30
Bank Performance	Pearson Correlation	.548**	1
	Sig. (2-tailed)	.002	
	N	30	30

The findings in Table2 revealed that, the results of correlation between identification of the effect of credit risk identification and Unguka bank limited performance was at 0. 548 mean that effect of credit risk identification was at the level of 54.8% which prove a significant relationship between effect of credit risk identification and bank performance. If the researcher considers the level of significance which is 0.05, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 5% level of significance.

Table 3: Descriptive Statistics on establishment of the effect of credit risk analysis and approval on performance of Unguka Bank Limited

Indicators	N	Mean	Std. Deviation
Historical information of borrowers	30	1.23	.430
Past and projected income statements	30	1.90	.607
Past and projected cash flows	30	1.30	.466
Past and project profitability	30	2.53	1.697
Performing Qualitative analysis	30	2.97	.890
Valid N (listwise)	30		

Source: Field Data (2018)

From Table3, the mean values for to establish the role of credit risk analysis and approval are respectively 1.23, 1.90, 1.30, 2.53 and 2.97which are rounded off to 1, 2 and 3 the code for strongly agree for the historical information and project cash flows borrowers, agree for the project income statement and neutral to the profitability and qualitative analysis. The standard deviation of four statements is greater than 0.5 meaning that respondents' answers on these statements were far different from the mean, in other words, their answers to the statement were heterogamous expect historical information of borrowers standard deviation is less than 0.5meaning that respondents' answers on this statement was not far different from the mean, in other words, their answers to the statement were homogeneous.

Table 4: Correlation between the effect of credit risk analysis and approval and performance of Unguka Bank Limited

Variable		CRA&A	Bank Performance
CRA&A	Pearson Correlation	1	.811**
	Sig. (2-tailed)		.000
	N	30	30
Bank Performance	Pearson Correlation	.811**	1
	Sig. (2-tailed)	.000	
	N	30	30

Source: Field Data (2018)

The findings in Table4 revealed that the results of correlation between establishment of the role of credit risk analysis and approval and Unguka bank limited performance was at 0. 811 mean that role of credit risk analysis and approval was at the level of 81.1% which prove a significant relationship between the role of credit risk analysis and approval and bank performance. If the researcher considers the level of significance which is 0.05, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 5% level of significance.

Table 5: Descriptive Statistics on assessment of the effect of credit risk monitoring and control on performance of Unguka Bank Limited

Indicators	N	Mean	Std. Deviation
Creditors in their respective categories	30	2.23	.430
Effective credit risk monitoring and control credit	30	1.73	1.202
The exposures causing risk concentration	30	2.73	1.721
The bank requires all material concentrations	30	2.27	.450
Valid N (listwise)	30		

Source: Field Data (2018)

From Table5, the mean values for to assess the implication of credit risk monitoring and control are respectively rounded off to 2the code for agree for the creditors in their respective categories, credit risk monitoring and control credit and material concentrations required for effective credit risk monitoring. Mean value of exposures causing risk concentration is rounded off to 3 the code for neutral. The standard deviation of two statements is greater than 0.5 meaning that respondents' answers on these statements were far different from the mean, in other words, their answers to the statement were heterogamous and respective categories and material concentrations standard deviation are less than 0.5meaning that respondents' answers on this statement was not far different from the mean, in other words, their answers to the statement were homogeneous.

Table 6: Correlation between the implication of credit risk monitoring and control and performance of Unguka Bank Limited

Variable		CRM&C	Bank Performance
CRM&C	Pearson Correlation	1	.782**
	Sig. (2-tailed)		.000
	N	30	30
Bank Performance	Pearson Correlation	.782**	1
	Sig. (2-tailed)	.000	
	N	30	30

Source: Field Data (2018)

The findings in Table6 revealed that, the results of correlation between assessment of the effect of credit risk monitoring and control and Unguka bank limited performance was at 0. 782 mean that the implication of credit risk monitoring and control was at the level of 78.2% which prove a significant relationship between the implication of credit risk monitoring and control and bank performance. If the researcher considers the level of

significance which is 0.05, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 5% level of significance.

Table 7: Descriptive Statistics on Unguka Bank Limited Performance

Indicators	N	Mean	Std. Deviation
Return on Asset	30	1.17	.379
Return on Capital	30	1.50	.509
Return on Equity	30	1.83	.699
Growth in customer Base	30	1.33	.479
Valid N (list wise)	30		

Source: Field Data (2018)

According to Table7, the mean values for the first and fourth statements are 1.17 and 1.33 which are approximately equal to the code of strongly agree. The second and third statements means are1.5 and 1.83 approximately equal to 2 the code for agree. The standard deviation for the first and fourth statements are less than 0.5 meaning that respondents' answers on these statements were not far different from the mean, in order words; their answers to the statement were homogeneous. The second and third statements standard deviation are above 0.5 meaning that respondents' answers were far different from the mean, in order words; their answers to the statement were heterogeneous.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.906[a]	.820	.799	.215

Source: Field Data (2018)

a. Predictors: (Constant), Credit Risk Identification, Credit Risk Analysis and Approvaland Credit Risk Monitoring and Control

From the table8 An$R^2 = 0.820$, indicates that 82% of variation in Credit Risk Identification, Credit Risk Analysis and Approval and Credit Risk Monitoring and Control can be explained by the Performance of Unguka Bank Limited leaving only 18% of the variation in the dependent variable being explained by the error-term or other variables other than bank performance.

Table 9: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	5.467	3	1.822	39.481	.000[b]
	Residual	1.200	26	.046		
	Total	6.667	29			

Source: Field Data (2018)

a) Predictors: (Constant), Credit Risk Identification, Credit Risk Analysis and Approval and Credit Risk Monitoring and Control
b) Dependent Variable: Unguka Bank Limited performance

The table9 shows that predictors: Credit Risk Identification, Credit Risk Analysis and Approval and Credit Risk Monitoring and Controlhave an effect on dependent variable, Unguka Bank Limited Performance. This is statistically significant with a p-value (.000).

Table 10: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	7.772E-016	.144		.000	1.000
	Credit Risk Identification	.600	.120	.624	5.016	.000
	Credit Risk Analysis and Approval	.400	.143	.359	2.795	.010
	Credit Risk Monitoring and Control	2.547E-016	.053	.000	.000	1.000

a. Dependent Variable: Bank Performance

Source: Field Data (2018)

The results indicate that Credit Risk Identification, Credit Risk Analysis and Approval and Credit Risk Monitoring and Control have statistically significant effect on Unguka Bank Limited performance with a positive coefficient of determination of 0.906 (table 21) indicates that there is a strong positive correlation between Credit Risk Identification, Credit Risk Analysis and Approval and Credit Risk Monitoring and Control with Bank Performance. The coefficients of independent variables (CRI, CRA$A and CRM&C) β_1, β_2 *and* $\beta_3$are respectively 0.6; 0.4 and 2.547E-016 with a statistically significant ($p = 0.00$). Therefore, the model equation derived is: $y = 7.772\text{E} - 016 + 0.6x_1 + 0.4x_2 + 2.547\text{E} - 016x_3 + e$. The positive coefficient further demonstrates that a 1% increase in the Credit Risk Identification attributed to 0.6% improvement in bank performance and the t-statistic value (5.016) indicates the effect is statistically significant at 95% confidence level. An increase of 1% on Credit Risk Analysis and Approval will increase bank performance given by 0.4 % at the t-statistic value (2.795) indicates the effect is statistically significant at 95% confidence level while a positive coefficient demonstrates that a 1% increase in Credit Risk Monitoring and Control causes an increase of 2.547E-016on bank performance with t-statistic value (.000) indicates the confidence level of 95% the effect is statistically significant. This demonstrates that bank performance exhibited in terms of Credit Risk Identification, Credit Risk Analysis and Approval and Credit Risk Monitoring and Control executed excellently.

7. Conclusions and Recommendations

7.1 Conclusions

1) The researcher concluded a positive and significant relationship between credit risk identification and performance of Unguka bank because their p-value (0.000) is statistically significant at 5% level of significance.
2) The researcher concluded a positive and significant relationship between credit risk analysis& approval and performance of Unguka bank limited
3) The study concluded a significant relationship between credit risk monitoring and control and Unguka bank performance. If the researcher considers the level of significance which is 0.05, there is therefore a significant relationship between them because their p-

value (0.000) is statistically significant at 5% level of significance.

7.2 Recommendations

The researcher made the following recommendations:

1) Since the study revealed a positive and significant relationship between credit risk identification and performance of Unguka bank, the researcher recommends the bank managers to put much efforts in identifying credit risks so as to ensure effective credits disbursement
2) The study also recommends that microfinance institutions and banks in general should adopt credit monitoring as it was established to have a significant impact on bank performance
3) The researcher finally recommends that credit departments should be equipped with skilled credit officers who are able to analyze and detect the manipulated and distorted borrowers' financial statements.

7.3 Areas for future research

The researchers suggested the following areas as necessary for future research:
The study sought to analyze the effect of credit risk management practices on performance of microfinance banks in Rwanda. Further research may be carried out to determine the effect of other various risks (liquidity risk, foreign exchange risk, operational risks, and interest rate risk) on performance of banks in Rwanda.

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