INTEREST RATE POLICY AND FINANCIAL SUSTAINABILITY OF UMURENGE SACCO AS A MICROFINANCE INSTITUTION IN RUSIZI DISTRICT, RWANDA

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Master of Business Administration of Management

By
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DECLARATION

I, NGENDAHIMANA Vénuste, do hereby declare that this thesis is my original work and has never been submitted in any academic institution for any academic requirements, or even published as normal publication.

NGENDAHIMANA Vénuste

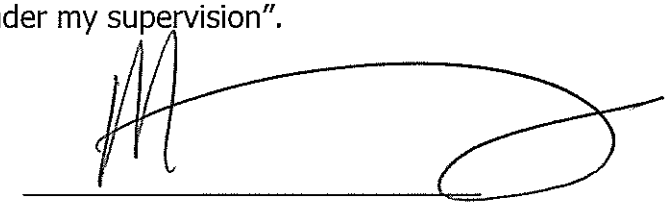
Name and signature of the Candidate

6 November 2014

Date

APPROVAL

"I confirm that the work reported in this research report was carried out by the candidate under my supervision".



Name and Signature of Supervisor

7th/11/2014

Date

DEDICATION

To Christ Jesus the Almighty,

My Savior, my Redeemer and my Strength,

The Lion of Judah and the King of Kings,

The Beloved and Only Son of my Eternal God,

I warmly dedicate this thesis.

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And you, Oh! Dear late mother, NYIRAKWEZI Marceline! Unfortunately you have not lived to harvest the fruits of your sweat through the labor of your son. May your soul rest in eternal peace. Above all, I would like to express my lovely and tender thanks to my dearest wife FITINA Marie Chantal whose tenderness and sacrifice strengthened my thoughts. And you my dear sons, NKURUNZIZA Peace Emmanuel, AHADI Frank Erasme, IGIRANEZA Faradja Methuselah receive my deepest gratitude for your assistance.

May the Almighty God cover you all with his Love and Mercy.

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LIST OF ABBREVIATIONS AND ACRONYMS

AE	:	Administrative expense
BNR	:	Banques National du Rwanda
CAP	:	The Common Agricultural Policy
CF	:	Cost of funds rate
CGAP	:	Consultative group to assist the poorest
EDPRS	:	Economic Development and Poverty Reduction Strategy
II	:	Fees and fines
IRP	:	Interest Rate Policy
IICM	:	Interest income collection methods
IRAM	:	Interest rate application methods
IRDP	:	Interest rate determination policy
K	:	Capitalization rate
LDCs	:	Less developed countries
LL	:	Loan loss rate
MDCs	:	More developed countries
MFIs	:	Microfinance institutions
MINECOFIN	:	The Ministry of Finance and Economic Planning
RCA	:	Rwanda Cooperative Agency
UBPR	:	Union des Banques Populaires du Rwanda
USA	:	United States of America
VUP	:	Vision Umurenge Programme
WAD	:	Women Action for Development in Namibia
WDI	:	Women Development Initiative in Nigeria

ABSTRACT

The study focused on "Interest Rate Policy and Financial Sustainability of UMURENGE SACCO as Microfinance Institution in Rwanda". The purpose of the study was to establish the relationship between interest rate policy and financial sustainability of UMURENGE SACCO. It was guided by the following objectives: to establish relationship of interest rate determination on sustainability of UMURENGE SACCO, to analyse the relationship of interest rate application methods on sustainability of UMURENGE SACCO, to establish relationship between interest rate income collection methods and sustainability of UMURENGE SACCO, and to establish the influence of clients' response to interest rate policy on the relationship between interest rate policy and sustainability of UMURENGE SACCO. Methodology of the study was the descriptive co-relational research design where Pearson's linear correlation analysis and linear regression analysis were applied to determine the relationship between interest rate policy and financial sustainability. However, the researcher found out that interest rate determination policy, Interest rate application methods, and the interest income collection methods improved financial sustainability of UMURENGE SACCO in Rwanda. The researcher recommended that UMURENGE SACCO should document the interest rate determination policy which specifies interest rate composition to comprise the administration expense rate, loan loss provision rate, cost of funds rate and capitalization rate to enable charge a sustainable interest rate on MFIs loans for financial sustainability. The researcher also recommended that UMURENGE SACCO should establish the interest rate that meets both UMURENGE SACCO sustainability and clients' micro enterprise sustainability.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Financial sustainability for MFIs in most parts of the world according to Rosenberg (2007) was projected to depend on the interest rate policy among other dimensions such as legal environment, market sustainability, MFI strategic plan (www.sa-dhan-net/adis/microfinance11.11.2005) which provided coverage to all costs namely; administration costs, cost of funds, loan losses provision, imported cost of capital through determining the interest rate application methods and interest income collection methods by the MFI best practices. The micro credit summit at Dhaka in Bangladesh 10th June 2004 among other proceeding summits approved the Rosenberg view that microfinance could pay itself through interest rate policies that covered all costs profitably as opposed to subsidies and grants which changed the trend of fundraising and conduct the microfinance businesses between MFIs and stakeholders (Fernando, 2006, CGAP, 2002, www.agap.org). This has had impact on emphasizing interest rate policies that maximize internally generated revenues towards financial sustainability by LDCs and MFIs whereas MFIs in LDCs endeavor that interest rate policies should cover the full costs for financial sustainability, it was observed that MFIs worldwide such as Latin America, Bolivia, India, Namibia, and Rwanda were not generating sufficient interest income to be financially sustainable (CGAP, 2002, Adong & Stock, 2005, Morduch, 1999).

Mohammed Yunus, an economist with experience gained from setting up the Good Faith Fund in Arkanas, USA while on a consultancy under the Clinton Fund, historically founded formal microfinance through piloting the successful financially

sustainable Grameen Bank in Bangladesh in 1974, (Yunus, 1995, Morduch, 1999). The Grameen Bank Microfinance best practices including determining interest rates, interest rate application methods and the methods on interest income collection which are factors associated with financial sustainability among others have been either adapted or adopted to other developing countries such as Bolivia, Washington... and Rwanda in its Poverty Eradication Plan (EDPRS) in order to enhance financial sustainability for MFIs (Yaron, et al, Abbink, Irlebusch& Renner 2002, Morduch, 1999).

The welfare approach is non-profit and emphasizes that the poorest need subsidized microfinance services with salient policy feature such as grants, subsidies, ceilings and regulated interest rates, towards MFI operations whose output is outreach to many active poor but with institutions that are not financially sustainable and would be bound to close down due to short-lived nature of grants and subsidies (Robinson, 1995, in Lutaaya 2009). The institutional approach is a focus on profitable interest rate policies for MFI to increase internally generated revenue in a liberalized market environmental and sustainability measured by the level of financial sustainability (WIDER, 2002, Fernando, 2006). From the global perspective, the MFIs by using an institutional approach would charge a financially sustainable interest rate irrespective of the source of capital (Ledgerwood and White 2006).

West and central African countries such as Namibia, Nigeria, Ivory coast and Malawi have regulated the MFI operating environment by putting in place legal policies that enforce ceilings on interest rates and the administration of the subsequent interest rates accordingly. The MFI industry in West Africa is regulated in welfare approach that seeks to maximize outreach but with constrained MFI financial sustainability because the resulting interest rates charged are below the break-even point. As a

result the MFIs such as Women Development Initiative (WDI) in Nigeria.... and Women Action for Development (WAD) in Namibia were reported not to have achieved financial sustainability (Anyanwu 2004).

East African governments on the other hand had to liberalize interest rate environment to enable MFIs to put in place interest rate policies that enhance Funds and to reach out to many clients.

1.2 Origin of UMURENGE SACCO in Rwanda

The microfinance sector in Rwanda is relatively young. Although small self-help peasant organizations such as IBIMINA have existed for some time, the sector growth accelerated with the creation of the Rwanda Banques Populaires or Union des Banques Populaires du Rwanda (UBPR) in 1975 whose network dominates the microfinance industry today (Kantengwa 2007).

After the Genocide perpetrated against Tutsi in 1994, Union of the Banques Populaires du Rwanda and all other MFIs stopped and lost their assets. In 1995 the financial sector launched a remarkable reform. The Government of Rwanda started reforms of the financial sector aiming at creating an efficient system. The principal objectives of these reforms include the reinforcement of the Central Bank (BNR), legal powers of coordination and supervision of the banking structure, the introduction of new financial instruments, the liberalization of interest rates and the opening of the banking structure to foreign banks. These reforms had brought a considerable impact on the development of the Rwanda's financial sector.

In this regard, the ultimate objective of Rwanda's long term development plan is to transform the country into a middle-income country and an economic trade, communication and financial hub by the year 2020. Towards the achievement of this, the Government of Rwanda has recently adopted an Economic Development

and Poverty Reduction Strategy (EDPRS), with Financial Sector Development as one of its key components (MINECOFIN 2007).

Indeed Rwanda's economic development agenda can't be achieved without a financial sector that is effective, in particular that is capable to expand access to credit and financial services, and to enhance saving mobilization and to mobilize long-term capital for investment. No economic development will be possible as long as the current situation will persist with domestic savings constantly negative and more than 50% of the population totally excluded from financial services, even from informal ones.

To address the issues hindering the development of financial sector, the Government of Rwanda has adopted a very ambitious Financial Development Plan in the occasion of which a National Dialogue Meeting was held in December 2008 and whose recommendations were based on the creation of at least one SACCO at the level of each Administrative Sector (UMURENGE). To achieve this, the expansion of access to credit and savings, the restructuration of the interest rate policy and other financial services are the most requirements for UMURENGE SACCO. Besides, subsidies were provided in the form of VISION UMURENGE PROGRAMME (VUP). The aim of these subsidies was to bring the low class of Rwandans familiar with financial services among others bank loans, deposits, withdrawal, etc (MINECOFIN 2007).

1.3 Statement of the Problem

In its earlier beginning for the 2008-11, UMURENGE SACCO experienced low profitability with remarkable loss of RWFs 0.4 billion within 2008 and 2011 while giving loan to non-sensitized population with interest rate policy that could not cover the full costs for financial sustainability. Even if subsidies were provided by

the Government of Rwanda to UMURENGE SACCO in the form of VUP but still the management and sensitization of the population with regard to UMURENGE SACCO were very poor to achieve the sustainability. Because of those subsidies, Rwanda had imposed legal policies that enforced ceilings on interest rates that sought to maximize outreach but with constrained UMURENGE SACCO financial sustainability because the resulting interest rates charged were below the break-even point. In addition, most of loans were subjected to arrears or not even paid till 2011. As a result, the UMURENGE SACCO was reported not to have achieved financial sustainability (RCA 2012).

The interest rate charged did not generate sufficient interest income to cover the aggregate of costs as intended and the flat interest rate application method used brought UMURENGE SACCO to be bound to close down because it did not maximize interest income generation to achieve financial sustainability.

The interest income generation from the interest rate charged while controlling the effects of the Government grants, subsidies... Fees could not cover the aggregate of operational costs: cost of funds, loan loss provision, capital growth and subsequently, the UMURENGE SACCO was trading at a shortfall of 20% operational self-sufficiency for the period 2008-11 (audited accounts 2008 – 11). If the UMURENGE SACCO fails to achieve operational and financial self-sufficiency and low profitability trends 20012 – 14 continue unchecked, it may lead to gradual loss, reduction on portfolio, insolvency and eventual closure of business. The study therefore sought to establish the relationship between Interest Rate Policy and Financial Sustainability.

1.4 Purpose of the Study

To establish the relationship between interest rate policy and financial sustainability of UMURENGE SACCO.

1.5 Objectives

1. To establish the relationship of interest rate determination on sustainability of UMURENGE SACCO.
2. To establish the relationship of interest rate application methods on sustainability of UMURENGE SACCO.
3. To establish the relationship between interest rate income collection methods and sustainability of UMURENGE SACCO.
4. To establish the influence of clients' response to interest rate policy on the relationship between interest rate policy and sustainability of UMURENGE SACCO.

1.6 Conceptual Framework on Interest Rate Policy and Performance

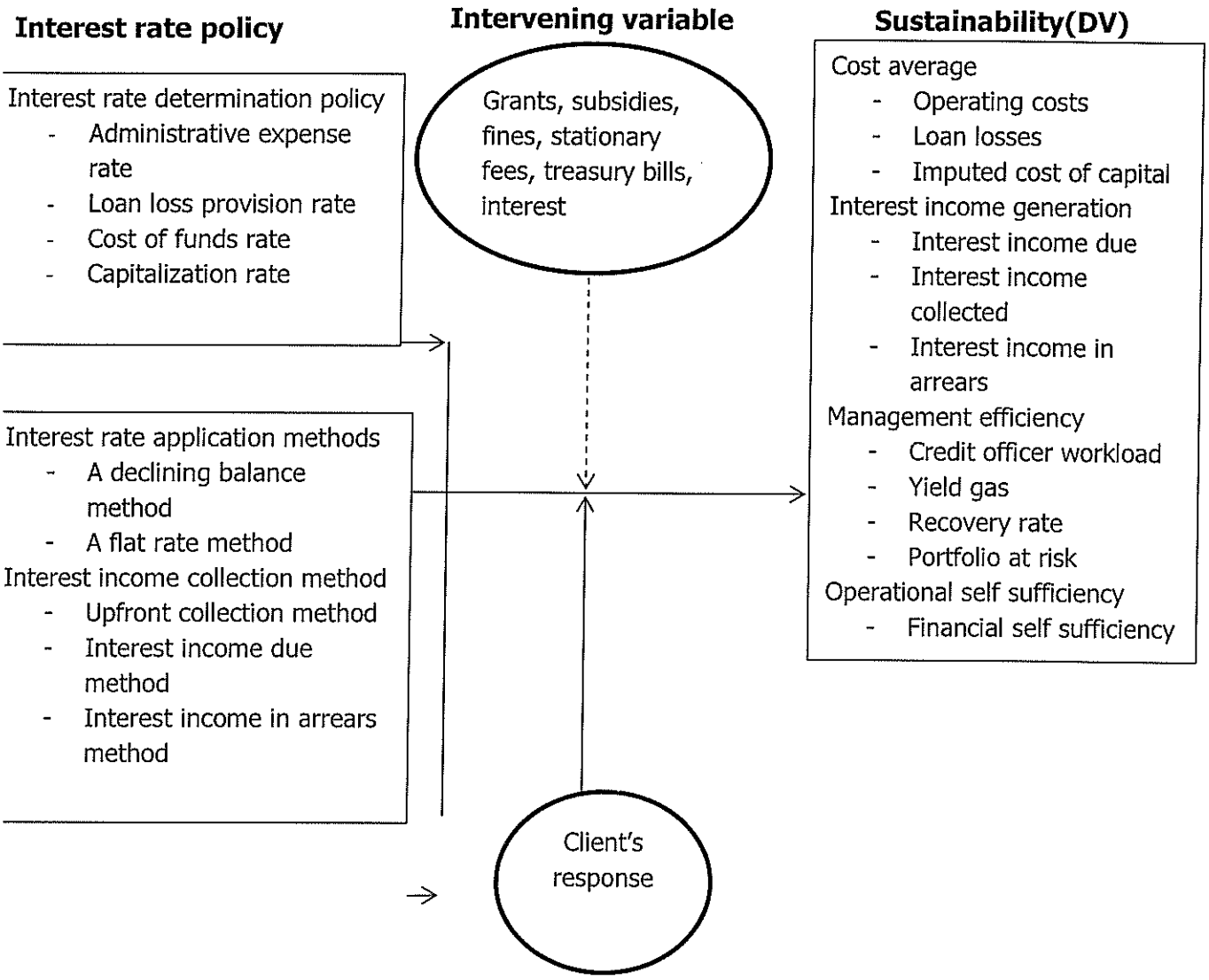
The conceptual framework to establish the relationship between interest rate and sustainability was modified from the CGAP (2002) institutional model on interest rate determination policy (IRDP) that suggested that sustainability was derived from determining sustainable interest rate, R, which is a function of administrative expense rate (AE), loan loss provision rate (LL), cost of funds rate (CF), capitalization rate (K) and adjustment of grants, subsidies, treasury bill income, fees and fines (II). The interest rate determination function based on the (CAP model 2002) before modification is shown below.

$$\text{IRDP} = \frac{R_2 + AE + LL + CF + K - II}{1-LL}, (CGAAP, 2002)\,(i)$$

Considering the cost of II at treasury bills rate in the CF modifies the R function to

$$\text{IRDP} = R_2 = \frac{AE + LL + CF + K}{1-LL}, (Modified)\,(ii)$$

Figure 1: Conceptual framework on interest rate policy and performance



urce: *Modified CGAP (2002)*

The model is further modified to include interest rate application methods (IRAM) with indicators on declining balance and flat rate application methods, interest

income collection methods (IICM) with indicators on upfront collection methods, interest income due and interest income in arrears method of the interest rate policy that influences sustainability of UMURENGE SACCO.

The model is further conceptualized to include the intervening variable whose effects are controlled by (II) in the IRDP = R_1 and client's response as a moderating variable whose influence affects performance. The modified conceptual framework on IRP and sustainability is rewritten to include interest rate determination policies IRDP = R_2, interest rate application methods (IRAM), interest income collection methods (IICM) moderated by client's response to interest rate policy (CR) as below;

$$P = [R_2 \div RAM \div IICM]\ CR$$

Sustainability was conceptualized as dependent variable, comprising of dimensions of cost average with operating costs, loan losses and imputed costs as indicators, interest income generation with interest income due, interest income collected and interest income in arrears as indicators, management efficiency with credit officers workload, yield gap, recovery rate and portfolio at risk as indicators and finally profitability with operational and financial self-sufficiency as indicators.

Grants, subsidies, Treasury bill interest income, stationary fees, ledger fees and fines were conceptualized as intervening variables because they offer an MFI a substitute solution to finance operations and were controlled by factoring them in the cost of funds (Shylendara, 2006, P.1). The moderating influence of client response (CR) was conceptualized to affect the relationship between interest rate and performance. Figure one above is diagrammatically representing conceptual framework on interest rate and performance.

1.7 Significance

These study findings inform government and management of UMURENGE SACCO, on a positive linear relationship between interest rate and sustainability of UMURENGE SACCO, the resulting effects of chosen interest rate application methods and interest income collection policies towards performance, the need to document and update the interest rate policy towards sustainability and the influence of client's response to interest rate policy as a stimuli. The study adds knowledge by stating the magnitude of relationship between interest rate policy and performance, how sustainable interest rates are determined, creating awareness, informing the critics and stakeholders of UMURENGE SACCO on the need for financial sustainability through charging sustainable interest rates. This will enable avoiding loss through preventive, detection and corrective measures.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter discusses the related literature on interest rate policy, financial sustainability, client's response, intervening variable (grants, subsidies, treasury bill, interest incomes, fees and fines) which are the independent, dependent, moderating and intervening variables of the study respectively. Following the conceptual framework, sustainability = $[R_2 + IRAM + IICM]$ CR and related literature on study objectives. The objectives of the study were to establish the relationship between interest rate policy and financial sustainability of UMURENGE SACCO in Rusizi District.

2.1. Theoretical Review

The conceptual framework on the study of the relationship between interest rate and financial sustainability was modified from the interest rate determination function for a financially sustainable MFI by consultative group to assist the poorest (CGAP, 2002). CGAP is a microfinance windowed constituted by the World Bank to guide MFIs to financial sustainable best practices that will enable the institutions to achieve financial sustainability using the institutional approach as opposed to a welfare approach. The welfare and the institutional approaches are two paradigms that explain the approaches that activists of MFIs are following to deliver services to the active poor across the continent characterized by continuous reforms (Robinson, 2001).

2.2.1. The Welfare Approach and Sustainability of MFIs

The welfare approach is a poverty alleviation strategy which both government of LDCs and MDCs advance to justify pushing the microfinance service to the active poor. The argument holds that the active poor need subsidized or interest free micro credit in order to stimulate employment, accumulate savings and reduce poverty hence customer welfare focused strategy (Yaron, Mcnold; Benjamin, Gerda and Pipreck, 1996). The result of this justification is the intensive mobilization for subsidies and grants to MFIs for both capital and operations in order to deliver the services to the active poor from social welfare point of view associated with this approach is the high cost of the service to MFIs, especially when grants and subsidies cease, which lead to closure of business or product lines. The welfare approach does not guarantee continued access to financial services by MFIs caused by eventual closure of product lines when grants cease, which has led to the agitation for the institution approach by the World Bank.

2.2.2. The Institutional Approach and Financial Sustainability of MFIs

The institutional approach was built on the premise of Adam Smith in Pandey (2000) on the simultaneous role of price mechanism in a free market economy to satisfy both financial sustainability needs of MFIs and service delivery to society. Accordingly MFIs products should be demand driven from the active poor who are ready to receive the service at sustainable interest rate on a sustainable access basis that the MFI should deliver the services while trading to either equity, commercial debts, concessional grants or deposits while charging cost covering and profitable interest rates in the interest policies and in a liberalized environment to be financial sustainable (Otero, Phyne, 1994, Christen, 2000).

2.3. Interest Rate Policy and Sustainability

Interest rate policy is comprised of formal objectives and guidelines of an MFI to determine and implement a price for obtaining and using its financial services preferably loans and savings by its clients other than liberalization. Dimensions of interest rate policy reviewed in this study include interest rate determination policy (IRDP), interest rate application methods (IRAM) and interest income collection methods.

1.3.1. Interest Rate Determination Policy on Sustainability of MFIs

Interest rate determination policy is part of the interest rate policy that comprises components of the sustainable interest rate for financial sustainability. An institution that puts in place criteria for determining interest rate is more likely to cover costs profitably and hence be financially sustainable. CGAP (2002)

Consider administrative expense rate (AE), loan loss provision rate (LL), cost of funds (CF), capital growth rate (K), grants, subsidies, Treasury bills, interest income, stationary fees and fines (II) as elements in a function to determine the annualized sustainable interest rate expressed as a percentage of average outstanding loan portfolio. The modified sustainable interest rate function R_2 as conceptualized in the study defines factoring the cost of grants, subsidies, and fines at a Treasury bill rate into the cost of funds to control the intervening variables in the study and then restating the formula.

$$R_1 = \frac{AE+LL+CF+K-II}{1-LL}$$

$$R_2 = \frac{AE+LL+CF+K}{1-LL} \text{ Modified}$$

Baseka (2007) observed that MFIs that do not want to identify themselves with sustainable interest rates, classified as high in the market place suppressed interest rates by soliciting for grants, charging other fees and commissions besides the quoted interest rate which was rated as low. It is expected that each MFI determines the interest rate charged to comprise the administrative expenses rate, loan loss provision rate, cost of funds rate and capitalization rate for financial sustainability.

2.3.2. Administration Expenses Rate (AE) on Performance/Financial Sustainability

The interest rate policy includes personnel and operational costs that comprise salaries, staff benefits, rent, sundries, utilities, transport and depreciation among others. Best practices of MFIs suggest that AE should not exceed 15-25% of the portfolio per annum (Christen, 1997, Ledgerwood 2000) and further recommends that AE ought to be on a reducing trend for financial sustainability, if AE exceeds 25%, then the likely interest rate will be high. Likewise, $\leq$ 0.25 of interest rate charged should be AE. Rosenberg (2007) holds the view that the AE rate should also depend on size of portfolio and that managerial inefficiency may affect level of administrative expenses rate.

2.3.3 Loan Loss Provision Rate and Performance

Loan loss provision is the ratio of delinquent loans to the portfolio to which the MFI makes a provision to the loan loss reserve which is made part of the interest rate charged.

$$LL = \frac{Annual\ loan\ loss\ reserve\ amount}{outstanding\ portfolio}$$

(USAID PRESTO Project, 2000)

2.3.4 Cost of Funds Rate on Sustainability

Cost of funds is a weighted average cost to the portfolio considering all sources of funding. Factoring Cost of Funds in the interest rate determination enables the MFI to recover its cost of funds irrespective of the source whether concessional, conditional grants or equity CGAP (2002) argues MFIs to use Cost of Funds or Treasury bill rate whichever is higher when calculating a sustainable interest rate. Rosenberg (2007) argues that the cost of funds should be reducing if the MFI is deposit taking. Otherwise factoring the cost of funds is one way to solve portfolio funding constrained MFIs from depending on conditional grants by obtaining commercial loans (Fernando, 2006, Anyanwu, 2004).

2.3.5 Capitalization Rate and Sustainability

Capitalization rate (k) represents the real profit targeted by an MFI to gradually increase retained earnings, and may lower the cost of funds for financial sustainability in a long run. Eventually, higher dividends may be paid and subsidies kept reducing. A capitalization rate is expected to compensate inflation in a portfolio. An MFI that does not factor capitalization rate in the interest rate may experience a persistent loss, declining real value in the portfolio and may run out of business in the long run. Capitalization rate is meant to cater for long term growth of equity which is financial sustainability strategy in nature.

2.3.6 Interest Income Collection Methods and Performance

Interest income generation methods are policies on receivables whose administration aims at accelerating interest income for sustainability and the methods include upfront interest income collection method, the due interest income collection methods and a policy on interest income in arrears among others. The

objective of the interest income collection policy is to accelerate interest income collected from payers.

Pandey (2007) argues that there should be stringent policies on receivables for accelerated collection of revenues and prompt collection of incomes due for fast turnover at reducing cost of collection to enable raise working capital for performance. This is said to be possible through short loan periods, repayment schedules, reminders to pay notices, besides prior repayment capacity appraisal on clients.

2.3.7 Management Efficiency and Performance

Management efficiency is the ability of employees of the MFIs to implement policies to achieve targeted productivity standards at the cost effective profitable measure with reducing cost per unit trend. Management efficiency has implication to the fact that if the cost per unit is high and increasing and productivity targets never achieved, then the MFI will be less profitable leading to low performance.

2.3.8 Interest Rate Application Methods and Sustainability

Methods of interest rate application include flat rate and declining balance interest rate application. The method chosen ought to maximize interest income generation for the MFI while at the same time easily understood by the clients and stakeholders besides maximizing their welfare. Though Ledgerwood and Victoria (2006) advise that an MFI can increase interest income yield by changing the method of calculation than affecting the interest rate, MFIs that do not have sustainable interest rate policies in place charge other fees and commissions besides a quoted interest rate to cover shortfalls (CGAP, 2002).

2.4. Performance

Financial sustainability is the ability of an MFI to cover its costs profitability with interest income earned from its operations which represents the internally generated revenue (Ledgerwood, 2000). Sustainability was the dependent variables in the study and its dimensions reviewed include cost coverage, interest income generation, management efficiency and profitability.

2.4.1. Cost Coverage

This is ability of an MFI to meet all direct and indirect costs related to MFIs products profitability using internally generated interest income. Key costs that must be covered by internally generated revenue for sustainability are operation costs, loan loss provision and imputed cost of capital which were conceptualized as indicators.

2.4.2 Operation Costs

Operation costs were defined to include administration expenses and cost of funds.

Administration expenses are defined to include salaries, office rent and maintenance, office sundries, transport and maintenance of equipment, depreciation and legal expenses, cost of funds include interest to acquire loan capital, interest on saving deposits, assumed cost of grants and subsidies and bank charges (CALMEADOW, 1995)

The level of operation costs threatens sustainability of MFIs to which Piyush and Tiwari recommend MFIs to cut down costs and keep operation costs on a reducing trend to achieve high performance.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter highlights the procedures and techniques used in carrying out the study. It sheds light on the research design, population size, sampling size and procedures, data analysis, interpretation and the overall limitation of the study. Generally, the methodology provided the framework within which data was collected, analysed, and presented.

3.1 Research Design

The descriptive co-relational research design was employed because it is a useful tool that can answer the research questions, relating to what and how the situation looks like out there. The methodology used can provide a significant relationship between variables and involves a survey. Hence, it is apparently suitable for the study of the relationship between interest rate policy and financial sustainability.

3.2 Research Population and Sample Size

The population of 149 elements comprised officials of Apex institutions for MFIs who regulate and supervise the MFI operating environment, senior executives of MFI, who are policy and decision makers, finance and branch managers of MFIs, who are implementers of interest rate policy and repeat borrowers from MFIs are the micro entrepreneurs and who pay the interest expense to the MFI.

A list of officials of MFIs subjects, senior executives, finance and branch managers and repeat clients, was obtained respectively from MFIs to form a sample frame. A

list of senior executives was obtained from the annual audited accounts report 2010.

Sample Size and selection

Table 1: Summary of elements of sample size and study population

Study elements	Study population	Sample size	Sampling techniques
Officials of Apex institutions	4	4	Purposive
Senior executives of MFIs	5	4	Purposive sampling
Finance and branch managers	35	20	Random sampling
Repeat clients of MFIs	105	86	Random sampling
Total	149	114	

Source: Krejcie and Morgan, 1970 Table cited in Amin (2005. p. 545)

From table above, the study sample of 114 subjects were selected out of a study population of 149 elements following the roles and functions of the stratum; officials of Apex institutions, senior executives, finance and branch managers and repeat clients. The Krejcie and Morgan, 1970 table was used to determine the sample out of the study elements. A total of 85 respondents were successfully selected from a sample of 114 subjects which represented a study population.

3.3 Sampling Procedures

A purposive and simple random sampling technique was used for selecting the sample under consideration. This is a non-probability sampling method where the researcher chooses those he/she knows will provide the required data. The researcher resorted to purposive and simple random sampling technique because of its inclusiveness. The researcher chose those who were meant to be in the sample.

3.4 Data Collection Methods

The researcher used self administered questionnaire, researcher administered questionnaires and face-to-face interviews.

3.5 Validity and Reliability of the Instruments

To ensure the validity and reliability of the instruments, the researcher strictly adhered to ethical standards and guide of Ernst and Young (2012) questionnaire, where 60 percent of the questions were adopted. While 40 percent of the questions were researcher's own tailored to meet unique circumstances and local business environment in Rusizi District, Western Rwanda. Furthermore, opinion of the supervisor who is an expert added more value on the validity and reliability of the instrument.

3.6 Data Analysis

The data adopted for analysis were entered into statistical packages namely; Epi data, STATA and Excel sheet. This was followed by its analysis and interpretation in line with the statistics set to capture the research objectives. Data were presented in frequency tables, percentages distribution and graphs where profiles of respondents, levels of interest rates were analysed. Item analysis helped to

demonstrate the strength and weakness of respondent on dependent and independent variables. The Pearson's correlation coefficient was computed to determine the strength of the relationship, where r^2 is the coefficient of determination.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0. Introduction

This chapter summarizes, presents, analyses and interprets findings on the study. The response rate, nominal data, descriptive and inferential statistics from questionnaires are presented using percentages, pie-charts, graphs, frequencies, Pearson correlation, according to objectives and hypotheses besides appending additional tables and figures. A hierarchical multiple regression was fitted, tested and used to analyse and interpret results on the research hypotheses which seeks to substantiate influence of a moderating variable client's response to interest rate on the relationship between interest rate policy and sustainability.

4.1. Response Rate

The researcher received a total of 85 returned questionnaires out of 114 questionnaires distributed comprising of Officials from Apex institutions (4/4), senior executives (4/4), finance and branch managers (11/20) and repeat clients 66/86. Eighty-five (85) questionnaires received indicated a response rate of 75% as per calculation below.

$$\text{Response rate} = \frac{recieved\ questioniares\ and\ response}{Total\ questionniares\ distributed}$$

$$= \frac{85}{114} x\ 100 = 75\%$$

The response rate of 75% compared with $\geq$ 50% response rate recommended by Mugenda & Mugenda (1999) was satisfactory to undertake data analysis.

4.2. Nominal Data from Study Element

This section explains key attributes of the respondent officials of MFIs and repeal client of MFIs according to position held in the organisation, experience in years, in management and governance of MFIs, type of micro enterprise and loan cycle for repeat clients, all of which are believed to affect the relationship between interest rate policy and financial sustainability and the results interpreted as related to study variables.

Table 2 : Officials of Apex Institution, senior executives of MFI by position and experience.

Category of respondent	**Official position**					**Experience in years**				
Nominal item measured	Board	Senior Exec.	Finance	Branch	Total	2 - 2	2 - 4		Min.	Total
Officials of Apex inst.	-	4	-	-	4		1	3	-	4
Senior exec. Of MFI	1	3			4	-	-	3	1	4
Branch manager	-	-	2	9	11	2	2	5	2	11
Total	1	7	2	9	19	2	3	11	3	19

Source: Primary data

4.2.1. Senior Executives, Finance and Branch Managers of MFIs by Experience

Out of the 19 respondents (table 2) who were officials of Apex institutions, senior executives, finance and branch managers of MFIs five 5 (33%) of the officials had experience above 5 years in management and governance of MFIs. The other 33%

had 2-4 years experience in management and governance of MFIs while 2 (13%) had management and governance experience below 2 years. The officials who responded to the self administered questionnaire and interviewees had significant management and governance experience on the job, and this explained quality management efficiency indicators such as 98% recovery rates, increasing officials credit workload reducing portfolio at risk and client's retention in MFIs which indicated that management experience contributes to improve the relationship between interest rate policy and financial sustainability.

4.2.2. Senior Executives, Finance and Branch Managers by Position Held

Out of 15 respondents who were officials of MFIs, the board of directors comprised 1 (7%), senior executives, 3 (13%) and 11 (73%) were finance and branch managers respectively. The 60% respondents were branch managers, distributed in branches of which 20 were targeted but 10 returned questionnaires on time. It is believed that since data was collected across the top and middle structure, all representative data to answer research questions on interest rate policy was collected (table 2 above). There was distributed involvement by all key officials of MFIs, Board members, senior executives, finance and branch managers in interest rate policy matters and implementation which is a pillar of financial sustainability of an institution.

Figure 2: Clients' respondents by loan cycle and financial sustainability

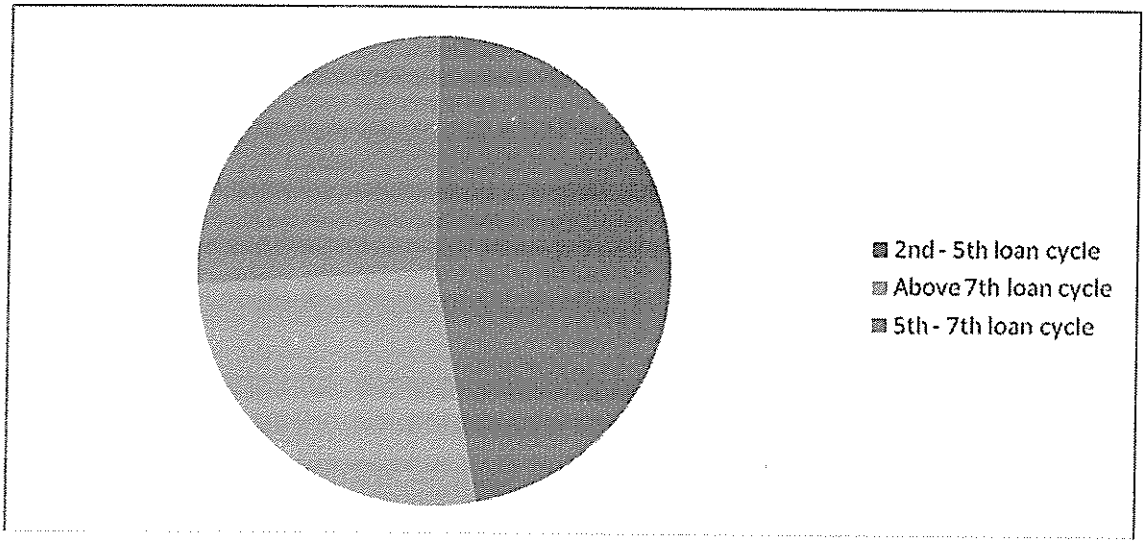


Figure 2 above showed that 31 (47%) of the client respondents were in the second to fifth loan cycles and 19 (29%) of the clients respondent had borrowed over seven times and 16 (24%) of the clients were in the 5^{th} – 7^{th} loan cycle.

These statistics meant that client retention was high and therefore, cost per loan made was reducing as loan cycles increased due to economies from repeat borrowings such as increasing loan size hence the administration expense was reducing which improved financial sustainability of MFIs.

Table 3 : Client respondents by type of collateral pledged to MFIs

No.	Collateral pledges	Frequency	Percentage
1	Household chattels	43	65
2	Investment assets of business stock	11	17
3	Land & other assets with title	6	9
4	Mandatory saving and co-guarantee	6	9
Total		**66**	**100**

Source: primary data

According to statistics (tables) 43 (65%) of clients respondents had pledged household chattels to access loans. Another 11 (17%) repeat client had pledged micro enterprises business stock and farm assets as their businesses were progressive. Six 6 (9%) repeat clients had pledged land and investment assets with titles. Although all the repeat client respondents had only mandatory savings and co-guarantors to access a loan in MFI without pledging any other asset, as much as peer pressure and co-guarantee are the basis of loan decisions, the MFI still required pledged collateral of both household nature and commercial to fully secure the portfolio in order to minimize loan losses which ensured financial sustainability in the event of default.

4.3. Findings on Interest Rate Policy and Financial Sustainability

This section presents both quantitative and qualitative data per study objectives following the data collection methods used namely questionnaire, face to face interviews, documentary review and observation.

4.3.1. Interest Rate Determination Policy and Financial Sustainability

The objective was to establish the effects of interest rate determination policy on financial sustainability of MFIs. Interest rate determination was studied according to dimensions of the administration expense rate, loan loss provision rate, cost of funds rate and capitalization rate against selected financial sustainability dimensions and indicators. This section presents empirical data to support answer the research question on the relationship between interest rate determination policy and financial sustainability of MFIs.

4.3.1.1. Descriptive Statistics; Questionnaire on Interest Rate Determination

Table 4 below shows the frequency distribution of responses by senior executives, finance and branch managers of MFIs on interest rate determination policy and financial sustainability of MFIs. The frequency was analysed according to the dimensions and indicators of the interest rate dimension variable below;

Out of 3 questions administered on the administration expense rate as a component in the interest rate policy for financial sustainability. The average frequency was 11 (73%) agree, 2 (13.3%) undecided and 2 (13.3%) disagree on whether the administration expense rate when included in the determination of the interest rate in the interest rate policy improved financial sustainability. The frequency on agree in table 4 below on administration expense rate is in agreement with the mean distribution 3.7 close to the media and mode of 4 implying agree along the Likert scale as used as per the descriptive statistics on interest rate determination which respondents opinion meant that the administration expense rate in the interest rate determination policy improved financial sustainability.

Three questions were set to measure the response on loan loss provision rate in the interest rate determination policy. Average frequency on loan loss rate variable tallied 9 (60%) agree, 2 (13%) undecided and 4 (27%) disagree by officials of MFIs respectively. This implied that the variable loan loss provision rate when included in the interest rate determination in the interest rate policy improved financial sustainability. The frequency result of 9 (60%) agree was close to 4 on the Likert scale and equal to mode and media. Accordingly 60% of the respondents agreed that the loan loss rate component in the interest rate policy improved financial sustainability.

From table 4 below the cost of funds component was measured by four questions of which the average frequency result were 12 (80%) agree, 2 (13%) undecided and 1 (7%) disagree respectively. The 12 (80%) agree was close to the mean 3.7 and mode and media of 4 on a Likert scale which implied that officials agreed that the cost of funds rate variable when included in the interest rate determination in the interest rate policy improved financial sustainability.

Four questions were administered on the capitalization rate and the average frequency on the capitalization rate variable in the interest rate determination was 10 (67%) agree, 2 (13.3%) undecided and 2 (13.3%) disagree respectively by senior executives and branch managers of MFIs which implied that the capitalization rate in the interest rate determination policy improved financial sustainability.

Table 4: Frequencies on interest rate determination policy, officials of MFIs

Interest rate determination policy	Measuring scale						Descriptive stat.		
No. of respondents = 15	Agree		Undecided		Disagree		Mean	STD	Skewness
Average indicator and dimension	Freq.	%	Freq.	%	Freq.	%			
Administrative expense rate	11	73	2	13.3	2	13.3			
Loan loss provision rate	9	60	2	13	4	27			
Cost of funds rate	12	80	2	13	1	7			
Capitalization rate	10	67	3	20	2	13			
Average on interest rate determination policy	11	73.3	2	13.3	2	13.3	3.7	0.560	0.357

Source: Primary data

Standard error = 1.121, Kurtosis = 0.580, mode = 4, median = 4, sum F = 58. Strongly agree and agree analysed as agree, disagree and strongly disagree analysed as disagree, undecided and none response analysed as undecided.

The aggregate and cumulative frequency on interest rate determination policy considering all its constructs as conceptualized in the study was 11 (73.3%) agree, 2 (13.3%) undecided and 2 (13.3%) disagree by senior executive, finance and branch managers of MFIs. The average result of the frequencies, 11 (73.3%) agree

is in agreement with the descriptive statistic mean of 3.7 which is close to 4 on the Likert scale used as agree and equal to the mode and medium of 4. The standard deviation of 0.560, Skewness of 0.357 and kurtosis of 0.560 were all within a range of -1 to 1, which suggested that data were a normal distribution that supported a Pearson correlation to be performed so as to establish the relationships. The frequency was also in agreement with the rotational component factor matrix whose percentage variance indicated that interest rate determination policy contributed 18.07% in the interest rate policy which improved financial sustainability. Accordingly senior executives, finance and branch managers of MFIs agreed that the interest rate determination policy in the interest rate policy improved financial sustainability.

4.3.1.2. Pearson Correlation

Interest rate determination policy and financial sustainability

The researcher sought to establish the effects of interest rate determination policy on financial sustainability of MFIs. Both dimensions and indicators of the interest rate determination policies and financial sustainability variables were correlated using the Pearson product moment correlation as in table 11 and 12.

From table 5 below the aggregated Pearson correlation coefficient was r=0.685**, sign = 0.002. The result showed that interest rate determination policy had a positive and linear relationship with financial sustainability and its calculated coefficient of determination was r^2 = 47%.

Table 5: Pearson correlation on interest rate determination and financial sustainability

Particulars	Variable	Financial sustainability	r^2
Pearson correlation (r)	Interest rate determination	0.685**	
Sig. (I- tailed)	Interest rate determination	0.002	
N		15	47%

** correlation – sig. at 0.01

r^2 = coefficient determination

Source: primary data

The coefficient of determination r^2 = 47% implied that interest rate determination policy r = 0.685, sig. = 0.002 had a positive linear relationship and significantly accounted for 47% variations in financial sustainability of MFIs.

Financial sustainability was low when the interest rate determination policy was not tailored but when the interest rate determination policy (IRDP) was in place and implemented financial sustainability improved.

4.3.1.3. Face-to-Face Interviews with Officials of Apex Institutions and Officials of MFIs on Interest Rate Determination

Unstructured face to face interviews with officials of Apex Institutions namely association of microfinance institution of Rwanda and National Bank of Rwanda and officials of MFIs comprising of senior executives, finance officers and branch managers were conducted.

The Apex institutions kept record and monitoring of conduct of MFIs business besides regulating the operating environment and microfinance best practices and therefore were vital to be interviewed while senior executives of MFIs designed policies and its implementation in the MFIs.

The officials revealed that each MFI determined its own interest rate charged in a liberalized environment but added that the MFIs in Rwanda did not have fully documented cost composing interest rates and have no precisely detailed documented interest rate policies in place that could be shared.

They further added to say that it was mandatory that each MFI submits the interest rate charged on loans and further displays it in the public as a supervisory and regulatory requirement.

4.3.2. The Effects of Interest Rate Application Methods on Financial Sustainability

The objective was to analyse the effects of interest rate application methods on financial sustainability of MFIs. The interest rate application methods studied were the dimensions of the declining balance method and flat rate application methods of financial sustainability and its indicators. This section presents empirical data to support answer the question whether interest rate application methods affects financial sustainability.

4.3.2.1. Descriptive Statistics on Interest Rate Application Methods

Table 6 below shows the frequency distribution of responses by senior executives, finance and branch managers of MFIs on whether interest rate application methods in the interest rate policy affected financial sustainability of MFIs. The interest rate

application methods were measured by two indicators: the declining balance method and the flat rate application methods. The frequencies are analysed according to the dimensions and indicators of the interest rate application methods and the average (table 6 below).

The declining balance method was measured by 4 questions of which the average frequency result was 8 (53%) agree, 3 (20%) undecided and 4 (27%) disagree by the senior executives, finance and branch managers of MFIs respectively. The result was of 8 (53%) agree on a Likert scale implied that the officials agreed that the declining balance method once applied in the interest rate policy improved financial sustainability of MFIs. There was 15 (100%) disagree as to whether the declining balance method was in use in MFIs which implied that the declining balance method is not the implemented. The agree result was above the mean of 3.67 on the Likert scale in the descriptive statistics which was close to mode and median of 4.

Table 6: Descriptive statistics on interest rate application methods and financial sustainability

Interest rate application methods	Measuring scale						Descriptive stat.		
No. of respondents = 15	Agree		Undecided		Disagree		Mean	STD	Skewness
Average indicator and dimension	Freq.	%	Freq.	%	Freq.	%			
Declining balance method	8	53	3	20	4	27			
Flat rate application method	12	80	1	7	2	13			
Average on interest rate application method	10	67	2	13	3	20	3.6444	0.54869	-0.183

Source: Primary data

Standard error = 1.121, Kurtosis = 0.580, mode = 4, median = 4, sum F = 55 strongly agree and agree analysed as agree, disagree and strongly disagree analysed as disagree, undecided and none response analysed as undecided.

Three 3 (20%) of the officials respondents were undecided that the reducing balance method in the interest rate policy would improve financial sustainability because on the declining balance on the outlook, it generated lesser interest income. The other 4 (27%) frequently disagreed that the reducing balance method

in the interest rate policy would improve financial sustainability. Since the majority agreed that the declining balance was preferred, it remained contentious to establish its effects on financial sustainability using Pearson correlation.

The flat interest rate application method was measured by four question and the average frequency of 12 (80%) agree, 1 (7%) undecided and 2 (13%) disagree by senior executives, finance and branch managers of MFIs showed that it was the method in use and would improve financial sustainability. 1 (7%) of the respondents were undecided as to whether the flat rate method of interest rate application in the interest rate policy improved financial sustainability, the other 2 (13%) of the officials disagreed that the flat rate interest application method in the interest rate policy will maximize interest rate income to improve financial sustainability.

The aggregated frequency for the declining balance method and flat rate application methods on agree and disagree by officials of MFIs tallied 10 (67%). This is above the mean of 3.67 and close to the mode and median of 4 as depicted in the descriptive statistics (table 6 above). The mean deviated from standard deviation by 0.54 which is less than 1 which implied that data were a normal distribution to support a correlation. The descriptive statistics are in agreement with the 18.4 percentage variation that suggested that the interest rate application method contributed 18.4% of the interest rate policy that financially sustained the MFIs (Table 6 above). This implied that interest rate application methods in the interest rate policy were variables that explained variations on financial sustainability of the MFIs. The Pearson correlation results are used to further analyse the effects of interest rate application methods on financial sustainability.

4.3.2.2. Pearson Correlation on Interest Rate Application Methods and Financial Sustainability

Table 7 below represents Pearson correlation result on interest rate application methods and financial sustainability. The objective was to analyse the effects of interest rate application methods on financial sustainability.

Table 7: Pearson correlation interest rate application methods and financial sustainability

Particulars	Variable	Financial sustainability	r^2
Pearson correlation (r)	Interest rate application	0.864**	
Sig. (I- tailed)	Interest rate application	0.000	75%
N		15	

** corr. Sig. at 0.01

r^2 = coeff. Of determination

The Pearson correlation result on interest rate application methods on financial sustainability was r = 0.864**, sig. = 0.10. The calculated coefficient of determination was r^2= 75%. The Pearson correlation results showed that there was a very strong and positive linear relationship between interest rate application methods and financial sustainability.

The coefficient of determination r^2 = 75% implied that the interest rate application methods in the interest rate policy significantly explained 75% variations in financial sustainability. This result implied that financial sustainability is low when the interest rate application method is not tailored, but when the interest rate application methods were tailored, financial sustainability improved.

4.3.2.3. Face to Face Interviews with Officials of Apex Institutions and Officials of MFIs on Interest Rate Application Methods and Financial Sustainability

Interview results for unstructured face to face interviews with officials of selected Apex institutions and the officials of MFIs are presented below;

4.3.2.4. Interviews with Officials of Apex Institutions on Interest Rate Application Methods

Interviewees, 2 (50%) of the officials of Apex institutions revealed that the interest rate application methods were liberalized and were being applied by MFIs competitively against each other. 2 (50%) of the officials stated that MFIs were implementing a flat rate application method.

Officials of Apex institutions and senior executives of MFIs were in agreement that the interest rate application methods are a competitive tool in MFIs and that the flat rate application method was under high criticisms that it leads to low customer retention and had affected the financial sustainability of MFIs negatively.

4.3.3 Examining Interest Income Collection Methods and Financial Sustainability

The objective was to examine the relationship between interest income collection methods and financial sustainability of MFIs. Interest income collection methods dimensions had indicators; upfront interest income collection methods, interest income due method and interest income in arrears method against financial sustainability indicators. This section presents empirical data to support answer the research question on the relationship between interest income collection methods on financial sustainability.

4.3.3.1. Descriptive Statistics on Interest Income Collection Methods

Table 8 below shows the frequency distribution of responses by senior executives, finance and branch managers of MFIs on whether the interest income collection methods in the interest rate policy affected financial sustainability of MFIs.

Table 8: Descriptive statistics on interest income collection methods and financial sustainability

Interest income collection methods	**Agree**		**Undecided**		**Disagree**		**Mean**	**STD**	**Skewness**
Average indicators and dimension	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**			
Upfront interest income collection method	10	67	4	26	1	7			
Interest income due collection method	13	56	1	7	1	7			
Interest income in arrears method	10	67	4	26	1	7	4.08	0.705	=0.162
Average on interest income collection methods	11	73	3	20	1	7			

Source: primary data

Standard error = 1.121

Kurtosis = 0.580

Mode = 4

Sum F = 6

Strongly agree and agree analysed as agree, disagree and strongly disagree analysed as disagree, undecided and none response analysed as undecided.

From table 8 above, the upfront interest income collection method as a variable in the interest rate policy was measured by 4 questions and the average responses are 10 (67%) agree, 4 (26%) undecided and 1 (77%) disagree by senior

executives, finance and branch managers of MFIs respectively. The agree frequency at 67% though high was less than the mean of 4.08 which is above the mode and median of 4 as in the descriptive statistics on the interest income collection methods and implied that the method improved financial sustainability on the outlook. However, according to 1 (7%) disagree, respondents upfront interest income collection method reduced client's welfare by depriving them off earlier investment income and hence did not improve the financial sustainability.

The interest income due collection method was measured by 4 questions and its average frequency are 13 (86%) agree, 1 (7%) undecided and 1 (7%) disagree by senior executives, finance officers and branch managers of MFIs respectively. There was 100% strongly agree that the interest income due was the method in use in MFIs and that this method was suitable in the interest rate policy to improve financial sustainability.

The interest income in arrears collection policy was measured by 4 questions and the average frequency was 10 (67%) agree, 4 (26%) undecided and 1 (7%) disagreed respectively by senior executives, finance and branch managers. This implied that the interest income in arrears collection policies in the interest rate policy improved financial sustainability.

The aggregate average frequency on the interest income collection methods in the interest rate policy and financial sustainability was 11 (73%) agree, 3 (20%) undecided and 1 (7%) disagree respectively by officials of MFIs. The mean response to this category of officials was 4.08 tending to strongly agree (5) along the Likert scale used. This was above the mode (4) and median (4) response.

4.3.3.2. Pearson Correlation on Interest Income Collection Methods and Financial Sustainability

The research objective was to examine the relationship between interest income collection methods in the interest rate policy and financial sustainability. Table 9 below presents the Pearson correlation result on interest income collection methods and financial sustainability.

Table 9: Correlation table; interest income collection methods and financial sustainability

Particulars	**Variable**	**Financial sustainability**	**r^2**
Pearson correlation (r)	Interest income collection	0.835**	
Sig. (I- tailed)	Interest income collection	0.000	70%
N		15	

Source: primary data

** corr. Sig. at 0.01

r^2 = coeff. Of determination

From table 9 above, the interest income collection methods on financial sustainability correlated a Pearson result, r = 0.833, sig = 0.10. The result implied that interest income collection methods in the interest rate policy had a very strong positive linear relationship on financial sustainability. From r = 0.833, sig. = 0.10, the coefficient of determination r2 = 70% which implied that interest income collection methods in the interest rate policy significantly explained 70% variations in financial sustainability of MFIs.

The result meant that financial sustainability was low when interest income collection methods were lenient to default, upfront and did not accelerate collections of due interest income but when the interest income collection methods

that were stringent to default and that accelerated collection of interest income due were incorporated in the interest rate policy and implemented, financial sustainability improved.

4.3.4. Influence of Clients' Response to Interest Rate Policy on the Relationship between Interest Rate Policy and Financial Sustainability.

The objective was to establish the influence of clients' response to the interest rate policy on the relationship between interest rate policy and financial sustainability of MFIs.

Client's response was studied according to dimensions of the interest rate policy on financial sustainability and data collected using a researcher administered questionnaire was analysed to answer the research question, to the influence of clients' response to interest rate policy on the relationship between interest rate policy and financial sustainability of MFIs. In this section, descriptive statistics on researcher administered questionnaire are presented; the part and partial correlation result of clients' response to the interest rate policy on the relationship between interest rate policy and financial sustainability were used to establish the influence of clients' response. A hierarchical multiple regression was fitted and used to answer the hypothesis that stated that "clients' response to interest rate policy positively influenced the relationship between interest rate policy and financial sustainability of MFIs. Results from face to face interviews were also presented.

4.3.4.1 Descriptive Statistics

Research administered questionnaire on influence of clients' response to the interest rate policy on financial sustainability.

Table 10 below shows the frequency distribution of responses by repeat clients of MFIs using a researcher administered questionnaire on whether there was an

influence of clients' response to interest rate policy on the relationship between interest rate policy and financial sustainability. Clients' response was studied as a moderator.

From the table below, repeat clients' respondents on the dimensions of the interest rate determination policy had a cumulative frequency of 34 (52%) agree that the interest rate determination policy in the interest rate policy affected them. This statistic was slightly less than the mean response of 2.81 tending to the mode and median of 3 on the Likert scale, which implied undecidedness by the repeat clients on whether they influenced the relationship between interest rate policy and financial sustainability. The other 31 (47%) of the repeat clients disagreed that they influence the interest rate determination policy. This indicated that 47% of the clients were more interested to accessing microcredit than interest rate determination policies that affect them.

Repeat clients' responses on the interest rate application methods had a cumulative frequency of 32 (48%) agreed that they influenced the interest rate application methods. The 33 (50%) disagreed on this matter which implied that the clients think they could not influence the interest rate application methods in place.

Table 10: Descriptive statistics on influence of clients' response to interest rate policy and financial sustainability

Influence of clients' response to interest rate policy	Measures scale						Descriptive statistics		
Number of respondents = 66	Agree		Undecided		Disagree		Mean	STD	Skewness
Average	Freq.	%	Freq.	%	Freq.	%			
Upfront interest income collection method	34	52	1	3	31	47			
Interest income due collection method	32	48	2	3	33	50			
Interest income in arrears method	28	42	3	5	35	53			
Average on interest income collection methods	31	47	2	3	33	50	2.9333	0.59362	-2.151

Source: Primary data

Standard error = 1.121, kurtosis = 0.580, sum = freq.

Strongly agree analysed as agree, disagree and strongly disagree analysed as disagree, undecided and none response analysed as undecided.

The mean score was 2.93 close to 3 = undecided on Likert scale used, and given that the standard deviation of 0.59 which was less than 1, data was a normal distribution to support run a part, partial correlation and a regression.

The average frequency of repeat clients of MFIs on interest income collection methods and financial sustainability had 28 (42%) agreed that they had an influence on interest income collection methods that affected them. The majority of the repeat clients 35 (53%), disagreed that they had an influence on interest income collection method that affected them. The minority of repeat clients 3 (5%) were undecided whether they could influence the interest income collection methods. The distribution implied that 53% of the repeat borrowers of MFIs felt that they could not influence the interest income collection methods in place in MFIs.

Summarily, the aggregated frequency of clients' response to interest rate policy and the relationship between interest rate policy and financial sustainability of the MFIs was 43 (62%) agree which implied that the clients of MFIs had influence on the interest rate policy that affected financial sustainability of the MFIs.

4.3.4.2. Part and Partial Correlation

Influence of clients' response to the interest rate policy and the relationship between interest rate policy and financial sustainability.

The objective was to establish the influence of clients' response to the interest rate policy on the relationship between interest rate policy and financial sustainability of MFIs. The influence was established using a part and partial correlation where the interest rate policy was the independent variable, financial sustainability the dependent variable and client's response, moderating variable (predictor). The R^2 change from r^1 to r^2 was interpreted as at its significant level to show the direction and influence accordingly. The hypothesis was tested using a hierarchical multiple regression by interpreting change in R^2 and significance level.

4.3.4.2.1. Part Correlation

Interest rate policy on financial sustainability while controlling the influence of clients' response

Table 11 below is the part correlation using results from the self administered questionnaire to establish the relationship between interest rate policy and financial sustainability while holding clients' response constant. The result is referred to as r^1.

Table 11: Part correlation: Interest rate policy and financial sustainability.

Control variables		Interest rate policy	Coefficient of determination
Interest rate policy,	Pearson correlation Sig (2) failed	1	
N		15	
Financial Sustainability, r^1	Pearson correlation	.880**	0.774
sig (2-tailed)		.000	
N		15	

The part correlation result to establish the relationship between the interest rate policy and financial sustainability while controlling the influence of clients response correlated Pearson r_1 = 0.880**, sig = 000, with its coefficient of determination r_1^2 = 77.4%. The r_1 result above implied that interest rate policy had a very strong positive linear relationship with financial sustainability. This implied that an appropriate interest rate policy in place accounted for 77.4% financial sustainability of MFIs while holding clients' response constant. The interest rate policy affected financial sustainability in the same direction. This explained the relationship between interest rate policy and financial sustainability as stated in the purpose of the study.

4.3.4.2.2. Partial Correlation

Influence of clients response to the interest rate policy on the relationship between interest rate policy and financial sustainability.

Partial correlation in the table below was used to establish the influence of clients' response to the interest rate policy on the relationship between interest rate policy and financial sustainability. In this section, the results from the researcher administered questions on repeat clients of MFIs were introduced as predictor to independent variable in r_1 and correlated to derive r_2 where the influence of client response was established by interpreting R^2 change and its significance level.

Table 12: Partial correlation: influence of clients' response on interest rate policy

Control variables		Interest rate policy	Coefficient of determination
Clients response	Interest rate policy	1.00	
	Significance (2-tailed)	.	
	df	0	
Financial sustainability	Correlation, r2	.876**	0.767
	Significance (2-tailed)	.000	
	N	15	

From table 12 above, partial correlation result r_2 when client's response predictor was introduced to r_1, a new correlation $r_2 = 0.876$, sig. ≤ 0.01 was obtained at 99% level of significance. The R square reduced from r_1 to r_2 by R2 change = $r_1 - r_2 = 0.880 - 0.876 = 0.004$.

The result showed that there was a reduction in R square by R^2 change = 0.004 at significance level sig = 0.000 as a moderating influence of client's response to the

interest rate policy. The coefficient of determination reduced from 0.774% to 0.767% as a result of the influence. It was analysed that the predictor influenced the r_1 to reduce by 0.7%, this implied that clients' response to the interest rate policy influenced financial sustainability to reduce by 0.7% since r_1 was high at 0.880, sig. $\leq$ 0.01 compared to the presence of clients response where r_2 = 0.876, sig 0.01. This further implied that a reduction in financial sustainability by 0.7% was explained by clients' response to the interest rate policy.

Hypothesis $H4_1$: Clients' response to interest rate policy positively influenced the relationship between interest rate policy and financial sustainability.

The alternative hypothesis stated that clients' response to interest rate policy positively influenced the relationship between interest rate policy and financial sustainability. The null hypothesis $H4_0$ stated that there was a negative influence of clients response to interest rate policy on the relationship between interest rate policy and financial sustainability at significance level, alpha ($\propto$) = $p(H_0)$ = sig. 0.05.

The R square = 0775 and R^2 change = 0.716 for model 2 posted a negative change in R square 0.58 at statistical insignificance level sig.=0.614, when clients response was predicted on the interest rate policy, R square reduced from 0.775 to 0.716 with a negative effect of change in R- square = 0.058, the relationship was insignificant at a statistical level 0.948 which was greater than the acceptable level of significance sig. $\leq$ 0.05 since the tested null hypothesis was sig. = 0.614 which was far greater than the stated level of significance sig. = 0.05, the alternative hypothesis that clients' response to interest rate policy positively influenced the relationship between interest rate policy and financial sustainability was rejected and the null hypothesis was upheld. The variation, 5.8% reduction in financial

sustainability was explained by the influence of clients' response to interest rate policy.

This guided the decision to reject the hypothesis that client response to interest rate policy positively influenced the relationship between interest rate policy and financial sustainability.

Table 13: The hierarchical multiple regression model

Model	Unstandardized coefficients		Standardized coefficient	t	R-square	Adj R-square	R-square clong	F. clong	F	Sig. F
	B	Std error								
1. (constant) Client response	3.111 .206	.704 .230	.241	4.419 .895	.001	.058	- .014	.058	.801	.387
2. (constant) Client response	.393 .061	.603 .125	.72	.652 .490	.527 .633	.751	.769	.693	18.080	.000
Interest rate application	.864		.150	.849	5.776	.000				

Durbin – Watson = 2.580

Table 14: Colliniarity variables excluded from the hierarchical model

Model	Beta in	t	Sig.	Partial correlation	Colliniarity statistics		
					Tolerance	VIF	Minimum tolerance
1. Interest rate determination	.702a	3.060	.010	.662	.837	1.195	.837
Interest application	.849a	5.776	.000	.858	.960	1.041	.960
Interest income collection	.816a	5.200	.832	.832	.981	1.020	.981
2. Interest rate determination	.260b	1.390	.386	.386	.552	1.813	.552
Interest income collection	.369b	1.409	.391	.391	.280	3.568	.275

a. predictors (constant), client responds

b. predictors (constant), client response and interest rate policy

c. DV. Financial sustainability

Table 15: The hierarchical multiple regression model, coefficients

lodel	Unstandardised coefficient		Std coefficients	T	Sig.	R-square	Adj R-square	R-square change	F-change	df2	Sig F change
	B	Std error	Beta								
. Constant lient :sponse	3.111 .230 .206	.704	.241	4.419 .895	.001 .387	.058	-.014	.058	.801	13	.387
. Constant ient :sponse	.300 .800	.579 .121	.009	.518 .066	.614 .948	.775	.737	.737	38.135	12	.000
:P	.895	.145	.878	6.175	.000						

Durbin – Watson = 2.324

a. predictors (constant), client response

b. predictors (constant), client response and interest rate policy

c. DV. Financial sustainability

CHAPTER FIVE: SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0. Introduction

The study sought to establish the relationship between interest rate policy and financial sustainability of microfinance institutions in Rwanda. This chapter presents a summary on conceptualization of the problem, methodology, discussion of findings, conclusion, recommendations and suggestions for further research accordingly.

5.1. Summary

MFIs in Rwanda had not achieved financial sustainability according to trends depicted in the background of the study. Using a modified (GAP model, 2002), it was analysed that interest income generated by applying the interest rate on loans barely covered the aggregate of costs and thus the interest rate policy from which interest income is derived was conceived to affect financial sustainability, using an institutional approach to microfinance, the literature review was undertaken which found that interest rate was listed among the factors that affected financial sustainability, but there was a gap to demonstrate the relationship that existed between interest rate and financial sustainability of MFIs and subsequently, the interest rate policy governing administration of interest rate was conceptualized as the independent variable, financial sustainability as the dependent variable, client response as a moderating variable.

The study to establish the relationship between interest rate policy and financial sustainability used a quantitative approach supported by qualitative aspects. The relationship between interest rate policy and financial sustainability of MFIs was found to be very strong, positive and linear, interest rate policy accounted for

77.4% variations in financial sustainability and clients' response to interest rate policy having a negative influence on the relationship between interest rate policy and financial sustainability.

Using a part correlation result a Pearson, r, = 0.880, sig.= 000 and r^2 = 77.4%, it was found that the interest rate policy had a very strong positive linear relationship and accounted for 77.4% variations in financial sustainability of MFIs which implied that financial sustainability was low when the interest rate policy was not tailored to cover all costs and a profit, financial sustainability improved. The empirical findings of the study, which added direction, degree and magnitude of the relationship, where the interest rate policy was very strong, positive linear and explained 77.4% variations in financial sustainability.

Considering that MFIs derive interest income from interest rate charged on the portfolio to cover costs and retain a profit if any, the study concentrated on interest rate determination policy, interest rate application methods and interest income collection methods all of which were confirmed critical constructs of the interest rate policy as supported by related literature.

5.2. Discussion of Findings

This section presents a discussion on findings following the study objectives, dimensions of interest rate policy and financial sustainability.

5.2.1. Interest Rate Determination Policy and Financial Sustainability

The objective was to establish the relationship of interest rate determination policy on financial sustainability of MFIs.

The Pearson correlation on interest rate determination and financial sustainability was r = 0.685, sig. = 0.002 and calculated r^2 = 47%. This implied that the interest determination policy had a strong positive linear relationship and accounted for 47% variations in financial sustainability. It was found that financial sustainability was low when interest rate determination policy was not tailored but when interest rate determination policy was tailored towards financial sustainability of MFI, financial sustainability improved.

The Pearson correlation r = 0.685, sig. = 0.002 and calculated coefficient of determination r^2 = 0.465 which implied that interest rate determination method had a positive linear relationship and accounted for 46.7% of financial sustainability. Once the interest rate determination policy was tailored to cover the cost profitably, then the resulting interest income improved financial sustainability. This result added direction and degree of relationship to related studies by Adongo (2001), Rosenberg (2002) and Robinson (2001) who recommended MFIs to charge sustainable interest rates for financial sustainability.

5.2.3. Interest Income Collection Methods and Financial Sustainability

The objective was to examine the relationship between interest income collection methods and financial sustainability of MFs. The mean of responses was 4.08 along the Likert Scale which implied that the officials of MFIs agreed that the interest income collection methods affect financial sustainability.

The Pearson correlation result for interest income collection methods on financial sustainability was r = 0.833 sig = 0.000 and coefficient of determination = 70%. The result implied that the interest income collection method had a very strong positive linear relationship and accounted for 70% variations on financial

sustainability of MFIs. The result meant that financial sustainability was low when the interest income collection methods were not accelerating collections and lenient to default, but when the interest income collection method in the interest rate policy accelerated collections, zero default tolerant and stringent, financial sustainability improved which is agreement with both Youssofou (2002) and Pandey (2007) who suggested that income collection methods ought to accelerate income collection to improve financial sustainability.

5.2.4. Influence of Clients' Response to the Interest Rate Policy

The objective was to establish the influence of clients' response to interest rate policy on the relationship between interest rate policy and financial sustainability. In order to establish the influence, a part and partial correlation was fitted where the difference between r_1 and r_2 was interpreted. A hierarchical multiple regressions supported testing the hypothesis which stated that clients' response to IRP positively influenced the relationship between interest rate policy and financial sustainability.

Part correlation result between interest rate policy and financial sustainability while controlling client response correlated the Pearson $r_1 = 0.880$, sig. 000. The result implied that when clients' response was under control, the IRP had a very strong positive linear relationship at 99% level of significance. The interest rate policy accounted for 77.4% variations in financial sustainability of MFIs. The interest rate policy and financial sustainability moved in the same direction hence linear.

Partial correlation result r_2 while clients response was introduced to the interest rate policy correlated a Pearson $r_2 = 0.876$, at 99% level of significance. The IRP now accounted for 76.7% of financial sustainability and the other 0.7% unexplained

variance in financial sustainability was an influence of clients' response to the interest rate policy, the correlation r_1 reduced from 0.880 to r_2 = 0.876 by R^2 change = $r_1 - r_2$ =0.880 – 0.876.

The coefficient of determination = 0.7% implied that clients response to IRP influenced financial sustainability to reduce by 0.7% and this was in agreement with Shylendra (2006) who reported that when clients in Andra Pradesh in India complained on the interest rates charged and collection methods used by MFIs to their detriment, the MFIs were closed down politically which was a worse scenario than 0.7% reduction. The partial correlation findings of a reduction in financial sustainability by 0.7% is supported by Namyalo (2007) who had concluded that clients of MFIs were affected by the interest rate policy which reduced their welfare and investment capital through the size of interest expense paid to MFIs.

5.3 Conclusions on Research Findings

It was found that the interest rate determination policy and its indicators had a positive linear relationship and significantly accounted for 47% variations in financial sustainability of MFIs. Interest rate application methods in the interest rate policy had a very strong positive linear relationship and accounted for 75% variations in financial sustainability of MFIs. It was found that the interest income collection methods had a very strong positive linear relationship and accounted for 70% variations in financial sustainability of MFIS.

5.4. Recommendations

The following recommendations are guided by the study findings and conclusions on the relationship between interest rate policy and financial sustainability of MFIs.

1. The study recommends that MFIs should document the interest rate determination policy which specifies interest rate composition to comprise the administration expense rate, loan loss provision rate, cost of funds rate and capitalization rate to enable charge a sustainable interest rate on MFIs loans for financial sustainability.
2. The study recommends a declining balance method which was found to maximize interest income to the MFI and positively related to operational and financial self sufficiency for financial sustainability through increased outreach and management efficiency associated with an increasing credit officers' workload, customer retention. It is recommended that MFIs should adopt a reducing balance method because it will increase revenue by creating a win-win situation where maximum interest income for MFIs and less interest expense for clients is the standard.
3. The study recommends that MFIs should establish the interest rate that meets both MFIs sustainability and clients' micro enterprise sustainability.

5.5. Recommendations for Further Research

1. Sustainable interest rate for financial sustainability of microfinance deposit taking institutions in Rwanda.
2. Establishing interest rate composition coefficients for interest rate charged by microfinance deposit taking institutions.
3. Clients' response on financial sustainability of MFIs.
4. Cost controls and financial sustainability of MFIS.
5. Clients' sensitivity to charges in interest rates on financial sustainability of MFIs.

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COLLEGE OF HIGHER DEGREES AND RESEARCH

DEPARTMENT OF ECONOMICS, BUSINESS AND MANAGEMENT

January, 27, 2014.

INTRODUCTION LETTER FOR NGENDAHIMANA VENUSTE REG.NO. MBA/38625/123/DF TO CONDUCT RESEARCH IN YOUR ORGANISATION

The above mentioned candidate is a bonafide student of Kampala international University pursuing a Master's of Business Administration.

He is currently conducting a field research for his dissertation entitled "**Interest Rate Policy and Financial Sustainability of Umurenge SACCO as a Micro-finance Institution in Rusizi District, Rwanda".**

Your organization has been identified as valuable source of information pertaining to his research project. The purpose of this letter then is to request you to avail him with pertinent information he may need.

Any information shared with him will be used for academic purposes only and shall be kept with utmost confidentiality.

Any assistance rendered to him will be highly appreciated.

Yours truly,

15/8/014

KAMPALA INTERNATIONAL UNIVERSITY
KIU
15 AUG 2014
DEPUTY PRINCIPAL
CHDR
P.O. BOX 20000 KAMPALA

Dr. ES Kasenene
Deputy Principal, CHDR.

APPENDIX I

RESEARCH INSTRUMENT

A self-administered questionnaire

This is a self-administered to senior executives, finance and branch managers of MFI to collect opinions, perceptions that relate to interest rate policy and financial sustainability in accordance with the research objectives. The questionnaire was made up of five sections with predetermined alternatives on a nominal and Likert scale to enable collect data to answer the research questions.

SECTION A: NOMINAL DATA ABOUT THE RESPONDENTS

?resident of board ☐ Credit Officer ☐

\ccountant ☐ Branch manager ☐

:xperience in management of MFIs

\bove 5 years ☐

: – 4 years ☐

3elow 2 years ☐

SECTION B

'his section is an inquiry on the relationship between interest rate policy and financial ustainability. The respondent is requested to check along the row the number that atisfies over opinion and perception about the statement made or question asked oncerning interest rate policy and financial sustainability in UMURENGE SACCO. In this tudy, each number has the meaning assigned as follows;

= strongly agree 4 = agree

= undecided 2 = disagree 1 = strongly disagree

Objective 1: Interest rate determination policy on financial sustainability.

.	**Question / scale of measures**					
	Administration expense rate	**5**	**4**	**3**	**2**	**1**
1.	Administration expenses are considered in interest rate improved Fs.					
2.	Operation costs are reducing					
3.	Ratio of administration expenses to loans portfolio < 15%					
	Loan loss provision rate					
4.	Loan loss provision rate is included in interest rate					
5.	Loan loss ratio to operating cost is reducing					
6.	Loan loss provision to portfolio is less than 1%					
	Cost of funds rate	**5**	**4**	**3**	**2**	**1**
7.	Cost of funds is covered by interest rate					
3.	Use of commercial funds is reducing					
9.	Grants and subsidy contribution is reducing					
10.	Cost of funds ratio to portfolio is less than 15%					
11.	Capitalization rate included in interest rate improved financial sustainability					
12.	Part of profits are loaned out					
13.	Contribution to portfolio growth by retained earnings is increasing.					
14.	Ratio of capitalization rate to portfolio is less than 15%					
	Objective 2: Interest rate application methods on FS					
	Declining balance method	**5**	**4**	**3**	**2**	**1**
15.	Interest rate policy specifies method of application					
16.	Calculation method maximizes income generation					

17.	Reducing balance method is in use					
18.	UMURENGE SACCO interest rate objective is to maximize interest income generation					
	Flat rate application method	**5**	**4**	**3**	**2**	**1**
19.	Clients know how to calculate interest					
20.	Interest calculation is simplified to all					
21.	Flat rate method is the policy in use					
22.	Application method maximizes interest income					
	Objective 3: Interest income collection methods on Fs	**5**	**4**	**3**	**2**	**1**
23.	UMURENGE SACCO collects interest income upfront					
24.	Repayment schedules are used to collect interest income					
25.	Prepaid interest income is held on a special account till due.					
26.	There is a budgeted interest income per year					
27.	Interest calculation is simplified					
28.	Interest income due method					
29.	Interest income is collected when due our clients pay interest installments weekly.					
30.	Loan installments are paid monthly					
31.	Repayment schedules are followed to collect interest income.					
	Interest income in arrears method	**5**	**4**	**3**	**2**	**1**
32.	There is a budgeted interest income per year in this UMURENGE SACCO					
33.	Interest income to expense and budget gap is favourable/positive					
34.	Interest income in arrears is collected and reported.					

35.	Zero default is implemented.					
	Financial sustainability operational costs	**5**	**4**	**3**	**2**	**1**
36.	Interest income covers operational costs					
37.	Cost controls are in place and effective interest income covers imputed costs					
38.	Operational grants, subsidies and treasury bills interest income are used to cover costs.					
39.	Fees and commissions are charged to meet costs					
40.	Interest income is low to cover costs					
	Loan losses	**5**	**4**	**3**	**2**	**1**
41.	Bad loans written off are pursued to recovery					
42.	Loan loss provision is covered by interest income					
43.	Interest income covers loan loss adjustment imputed costs of capital.					
44.	Interest income covers adjustment of imputed costs.					
45.	Other loanable funds are invested in treasury bills to meet costs.					
46.	Inflation level affects interest rate charged.					
	Interest income generation – interest income due	**5**	**4**	**3**	**2**	**1**
47.	Interest income due is collected on time					
48.	Interest income due is reported on time					
	Interest income collected					
49.	Interest income paid is timely reported					
50.	Interest income paid to due ratio favourable> 95%.					
	Interest income in arrears	**5**	**4**	**3**	**2**	**1**
51.	Interest in income in arrears is pursued to recovery					

52.	Interest income prepaid is held on special account till due					
53.	This UMURENGE SACCO has a zero tolerance policy on default					
	Management efficiency	**5**	**4**	**3**	**2**	**1**
	Credit officer's workload					
54.	The IMIRENGE SACCO trades on optimum portfolio					
55.	Repeated loans are increasing					
56.	Average loan size is increasing					
57.	Loan methodology is implemented appropriately					
58.	Credit officers work load is > 400 and increasing					
59.	The cost per loan is reducing					
60.	Customer retention is > 90%					
	The yield gap	**5**	**4**	**3**	**2**	**1**
61.	Interest earned exceeds the budgeted yield gap ratio > 1.					
	Recovery rate					
62.	This UMURENGE SACCO has zero tolerance policy on defaulters					
63.	Average recovery rate is > 95%					
	Portfolio at risk	**5**	**4**	**3**	**2**	**1**
64.	Portfolio at risk is 5% of the portfolio					
65.	Portfolio at risk is less than 5% and reducing					
66.	Administration costs are < 25% and reducing					
67.	There is a portfolio at risk policy					
	Profitability	**5**	**4**	**3**	**2**	**1**
	Operational self sufficiency					
68.	This UMURENGE SACCO has achieved operational self sufficiency					

69.	The operational self-sufficiency is > 94%					
	Financial self sufficiency	**5**	**4**	**3**	**2**	**1**
70.	The imputed cost of capital is reducing					
71.	This UMURENGE SACCO has achieved financial self sufficiency					
72.	Financial self-sufficiency is > 90%					
73.	Operational costs at this UMURENGE SACCO are reducing					
74.	Ratio of other incomes to total income is reducing					
75.	The ratio of operational grants to cost is reducing					
	Objective 4: Client's response to interest rate policy on Fs					
	Interest rate determination	**5**	**4**	**3**	**2**	**1**
76.	Increasing interest rate will scare-away the clients					
77.	Clients are consulted to revise interest rates.					
78.	Clients give feedback on interest rate policy					
79.	This UMURENGE SACCO interest rate is lower than competition					
	Interest income collection methods	**5**	**4**	**3**	**2**	**1**
30.	Clients micro enterprise sustainability is emphasized when applying interest rates.					
31.	Clients don't mind the level of interest rates.					

INTERVIEW GUIDE

Interest rate determination

How was the interest rate determined?

What is the composition of interest rate being charged?

Is there a written down policy on interest rate determination?

What is the interest rate determination objective at this UMURENGE SACCO?

Is the interest rate charged?

Sustainable rate for the institution

Interest rate application methods

What interest rate application method this UMURENGE SACCO is implementing?

Does the application method retain customers?

What strategic plans are in place on the interest rate application method?

Do clients give feedback on the interest rate application methods?

Is there a written down policy in interest rate application method?

Interest income collection methods

How has this UMURENGE SACCO ensured high recovery rates through the period?

Is there a written down policy on interest income methods?

What are interest income collection objectives at this UMURENGE SACCO?

How does this UMURENGE SACCO ensure on time income collection?

Does the interest income collected cover all costs of a profit?

What is the use of other fees and commissions charged at this UMURENGE SACCO?

Appendix II

Sample Size (s) required for the given population size (N)

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	256	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: From R.V.Krejcie and D.W.Morgan (1970), Determining sample size for research activities, Educational and psychological measurement, 30, 608, Sage Publications.

CURRICULUM VITAE

I. PERSONAL IDENTIFICATION

First name: **Vénuste**
Familly name: **NGENDAHIMANA**
Father names: **André NDEREGE**
Mother names: **Marceline NYIRAKWEZI**
Date of Birth: **January 1st, 1979**
Current Address:

- Cell: **KAMURERA**
- Sector: **KAMEMBE**
- District: **RUSIZI**
- Province: **WESTERN**
- Country: **Rwanda**
- Telephone: **07 88 65 86 23 / 07 38 65 86 23**
- E-mail: **ngendaven@yahoo.fr, vngendahimana@gmail.com**
- C/O: G.S.GIHUNDWE
  P.O. Box 34 RUSIZI

Marital status: **Married**

II. EDUCATION:

May 2012-2014	**Kampala International University (KIU), Ggaba Road-Kansanga, Kampala, Uganda** **Master's Degree in Business Administration (2 years)**
September 2009-2011	**Université Pédagogique Nationale (UPN-BUKAVU)**, based at ISP- Bukavu, Bukavu, Democratic Republic of Congo **Master's program in English Linguistics** (Interrupted Program: No Degree because the University didn't have the charter)
October 2002 - 2006	**National University of Rwanda (NUR)**, Huye, Southern Province, Rwanda **Bachelors' Degree in Education (French-English) (4 years)**
January 1998 – July 2001	**E.S.TYAZO**, Nyamasheke, Western province, Rwanda **Secondary School Certificate (3 years)**
Sept. 1995 – March 1997	**Saint Cyprien Nyamasheke**, Nyamasheke,Western Province, Rwanda **Senior Two and Three Ordinary Level**
Sept. 1993 – March 1994	**Ecole Normale Primaire (ENP-MURURU)**, Rusizi,Western Province, Rwanda **Snior One in Normal Primaire (No certificate: interrupted program)**
Sept. 1986 – July 1993	**E.P.BUGUMIRA**, Rusizi, Western province, Rwanda **Primary School Leaving Certificate (7 years)**

III. WORK EXPERIENCE:

January 2009- Today: **GROUPE SCOLAIRE GIHUNDWE**, Rusizi, RWANDA

Director of Studies

- *Assure the students' performance in accordance with the quality of education at school as provided by the national policy of education*
- *Collaborate with the Head teacher of the school*
- *Define and follow up the teachers academic tasks according to their qualifications*
- *Provide and follow up the annual timetables related to all academic activities (courses, laboratories, libraries, etc.)*
- *Plan all annual pedagogical meetings for both teachers and students according to their aims*
- *Invite and preside the annual pedagogical meetings for both teachers and students*
- *Prepare and submit to the Head teacher the report from both teachers and students meetings*
- *Assess and approve the teachers' annual schemes of work*
- *Provide annual trainings for teachers*
- *Assess the relationship between the teachers' schemes of work and the National Curriculum*
- *Plan, implement, monitor and evaluate all annual evaluations (diagnostic evaluation, formative evaluation, summative evaluation, etc.)*
- *Plan, implement, monitor and evaluate all annual class visiting*
- *Provide technical advice to newly hired and veteran teachers, and to students*
- *Follow up the teachers' implementation of contract of performance at school*
- *Follow up the teachers discipline model at school*
- *Follow up the students' termly and annual progressive report*
- *Participate in the deliberation of students at the end of the year and prepare its minutes*
- *Assume roles and responsibilities of the Head teacher when officially absent*
- *Participate in activities pertaining with the development of school*
- *Etc.*

January 2010 - Today

Kigali Institute of Education based at Groupe Scolaire Gihundwe, Rusizi, RWANDA

TUTOR OF ENGLISH-FRENCH IN DISTANCE TRAINING PROGRAM

(Part time job)

- *Prepare lessons for KIE students in Distance Training program using provided modules*
- *Provide explanations to students*
- *Prepare and Correct Tutor Marked Assignments*
- *Prepare students for Face-to-Face examinations*
- *Etc.*

January 2010 – Dec. 2012

Institut Supérieur de Technique Commerciale et Economique (ISTCE-BUKAVU), Bukavu, Democratic Republic of Congo

LECTURER OF PHILISOPHY, ENGLISH, FRENCH AND PROFESSIONAL ETHICS

(Part time job)

- *Prepare lessons for ISTCE students*
- *Provide explanations to students*
- *Prepare and Correct course works*
- *Prepare students for partial and final exams*
- *Etc*

March 2010 – Today

VVOB-School Management based at Groupe Scolaire Gihundwe, Rusizi, RWANDA

TRAINER IN ALL FIELDS OF SCHOOL MANAGEMENT AND SCHOOL LEADERSHIP

- *Prepare and facilitate trainings for all Sector Education Officers of Rusizi District*
- *Prepare and facilitate trainings for all Head teachers of secondary schools in Rusizi District*
- *Prepare and facilitate trainings for all Deputy Head teachers of secondary schools in Rusizi District*
- *Prepare and facilitate trainings for all School Bursars of secondary schools in Rusizi District*
- *Prepare and facilitate trainings for all Secretaries of secondary schools in Rusizi District*
- *Prepare and distribute modules for all trainings facilitated*
- *Follow up the impact of trainings to the performance of schools, in terms of students' performance, teachers performance, school leadership and school management*
- *Etc.*

January 2010 – Today **Glory Multiservice Computerhouse (GMC),**
www.gmcomputerhouse.com, Kamembe-Rusizi, RWANDA
OWNER AND MANAGING DIRECTOR
(Self entrepreneurial sector)

- *Consultants in web designing and hosting*
- *Consultants in Software Application designing*
- *Experts in Computer Maintenance*
- *Experts in Computer training*
- *Dealers in typing, printing, photocopying and text treatment*
- *Dealers in computer and computer accessories selling*
- *Dealers in smart phones selling*
- *Etc.*

January 2005 – 2008 **La Fontaine Enterprise**, Ngoma-Huye, RWANDA
EXECUTIVE MANAGER
(Part time job)

- *Dealers in laboratory equipment selling*
- *Dealers in books selling*
- *Working as marketing officer*
- *Collecting all customers' orders*
- *Supplying customers according to their orders*

anuary 2008 – Dec. 2008 **G.S.GIHUNDWE**, RUSIZI District, Western Province, Rwanda
TEACHER OF ENGLISH AND FRENCH

- *Prepare French and English Language Lessons for Secondary School Students (Ordinary & Advanced Levels)*
- *Teach prepared lessons*
- *Evaluate students on taught lessons*
- *Supervise National Examinations*
- *Safeguard students' discipline and positive moral values*
- *Assist youth clubs and organizations of students*
- *Etc.*

IV. SPECIAL SKILLS / ABILITIES: Computer literacy

- Microsoft Office (Word, Excel, Power point, Publisher)
- Internet (Internet explorer, Mozilla, Google chrome, etc)
- Computer maintenance
- Networking (Cabling and configuration)
- Audio, Photo and Video Editing (Adobe Audition, Photoshop and Pinnacle Studio)

V. TRAINING / WORKSHOPS FACILITATED

- Trainings for Head teachers and Bursars of Secondary schools on Planning and Writing an annual Budget
- Trainings for Secretaries on Customer Care and Challenges Encountered in their every day duties
- Trainings for all School Administrative Staff Members on Collaboration and Stdents' Performance
- Trainings for all Administrative School members on Agreed on Norms to Be Followed by Administration Staff for Implementation of Annual Budget
- Trainings for Head teachers of Secondary schools & Sector Education Officers in Harmonization of Evaluation of Teaching & Learning at the District level / Rusizi District
- Trainings for teachers in English Language Proficiency / G.S.Gihundwe

VI. TRAININGS / WORKSHOPS MODULES COMPILED

- Module on Planning and Writing an annual
- Module on Customer Care and Challenges Encountered by Secretaries in their every day duties
- Module on Impact of Collaboration between Head teachers and Deputy Head teachers on Students performance
- Module on Impact of Discipline on Academic Performance
- Module on Agreed on Norms to Be Followed by Administration Staff for Implementation of Annual Budget

VII. TRAINING / WORKSHOPS / SEMINARS:

- Training in ICT basic skills
- Training in Project Management, Performance management, Hiring and Recruitment
- Training in Team Collaboration and Conflict Resolution
- Training in Driving / Driving License, Class B
- Training in English Language Proficiency
- Short Course in Religious Studies

VIII. TENDERS SUPPLIED

- Mibilizi Hospital : Supply of Computer equipment
- G.S.Gihundwe B: Supply of Computer equipment
- Kibogora Hospital: Supply of Computer related equipment and stationary
- Rusizi District: Supply of Computer and E-Filing Software Application
- IJW-KIBOGORA: Supply of stationary
- GSFA-KIBOGORA: Supply of stationary
- G.S.St Augustin Giheke: Supply of stationary
- G.S.Gihundwe: Cablinng and Networking
- Etc

IX. REFERENCES:

1. Dr. Pascal GAHUTU (07 88 46 80 36), Current Vice Chancellor of Rusizi International University
2. Dr Pastor Jean NGEZAHAYO (07 88 61 38 09), EX.V/C Rector of Pentecostal University of Rwanda, Currently Lecturer at ULK in the Masters program
3. Mr Valens NGABOYERA (07 88 53 50 45), Professional in charge of Rwandan Students Abroad, Ministry of Education

X. ADDITIONAL INFORMATION

- *Spoken languages (**Kinyarwanda**: Mother tongue, **English**: Very good, **French**: Very good, **Swahili**: Very Good)*

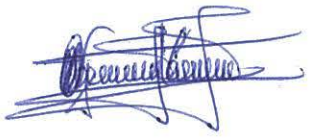
XI. OPTIONAL INFORMATION (TRIPS):

- Trips in Uganda (Kampala)for Education Purposes
- Trips in United Arab Emirates (Dubai)for Business Purposes
- Trips in Uganda (Kampala)for Business Purposes
- Trips in DRC (Bukavu-Goma-Uvira)for Business Purposes
- Trips in DRC (Bukavu)for Education Purposes

XII. DECLARATION:

I certify that the information provided above is true to the best of my knowledge

DATE: *November 4th, 2014*

SIGNATURE: 

NAMES: **Vénuste NGENDAHIMANA**