

## **“THE EFFECT OF INTEREST RATE ON LOAN REPAYMENT IN COMMERCIAL BANK IN RWANDA”**

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### **ABSTRACT**

This research entitled “The effect of interest rate on loan repayment in commercial bank in Rwanda” a case study of KCB Musanze Branch, has the following specific objectives

-to describe loan policy of KCB Musanze Branch, to analyze quality of loan portfolio of KCB Musanze Branch and to establish the relationship between interest rate and loan repayment in KCB Musanze Branch and research questions are (1) How is the interest rate on loans in KCB? (2) What is the quality of loan portfolio of KCB Musanze Branch? And (3) Is there any relationship between interest rate and loan repayment in KCB Musanze Branch? And then the hypotheses of the study is that Interest rate influences loan repayment in KCB Musanza Branch.

The study population was employees and clients of KCB Musanze Branch. The sample size is 99 respondents from the population of 18761 employees and clients of KCB Musanze Branch. Sampling technique used was purposive sampling

The results indicated that the majority of respondents equal 60.7% said that the collateral is important in order to get loans whereas .

The quality of loan portfolio is mainly justified by the fact that Non performing loans are in normal range as per regulations of central Bank of Rwanda (NBR).

The findings revealed that there is strong relationship between interest rate and loan repayment in KCB Musanze Branch and implied that when interest rates are low, people are willing to

borrow because they find it relatively easy to repay their debt. When interest rates are high, people are reluctant to borrow because repayments on loans cost more.

In conclusion the interests rate is a critical factor in loan payment in KCB Musanze Branch. As recommendation, financial institutions should set affordable interest rates on loans.

## **CHAPTER ONE**

### **GENERAL INTRODUCTION**

#### **1.1. Back ground of the study**

To calculate the payment amount, all terms of the loan must be known: interest rate, timing of payments (e.g., monthly, quarterly, annually), length of loan and amount of loan. Borrowers should understand how loans are amortized, how to calculate payments and remaining balances as of a particular date, and how to calculate the principal and interest portions of the next payment. This information is valuable for planning purposes before an investment is made, for tax management and planning purposes before the loan statement is received, and for preparation of financial statements (Gutierrez & Dalsted, 2012).

When a loan is being repaid by a series of payments, the total of all payments must retire the original amount of the loan (the principal) as well as provide interest on the loan. It is usually the case that each loan payment can be separated into two components, the amount of interest and the amount of principal. There are several ways in which a loan repayment scheme can be set up, each of which specifies the division of payments into interest and principal (Samuel, 2015).

#### **1.2. Problem Statement**

High interest rates break the clients to repay loans on due date while low interest rates favorite the clients in the loans repayment in commercial bank.

#### **1.3. Research questions**

1. How is the interest rate on loans in KCB?
2. What is the quality of loan portfolio of KCB Musanze Branch?

3. Is there any relationship between interest rate and loan repayment in KCB Musanze Branch?

#### **1.4. Objectives of the study**

##### **1.4.1. General objective**

The general objective of this study is to analyze the effect of interest rate on loan repayment in commercial bank.

##### **1.4.2. Specific objectives**

1. To describe loan policy of KCB Musanze Branch
2. To analyze quality of loan portfolio of KCB Musanze Branch.
3. To establish the relationship between interest rate and loan repayment in KCB Musanze Branch.

#### **1.5. Hypotheses of the study**

1. The interest rate on loan in KCB is affordable.
2. The non performing loans are at the normal level in KCB
3. Interest rate influences loan repayment in KCB Musanza Branch

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Definition of key concepts**

##### **2.1.1 Loan**

A loan is a debt provided by one entity (organization or individual) to another entity at interest rate, finalized by a note which specifies, among other things, the principal amount, interest rate and date of repayment (Rachna, 2014).

##### **2.1.2. Commercial banks**

Commercial bank is an institution whose business consists of discounting commercial paper, accepting deposits (particularly demand deposits), and making loans (particularly commercial loans) (Michael, 2011).

### **2.1.3. A loan portfolio**

As published on the website (<http://www.businessdictionary.com/definition/loan-portfolio.html>), total of all loans held by a bank or finance company on any given day.

### **2.1.4 Non performing loans**

A loan is non performing when payments of interest and principal are past due by 90 days or more, or at least days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full (IMF, 2005).

## **2.2. Interest rate**

Interest-rate is the percentage of an amount of money which is paid for its use for a specified time. It adds that this is commonly expressed as an annual percentage rate so as to make it easy to compare costs of borrowing money among several lenders or sellers on credit (Ben & Kristina, 1999).

### **2.2.1. Role of interest rate in commercial bank**

Hence the relationship between the interest rate charged by banks and their implicit interest rate determines whether the household decides to take a loan or make a deposit. In equilibrium, the economies' gross interest rates will be between banks and interest rate. Note that due to imperfect competition in the banking market there will be two rates, one for deposits and another for loans, for each currency. We will assume a set of parameter values for which all four equilibrium rates will be inside that interval. Hence the household with low discount factor will find it better to borrow and consume more today and the other will find it better to save and consume more tomorrow. Households maximize utility given a stream of income choosing the amount of deposits and loans in local and foreign currency (implicitly determining consumption in each period). Both local and foreign currency denominated assets is risky. While the first might fluctuate due to inflation, the second will fluctuate due to changes in the real exchange rate, (Henrique & Marius, 2007).

According to Tejvan (2011), interest rates are used to try and achieve low inflation and stable, sustainable economic growth.

### **2.2.2. Problem of relying on interest rates**

- Relying of interest rates to reduce inflation, disproportionately hits debtors and homeowners;
- Cutting interest rates to boost growth, disproportionately hits savers (currently many savers have negative interest rates)
- The impact of interest rates can be limited. For example, we are currently in a liquidity trap, which means zero interest rates are being ineffective in boosting growth.

This doesn't mean interest rates are always bad (Tejvan, 2011)

### **2.3. Loans portfolio management**

Effective loan portfolio management begins with oversight of the risk in individual loans. Prudent risk selection is vital to maintaining favorable loan quality (ALPM, 1998).

Repayment schedules must be made flexible so that it should be adjusted to borrower's cash flow pattern. In addition to this credit policy instruments, some relevant lending principles are used by banks as their guiding principles (Kibrom, 2010).

### **3.2. Research design**

#### **3.4. Data collection instruments or techniques**

The instruments used in data collection include self-administered questionnaire, interview and documentary review. The questionnaire and interview were used for the purpose of obtaining the primary data where as documentary review was for secondary data.

#### **3.5. Study population**

The population size is a number of 18761 persons.

#### **3.6. Sample size**

The study cannot cover all population concerned because of time and limited budget; it is in that way the research will be on the selected number of employees in the Agency. According to Lyman (2010), Sample is any subset of measurement selected from the population.

However, the sample size of this study is determined by using the formula of Cochran (1963):

$$n = \frac{N}{1 + N * (e)^2}$$

n= sample size

N= total population

e= the desired margin error which is equal to 0.1

$$\text{sample size} = \frac{18761}{1 + 18761 * (0.1)^2} = 99 \text{ persons}$$

Therefore, the sample size is 99 respondents from the population of 18761 employees and clients of KCB Musanze Branch.

### 3.7. Sampling techniques

According to Kothari (2004), sampling is the process of obtaining information about an entire population by examining only a part of it.

The sampling techniques that were used in this study are purposive sampling as well as the aims of the study means that the researcher selected respondents based on their experience or using loans for the clients, and their duties and responsibilities for the employees of KCB Musanze Branch.

## FINDINGS

### 4.2.1. Loan products in KCB

**Table 1: Distribution of respondent views on types of loans provided by KCB**

| Types of loans provided by KCB | Frequency | Percent |
|--------------------------------|-----------|---------|
| Agriculture and farm loan      | 19        | 19.2    |
| Mortgage loan                  | 20        | 20.2    |
| Vehicle loan                   | 17        | 17.2    |
| Trading loan                   | 31        | 31.3    |
| Marriage loan                  | 13        | 13.1    |
| Total                          | 99        | 100.0   |

**Source: Primary data, July, 2016**

The findings in this table here above describes that KCB Musanze provided loans due to the fact that 19.2% of respondents said agriculture and farm loan as types of loans provided by KCB Musanze Branch, 20.2% of respondents said mortgage loan, while 17.2% of respondents said vehicle loan and 31.3% of respondents stated trading loan and finally 13.1% of respondents said marriage loan.

However, data collected revealed that types of loans required by clients from KCB Musanze Branch are financing industry, financing trade ,financing agriculture, financing consumer and activities financing employment generating activities .

This implies that entrepreneurs and employees requested loans in KCB Musanze branch to invest in agribusiness, in trading, in education and to repair or to build their houses and other economic issues of family.

#### **4.2.2. The loan policy used by KCB Musanze Branch**

**Table 2: Distribution of respondents on the features of loan policy used by KCB Musanze Branch**

| <b>Views of respondents</b>                         | <b>Frequency</b> | <b>Percent</b> |
|---|------------------|----------------|
| Using collateral or guarantee for securing loans    | 42               | 42.4           |
| Controls lending risk                               | 18               | 18.2           |
| Considering employer's contract for providing loans | 39               | 39.3           |
| Total   | 99               | 100.0          |

**Source: Primary data, July, 2016**

The table above shows that the majority of respondents equal 42.4% knows that the using collateral or guarantee is important in order to get loans due to the fact that it secures KCB in the case of no repayment of loans, 18.2% of respondents said that controls lending risk is the loan policy of KCB Musanze Branch whereas 39.3% of respondents have been used contract of employers in protecting the loans provided to the clients who have jobs.

This implies that a loan advanced by the bank to a customer to be repaid over duration of time at a specific interest rate, required collateral or salaries and get verifiable monthly income or other regular receipts like rentals or pension which are banked in the account.

#### 4.2.3. The processes of loan repayment at KCB Musanze Branch

**Table 3: Distribution of respondents according to the processes of loan repayment at KCB Musanze Branch**

| Views of respondents                  | Frequency | Percent |
|---------------------------------------|-----------|---------|
| Contact clients and request repayment | 60        | 60.7    |
| Repayment on time by clients          | 23        | 23.2    |
| Send case to the court                | 10        | 11      |
| Auction of collateral                 | 6         | 6.1     |
| Total                                 | 99        | 100.0   |

**Source: Primary data, July, 2016**

As it is mentioned here above in the table, regarding the processes of loan repayment 60.7 % of the respondents agreed that they do contact clients and request. The 23.2% of the respondents revealed that repayment of loan on time expected in the agreement while 11% of respondents, be resisted until send case to the court and 6.1 % of respondents was waiting auction of collateral.

These results from the table above revealed that the clients of KCB Musanze Branch was tried to use well loans from KCB as expected in their application forms and their business plan as source of repayment loans and to resolve economic situations.

#### 4.2.4. Quality of loan portfolio of KCB Musanze Branch

The quality of loan portfolio was calculated based on the ratio of non performance loan. The following table shows quality of loan portfolio of KCB Musanze Branch;

**Table 4: Distribution of respondents according to the quality of loan portfolio of KCB Musanze Branch**

| Factors for NPL ratio | 2012 | 2013 | 2014 |
|-----------------------|------|------|------|
|                       |      |      |      |



|                            |             |             |             |
|----------------------------|-------------|-------------|-------------|
| Non performance loan (NPL) | 21,671,000  | 19,952,000  | 24,511,000  |
| Loans provided by KCB      | 291,319,000 | 349,741,000 | 405,983,000 |
| NPL ratio                  | 7.4%        | 5.7%        | 6.03%       |

**Source: Primary data, July, 2016**

As shown in the above table, quality of loan portfolio of KCB Musanze Branch is shown as follow; in 2012 the ratio of non performance loan was 7.4% while in 2013 it decreased to 5.7% and finally in 2014 it increased to 6.03%. This implies that the total loan provided in 2012; 7.4% of them was not performed well while in 2013 it was 5.7% only and then in 2014 it was 6.03%.

### 3.2.5 Classification of interest rate in KCB Musanze Branch

The information brought from KCB Musanze Branch is summarized in the following table according to the views of respondents;

**Table 5: Distribution of respondents according to the classification of interest rate in KCB Musanze Branch**

| Classification of interest rate | Agree | Percent |
|---------------------------------|-------|---------|
| Personal interest rate (19%)    | 99    | 100.0   |
| Business interest rate (17%)    | 99    | 100.0   |

**Source: Primary data, July, 2016**

As seen in the above table, interest rate of KCB Musanze is classified into two parts one for personal interest rate where clients who request credit or loans on their salaries pay with 19% of interest rate while the other is business interest rate where clients who request loans for doing businesses are charged 17% of interest rate. This indicates that in KCB Musanze Branch there are two types of interest rate classified as personal and business interest rates.

### 3.2.6 The relationship between interest rate and loan repayment in KCB Musanze Branch

The level of interest rates has a direct effect on a consumer's ability to repay a loan. Here the researcher would like to know how interest rates effect on loan repayment to clients of KCB Musanze branch. The table below represents answer of the respondents.

**Table6: Distribution of respondents according to correlation analysis between interest rate and loan repayment in KCB Musanze**

| Correlation analysis |                     | Interest rate | Loan repayment |
|----------------------|---------------------|---------------|----------------|
| Interest rate        | Pearson Correlation | 1             | .643**         |
|                      | Sig. (2-tailed)     |               | .000           |
|                      | N                   | 99            | 99             |
| Loan repayment       | Pearson Correlation | .643**        | 1              |
|                      | Sig. (2-tailed)     | .000          |                |
|                      | N                   | 99            | 99             |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation coefficient value of 0.643 confirms what was apparent from the table, i.e. there appears to be a positive correlation between the two variables. However, Researcher needs to perform a significance test to decide whether based upon this sample there is any or no evidence to suggest that linear correlation is present in the population.

To do this we test the null hypothesis,  $H_0$ , that there is no correlation in the population against the alternative hypothesis,  $H_1$ , that there is correlation; data will indicate which of these opposing hypotheses is most likely to be true. The significant Pearson correlation coefficient value of 0.643 confirms what was apparent from the table; there appears to be a strong positive correlation between the two variables. It means that there is relationship between interest rate and loan repayment in KCB Musanze Branch.

This implies that when interest rates are low, people are willing to borrow because they find it relatively easy to repay their debt. When interest rates are high, people are reluctant to borrow because repayments on loans cost more. Some consumers may even find it difficult to meet their existing loan repayments, especially if interest rates increase faster than the rise in a consumer's income. If interest rates rise sharply and stay high for a long period, some consumers will default on their loans.

## 5.2 Conclusions

Interest rate affect the loan repayment in commercial banks in Rwanda

## 5.3 Recommendations

Interest rates should be optimal for both lending institutions and customers

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