

# EFFECT OF MOBILE CASH LENDING PROCESS ON NON-PERFORMING LOANS IN COMMERCIAL BANKS IN RWANDA: A CASE STUDY OF ECOBANK RWANDA

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**Abstract:** Mobile money, also referred to as mobile payment, mobile money transfer and mobile wallet, generally refers to services operated and performed from a mobile device such as mobile phone, credit or debit cards; the intersection of both banking and telecommunications services. It involves a diverse set of stakeholders from both mobile phone operators and financial service institutions. Mobile money services have been defined as electronic money accounts that can be accessed via mobile phone. Mobile money services offer secure and convenient means for banked and unbanked people to send and receive money with mobile phones at home and abroad; anywhere at any time. Lending is one of the most important functions of commercial banks. Yet, lending is at times associated with non-performing loans. Non-performing loans (NPLs) are a monumental challenge to the banking sector. This study sought to determine the effect of mobile lending process on non-performing loans in commercial banks in Rwanda. Precisely, the study assessed how loan appraisal process, documentation process, loan disbursement process, and monitoring and evaluation process affected NPLs in commercial banks. The study adopted a descriptive survey research design. The credit officers working with Ecobank Kigali branch in Rwanda constituted the target population. The 110 credit officers working with 12 branches of ECOBANK in Rwanda. A sample of 87 credit officers was obtained from the study population using stratified random sampling method. The study used both primary and secondary data. A structured questionnaire was used to collect data from the sampled respondents. A pilot study was carried out prior to the main study with the aim of determining both the reliability and validity of the research instrument. The researcher obtained requisite permits and consents before collecting data. The Statistical Package for Social Sciences Version 21 software was used to facilitate data analysis. Descriptive statistics and inferential statistics was used in the analysis. Descriptive statistics was encompassing frequencies, percentages, means and standard deviations. Inferential statistics took the form of Spearman rank correlation coefficient and multiple regression. The results of the analyses were present in tables. Interpretatively, for NPLs to increase by a single unit, loan appraisal process, borrower's documentation process, loan disbursement process, and monitoring and evaluation process had to be changed by 0.582 units, -0.418 unit, 0.054 units, and 0.063 units respectively while holding other factors (1.396) constant. According to the findings, it is clear that loan appraisal process was the most important element of mobile-cash loans in regard to non-performing loans in commercial banks. On the other hand, documentation process negatively impacted on non-performing loans. Illustratively, commercial banks are supposed to improve how they appraise the loans they lend on the mobile platform in order to arrest the escalating NPLs. The study concluded that Ecobank in Rwanda failed to demand for personal information of borrowers and also information regarding their family members prior to lending them credit on the mobile platform. In addition, the study inferred that commercial banks neither sought information regarding the income sources of borrowers nor their residence before giving them mobile-cash loans. The study suggests further comparative research in respect of mobile-cash loans and normal loans and how such affect non-performing loans among commercial banks in Rwanda. It is also important to conduct an empirical study on the impact of mobile-cash lending on other financial aspects of commercial banks such as financial performance and financial growth.

**Keywords:** Borrower's documentation process, Non-performing loans, Ecobank Rwanda.

## 1. INTRODUCTION

### 1.1 Background:

Lending is one of the most important functions of commercial banks (Agu & Basil, 2013). Lending by financial institutions is premised on various terms including amount of credit facility, lending rates, collateral requirements, purpose of credit, form of credit (secured or unsecured) among others. Every loan disbursed is associated with a certain degree of risk which is referred to as credit risk. Credit risk describes as the probability of decrease in economic benefit occasioned by a monetary loss or an unexpected expense or loss resulting from a given transaction. This form of risk is measured by the percentage of non-performing loans against the total loans (Dolam & Collender, 2001).

In the United States, lending to small businesses, otherwise referred to as microcredit, has been in a crisis. The foregoing raised the question on whether there existed a credit gap relative to small business lending (Mills & McCarthy, 2014). One of the challenges facing this sector is the emergence of dynamic market of online lenders who are employing technology with the view of disrupting the small business lending market. Their comparatively small size notwithstanding, the online lenders are providing fast turnaround and online accessibility for borrowers. There are, moreover, using data to come up with more precise credit scoring algorithms. The new market entrants have realized that the small business lending has continued to shrink. The proportion of business loans was approximately 50% of the entire loan portfolio in 1995. However, this ratio has reduced to only about 30% as at 2012 (Mills & McCarthy, 2014).

According to Haneef, Riaz, Ramzan, Rana, Ishaq and Karim (2012), the risk management procedures and policies in Pakistani banking sector are still in their infancy. In view of this, the industry is advised to have a better understanding of risk management in order to effectively address the problem of loan recovery and also tighten their credit assessment scrutiny policy. Moreover, the banking sector in this country is advised to have appropriate monitoring procedure so that they are able to keep check of non-performing loans (NPLs). In the event that credit risk is not addressed, lending institutions are likely to be more prone to NPLs. Credit risk is described as the proportion of NPLs to total loans advanced to borrowers (Dolam & Collender, 2001).

In Nigeria, lending is stated to be one of the primary functions of commercial banks (Agu & Basil, 2013). This is in spite of lending being associated with risk of default. Commercial banks always make provisions for both bad and doubtful debts every financial year. The foregoing sends bad message to current and prospective investors. The surest way for financial institutions to avoid bad debts and hence NPLs is failing to lend out any credit at all. But then, this is an unassailable challenge since the chief source of revenue for commercial banks is credit. This implies that, lending institutions have no alternative to advancing credit to their customers. However, this ought to be affected within sound credit management strategies in order to mitigate bad debts (Agu & Basil, 2013)

In an analysis of interest rates and loan portfolio performance in commercial banks in Uganda, effective monitoring and recovery of loans is aided by a computer system (Nakayiza, 2013). Loan committees for commercial banks in the country at branch level regularly hold recovery meetings. The agenda of these meetings is to review all loans which are in arrears. In support of recommendations by KPMG (2001), Nakayiza noted that banks are supposed to develop recovery strategies by factoring in the sector's dynamics. These dynamics are influenced by the banking industry environment and the position of the borrower within the sector, and also the borrower's financial condition.

The mobile money service is an aspect of a broader concept emerging in the electronic payment and banking industry. The main idea behind the emergence of using technology to facilitate money transactions via mobile phones was to create financial awareness to the poorer populations in developing countries, who either had no access to formal banks or could not afford to have a bank account due to expensive rates levied by the banks (Mwangi and Njuguna, 2009). Traditionally, commercial banks had always provided individuals with payment options and services. Customers have always been able to use different bank branches to make their payments through bank tellers, use ATMs, online banking, mobile and video banking. However, with time, evolutionary changes have taken place where introduction of other forms of payments have emerged; starting with the use of electron cards to mobile money. These payments are intended to cover emergencies like unexpected payments that need to be done fast and convenient and efficient money transfer (Otieno, 2013). The scope of offered service may include facilities to conduct banking transaction, to administer accounts and to access customized

information. Most of the mobile money offered by most banks includes performing balance checks, account transactions, payments, credit applications and other banking transactions such as to buy airtime

The Ecobank mobile app enables customers to send and receive money instantly across 32 other African countries, in addition to Rwanda. Customers can also use the app to open a free digital account – Ecobank Xpress Account. It can be opened instantly with no references or paperwork.

Ecobank is also the first bank in Africa to partner with Mastercard, a leader in global payments and technology, to bring its customers Masterpass QR. This new, cashless solution makes payments possible in stores and online via a mobile phone.

Ecobank Rwanda provides products and services through 13 branches and 48 ATMs in Rwanda. With the app, customers now have the opportunity to carry out various transactions on their phones. The study determined the effect of mobile lending process on non-performing loans in Ecobank Rwanda

### **1.2 Statement of the Problem:**

Non-performing loans are dangerous not only for the economy of one country but also for the whole world as we have seen the financial crisis created by these loans in East Asian countries, America and Sub-Saharan Africa (Adebola, Wan Yusoff, & Dahalan, 2011). Rwanda has not been exempted from the problem of non-performing loans which had negative effects both to the lending institutions and the economy as a whole.

Non-performing loans are not only the problem in Rwanda but also the problem of whole world, so we focus on the studies conducted in the countries other than Rwanda. Salas and Saurina (2012) conducted a research in Spain to identify the factors which explains the variation in non-performing loans from 1984-2003 according to the authors high interest rates, GDP growth and soft credit conditions determine the non-performing loans. Another study conducted in UK by Hoggarth, Sorensen and Zicchino (2015) considering time period between 1988-2004 according to the author's inflation and interest rates have positive relationship with the non-performing loans. Vogiazas & Nikolaidou (2011) investigated determinants of non-performing loans in the Romanian banking sector during the Greek crisis by taking the data from December 2001 to November 2010 according to them construction and investment expenditure, unemployment and inflation rate and Romania's external debt to GDP and M2 (narrow money and intermediate).

Ngugi (2001) looked at the interest rate spread on the level of non-performing assets as a major contributor to NPLs, the difference between gross cost of borrowing and the net return on lending defines the intermediary costs. Waweru and Kalani (2009) in his study on banking crisis found NPLs to be a major contributor. Warue (2010) did a study on macro and microeconomic determinants of NPLs and found that employment rate, income and bank structures significantly affect NPLs.

However, these studies did not look at how mobile money affects non-performing loans despite the increase adoption on mobile money by commercial banks and uptake by customers. This study therefore filled this knowledge gap by investigating the significance of effect of mobile money on NPLs and moderated/isolated its effect by include ancillary variables affecting NPLs like borrowers' documentation process, loan appraisal, loan disbursement and loan monitoring and evaluation. It also addressed this question: what are effects of mobile lending process on non-performing loans in commercial banks in Rwanda using Ecobank Rwanda?

### **1.3 Objectives of the study:**

#### **1.3.1 General objective:**

The general objective of this study was to determine the effect of mobile lending process on non-performing loans in commercial banks in Rwanda.

#### **1.3.2 Specific objectives:**

The specific objectives were:

1. To analyze how borrower's documentation process affects non-performing loans in Ecobank Rwanda.

## 2. CONCEPTUAL FRAMEWORK

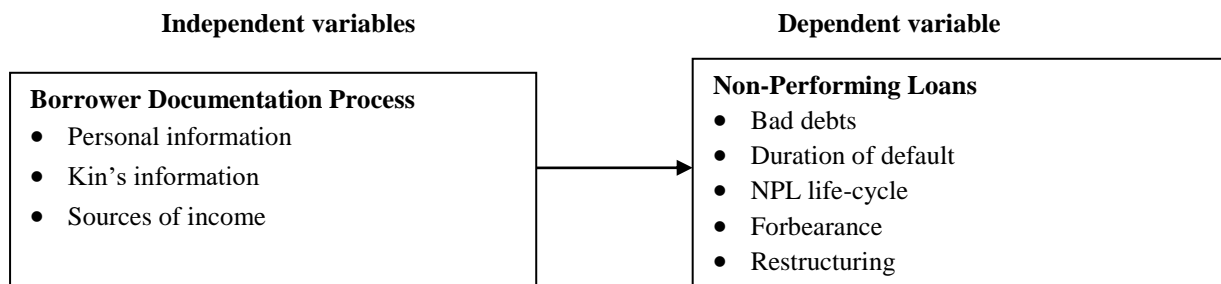


Figure 2.1: Conceptual framework

## 3. TARGET POPULATION

Target population in statistics is the specific population about which information is desired. According to Ngechu (2014), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. This definition ensures that the population of interest is homogeneous. And by population the researcher means the complete census of the sampling frames. According to Mugenda and Mugenda (2008), target population in statistics is the specific population about which information is desired. The target population describes subjects or individuals who share similar character traits. It is the population to which the study findings are generalized (Kombo & Tromp, 2010). The credit officers working with Ecobank Kigali branch in Rwanda constituted the target population. The 110 credit officers working with 12 branches of ECOBANK in Rwanda.

## 4. RESEARCH FINDINGS AND DISCUSSION

### 4.1 Loan Borrower's Documentation Process:

The first objective was to analyze how borrower's documentation process affects non-performing loans in Ecobank Rwanda. The respondents were asked to indicate the extent to which they agreed that the borrower's documentation process influences non-performing loans in Ecobank Rwanda in various activities highlighted. The findings are presented in Table 4.1 below.

Table 4.1: Descriptive Statistics for Borrowers' Documentation Process

Borrower's Documentation Process	SD	D	NS	A	SA	Mean	Std. Dev
Ecobank demands for borrower's personal information before lending money on mobile platform	40.0	15.0	0.0	35.0	10.0	3.278	.733
Ecobank demands for information of borrower's family members before lending money on mobile platform	70.0	15.0	0.0	5.0	10.0	3.377	.756
Ecobank seeks to know the source(s) of income of borrowers on mobile platform.	50.0	35.0	0.0	10.0	5.0	3.623	.710
Ecobank seeks information regarding borrowers' residence	70.0	15.0	0.0	5.0	10.0	3.377	.726
Ecobank seeks information regarding borrowers' workplace or business premises	0.0	20.0	0.0	50.0	30.0	3.541	.992

Source: Primary data 2018

The study further examined the views of the credit officers in regard to the documentation process of the borrowers as shown in Table The respondents were found to generally disagree (mean = 3.278; Standard deviation = 0.733) that Ecobank demanded for borrower's personal information before lending them money on mobile platform. Indeed, 40% of the respondents strongly disagreed with the proposition. It was further strongly disagreed by a majority of the credit officers (70.0%) that Ecobank demanded for information of borrower's family members before lending them money on mobile platform. Moreover, most of the respondents disputed that banks sought to know the sources of income of borrowers on mobile platform (50%). It was generally disagreed (mean = 3.623; Standard deviation = 0.710) that Ecobank sought information regarding borrower's residence. In addition, the study observed that credit officers disputed (mean = 3.541; Standard deviation = 0.992) that Ecobank sought information regarding borrowers' workplace or business premises.

These findings contrasted with the results of a study conducted in the United States by McCarthy (2014) which indicated that banks conducted extensive documentation of borrowers' sales, cash flow and collateral considerations. In the same vein, the present study's findings were contrary to the emphasis granted to documentation process in a study conducted by Wondimagegnehu (2012) in Ethiopia. The latter study has underscored the importance of documentation and keeping relevant documents alive particularly in relation to legal follow-ups. Another study that disputed the current results was conducted by Ibtissem and Bouri (2013) in Tunisia. The foregoing study had found that documentation was conducted prior to advancing credit to borrowers. The documents sought were employed as collateral to secure the credit facility being advanced by the lending institution.

## 5. CONCLUSIONS

The study concluded that Ecobank in Rwanda failed to demand for personal information of borrowers and also information regarding their family members prior to lending them credit on the mobile platform. In addition, the study inferred that commercial banks neither sought information regarding the income sources of borrowers nor their residence before giving them mobile-cash loans. The banks further failed to seek information regarding the workplace and/or business premises of the borrowers before awarding the credit facilities. The foregoing was in spite of the indication that documentation process was very crucial in respect of NPLs. Conclusively, Ecobank risked incurring more NPLs for failing to get the necessary documentation of the borrowers.

### 5.1 Recommendations:

Every loan process encapsulates documentation. To this effect, the study recommends that mobile-cash loans should not be exempted from the rigors involved in loan application process. The commercial banks should demand for online submission of authentic documents in respect to loan application. Such documents may include the details of the applicants, spouse, next of kin, employer, business, guarantor among others. Requirement should be similar across the board that is, irrespective of the amount of the loan applied. The documentation process is advisable to be cognizant of loan recovery procedure in case of default in order to effectively address NPLs.

### 5.2 Areas for further research:

The study suggests further comparative research in respect of mobile-cash loans and normal loans and how such affect non-performing loans among commercial banks in Rwanda. It is also important to conduct an empirical study on the impact of mobile-cash lending on other financial aspects of commercial banks such as financial performance and financial growth.

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