



**MOBILE BANKING AND PERFORMANCE OF BANKS IN UGANDA: A CASE
OF CENTENARY BANK, UGANDA**

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DECLARATION

I, SIMON OUNDO, registration 15/MBA/00/KLA/WKD/0099 declare that this dissertation is my original work. This work has not been submitted to any University, College or School for the award of a degree, diploma or any other academic qualification.

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APPROVAL

This work has been submitted with the approval of my supervisors;

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DEDICATION

I dedicate this dissertation to my family. I will always cherish our bond

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ABSTRACT

This study investigated the effect of mobile banking on financial performance of banks in Uganda focusing on Centenary Bank as a case. The independent variable in the study was ‘mobile banking’ and the dependent variable was ‘financial performance’. This study was based on the Excellence Theory, and a case study research design was used to undertake this study. Research findings established that mobile financial information has no statistically significant effect on financial performance of banks in Uganda. The hypothesis stating that mobile financial information services have an effect on financial performance of banks in Uganda was rejected. Research findings established that mobile transfers and receipts have a statistically significant effect on financial performance of banks in Uganda. The hypothesis stating that mobile transfers and receipts have an effect on financial performance of banks in Uganda was accepted. Research findings established that mobile deposits and withdrawals have a statistically significant relationship with financial performance of banks in Uganda. The hypothesis stating that there is a relationship between mobile deposits/withdrawals and financial performance of banks in Uganda was accepted. From the findings the researcher concluded that mobile financial information has no significant effect on financial performance of banks in Uganda. From the findings the study concluded that mobile transfers and receipts have a significant effect on financial performance of banks in Uganda. From the findings the study concluded that mobile deposits and withdrawals have a significant effect on financial performance of banks in Uganda. It is recommended that leaders in banks should provide more relevant and easy to understand mobile financial information for users, shorten processes of mobile transfers and receipts, and the central bank should ensure charges by banks on mobile financial services are regulated.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The banking industry is undergoing rapid change due to advancements in technology. One of the noticeable changes is mobile banking. Johnson Amugongo Mwange (2011) argues that the ways banks were operating has changed with the introduction of mobile banking hence technology is now considered as one of the main factors contributing to the organizations' success.

Today people do not have to move physically to banking halls in order to engage in banking services as it was in the past (Owens, 2009). Mobile banking has been embraced by almost all banks, and telecommunication (telecom) companies and this has led to partnerships between banks and telecom companies in Uganda. Many benefits such as speed, convenience, and cost effectiveness have been brought about by mobile banking. However, it would be interesting to find out the effect of the different dimensions of mobile banking on commercial banks' performance in Uganda.

This study, therefore, investigated the effect of mobile banking on financial performance of banks in Uganda focusing on Centenary Bank as a case. The independent variable in the study was 'mobile banking' and the dependent variable was 'financial performance'. The independent variable was operationalized into; 'mobile financial information services', 'mobile transfers and receipts', and 'mobile deposits and withdrawals', while the dependent variable was operationalized into; 'return on assets', 'return on equity', and 'liquidity'.

This chapter presents the background of the study which is sectioned into the historical, theoretical, conceptual, and contextual backgrounds. The chapter also presents the, statement of the problem,

purpose, objectives, research questions, hypotheses, scope, significance of the study, justification of the study, and the operational definition of terms and concepts.

1.2 Background to the Study

This section is divided into the historical, theoretical, conceptual, and contextual backgrounds to the study.

1.2.1 Historical Background

In management, performance can be traced back towards the end of the 18th Century (Robbins & Coutler, 1996). During that time, influential people like Adam Smith exposed the weaknesses of the 'laissez-faire' system and this helped push the industrial revolutionists realize the need for state intervention. This paved way for management in industry and business to be reflected in the political stances that were being made.

In order to evaluate staff productivity, performance rates were introduced in the early 1920s (Armstrong and Baron, 1998). The process of improving performance continued through the mid-19th century particularly in 1957 with the likes of McGregor (1957) where focus was shifted around personality traits of the individuals. According to Leslie and Lloyd (2000) the golden age (1929-32) was the age of unionism, legislature and courts supporting the plea of organized labor and the working class. Managers had to quickly move their attention from being mere task oriented to also trying to understand the need of the employees and how they can conduct work in a smoother manner.

According to Bosman (2009), the role of leaders in organizations is changing to 'servant leaders' of the 21st Century other than 'owner-managers' of the 19th Century in order to achieve the desired organizational performance. With this evolution in management, managers realize that their employees are their safest means to achieve this performance.

Mobile banking is currently estimated at 38% across the Europe and North America, with relative annual growth (KPMG, 2015). With United Kingdom (UK) leading the trend across Europe, the average adoption rate of mobile banking remains at 38%. This percentage is a low adoption rate with the high smartphone proliferation in Europe. In terms of mobile and internet banking, UK is a grown market as most of these were started eight years ago.

The beginning of mobile banking in Africa can be traced back to 2008 with innovations from the telecom companies. It started in South Africa with the customer base increasing by 3.8% from 2008 to over 51.9 million by end of March 2009 (Africa Economic Brief, 2010). Mobile banking became common as mode of payment for services and an account for storage of electronic money that would be used at any time. Money transfers become easy to and from areas where physical banks with immediate notifications about the receipt of the money and this was instrumental in its popularity (Laukkanen and Lauronen, 2005). According to Apati (2011), Safaricom in Kenya with the drive for financial inclusion through key innovations like M-PESA and other nations in Africa adopting different mobile platforms, has led to the development of a completely new kind of banking.

Today, the Government of Uganda through its Central bank regulates the financial sector where 90% of financial services are provided by the private sector. However, decades ago, the government through cooperative societies started the process of bringing its citizens to the financial world. These have since been decentralized and are managed by different small groups in form of Savings and Credit Cooperative Organizations (SACCOs) to ease the process of borrowing money from government or financial institutions.

The main focus of the financial integration was to achieve increased performance, especially on access to affordable financial services by citizens and for players in the private sector. However,

MTN Uganda started a service called ‘Mobile Money’ where a customer would transfer or receive money electronically from another customer. MTN Uganda in collaboration with Stanbic Bank Uganda started this service in 2009 and since then, a total of seven mobile money platforms have been launched in Uganda i.e. MTN Mobile money, Airtel Money, Orange money (Currently Africell Money), MCash, Ezeemoney, M-Sente and Payway all partnering with different commercial banks in order to embrace financial inclusion.(Bank Of Uganda, Annual Supervision report,2014).

Mobile banking was adopted by Centenary Bank, the case for this study at the end of 2013 as Cente Mobile. This was to allow Centenary Bank clients to access their bank accounts for balance checks, statements among others on the go. Customers would also pay for utilities and buy mobile credit (Centenary Bank report, 2014).

1.2.2 Theoretical Background

This study about the effect of mobile banking and financial performance of banks in Uganda was based on the ‘Excellence theory’ which was developed by Grunig (1985). This theory evolved from four approaches: Goal attainment, Systems, Competing Values, and Strategic Constituencies approaches. The Strategic Constituencies approach therefore was useful in understanding the effect of mobile banking on financial performance commercial banks in Uganda since it emphasizes the need to establish factors that affect organizational effectiveness and efficiency. The study was based on this theory to establish how the specific dimensions of mobile banking affect financial performance, specifically for commercial banks in Uganda.

According to the Strategic Constituencies Approach, Centenary Bank survives in the financial sector by fulfilling the demands of its stakeholders for its efficiency. The approach was useful since Centenary Bank is highly responsive to the customers’ demands and all other stakeholders

for effectiveness. Centenary Bank also aims at many goals to cater for the interests of the different constituents in its environment thus concurring with the Strategic Constituencies Approach. The Competing Values Approach was useful in covering the gap between Strategic Constituencies and Centenary Bank's goals as the bank must integrate strategic constituencies' value with its goals for it to attain the most valuable goals to its strategic constituencies.

According to Goal Attainment Approach, Centenary Bank can be effective when it meets its goals, this was useful is assessing the bank's financial performance in relation to mobile banking strategy.

With the Systems Approach, Centenary Bank would be effective if there's a mutual connection between the bank and the environment in which it operates (Von Bertalanffy, 1969).

The environment changes rapidly today and this makes organizational goals change daily. Thus, picking out the strategic constituencies from their environment becomes challenging. For this case, the different stakeholders use different criteria to rate the effectiveness of Centenary Bank. There is little consensus on how organizations are effective and the best way to measure effectiveness both theoretically and empirically.

1.2.3 Conceptual Background

Mobile banking is the use of mobile gadgets or internet while performing money transactions electronically. Physical money is converted into electronic money (e-money) through the banks as the mobile network operators have escrow accounts with the banks where physical cash is deposited and the bank sends it electronically in return. The mobile account is a virtual account associated to a mobile telecom operator that can be used to keep, receive and transfer monetary value from other mobile accounts such as agents or banks. Through mobile banking, customers

are able to check their account balances, request for transaction statements/mini statements, do forex inquiries, receive or transfer funds among other services. (B.O.U, 2013).

The use of mobiles phones and Personal Digital Assistants (PDAs) to access banking facilities and services is also referred to as mobile banking (Porteous, 2006). Mobile banking is a transaction that is started and/or completed by use of an electronic device to sale goods and services or carry out any financial service related to the bank (Tiwari, Herstatt and Buse, 2006).

1.2.4 Contextual Background

Mobile money in Uganda has matured profoundly as one of the ways to improve financial inclusion. With the high adoption of mobile phones in Uganda, over 40% of the population has access to mobile money accounts as most of the telecoms offer the services due to its profitability. Mobile money transactions totaled to Uganda shillings 32.5 trillion (US \$ 9.76 billion) in 2015, an increase of 35% from 2015 (Uganda Communications Commission report, 2015). Mobile money has become a key revenue stream for the government through taxes (Bank of Uganda, 2015).

Bank of Uganda projects that in the near future, mobile banking will be key to the national payment system, and this calls for tighter regulation (BOU, 2013). A Uganda central bank report indicates that the mobile banking industry is competing with mainstream financial service providers like banks. In fact, the Uganda Communications Commission, 2016 annual and industry report indicates that mobile money accounts grew by 0.4 million as at the end of 2016 from the previous year. As a result, the annual monetary value transacted through mobile money totaled to Uganda shillings 43.8 trillion in 2016, up from Uganda shillings 32.7 trillion in 2015. This shows that the amount of money transacted increased significantly compared to the increase in the number of

mobile money lines and this can only be explained by improved usage of mobile financial services such as mobile banking.

The financial services sector in Uganda is dominated by the banking sector much as it also has Insurance, Microfinance and investments sectors. According to the Financial Institutions Act, 2014, the Bank of Uganda supervises the entire financial sector and monitors the capital requirements.

According to the financial stability report (2016), Uganda has 25 licensed commercial banks of which 19 have embraced mobile banking through partnering with different mobile network operators. Only 38 percent of Uganda's population is banked or can access financial services while 62 percent remain unbanked (Johnson and Nino-Zarazua, 2009).

Centenary Rural Development Bank Ltd, the case for this study started as a credit trust with the aim of developing the rural people. Centenary Bank later become a commercial bank in 1993 and today it is ranked among the top 4 commercial banks in Uganda with over 1.4 million account holders. The bank has recently adopted mobile banking through Cente Mobile to improve on the already existing infrastructure across the country to serve its customers that is 69 branches and 172 Automated Teller Machines (ATMs) (Centenary bank annual report, 2015). Centenary Bank was chosen for this study because it is one of the few indigenous banks in Uganda and since this study is based on the Uganda context it would befitting to focus on an indigenous case. Also, Centenary Bank is one of the banks that have embraced creating financial services and products that are in line with the interests of the ordinary people in Uganda. Thus, it would be most appropriate to understand how Mobile Banking is affecting the financial performance of banks by looking at a truly indigenous case of a bank.

While majority of Centenary Bank customers transact physically within the banking hall, the bank is realizing an increasing number of its customers embracing its mobile banking services, especially through online platforms and the use of telecom lines. The bank is increasingly getting overwhelmed by many users of its online banking platform making it slow and sometimes unreliable. (FinScope Survey, 2013)

1.3 Problem statement

Commercial banks in Uganda strive to achieve targeted financial performance levels through strategies that focus on effectiveness and efficiency. In Uganda most commercial banks are struggling to achieve desired financial performance (Bank of Uganda Report, 2016). To explain this challenge, the example of Centenary Bank Ltd in Kampala can be used. Centenary Bank anticipates an overall 40% improvement in financial performance starting from 2014 in its two year strategic plan. According to this plan the improvements in financial performance are expected in the areas of return on assets, return on equity, and increase in liquidity at rates of 35%, 25%, and 40%, respectively. Indeed, according to a recent Centenary Bank internal audit report, (2016), overall financial performance improved by 17%, with 8% gains on return on assets, 11% of returns on equity, and 23% liquidity between 2014 and 2016.

To improve financial performance in terms of return on assets, return on equity, and liquidity, the stock and shareholders' resolutions among most banks agreed to focus on redefining mobile financial information services, mobile transfers and receipts, mobile deposits and withdrawals through implementation of more mobile-oriented policies (Board of Governors Meeting Minutes Bank of Uganda, 2016). These efforts are aimed at creating an environment through which financial performance in terms of return on assets, return on equity, and liquidity can be improved.

But despite all these interventions, the problems of low financial performance still persist in most banks in Uganda. With mobile financial inclusion at 35%, conventional bank accounts at 11% and nonbank financial institution (NBFIs) accounts at 6% (Financial Inclusion report, 2016), if mobile banking in terms of mobile financial information services, mobile transfers and receipts, and mobile deposits and withdrawals are not addressed, financial performance in banks in Uganda may not improve as desired. This is evident as the active bank accounts have continuously remained stagnant at 6 million over the years as the mobile money accounts have flourished to over 21 million active as of 2016. So, this study comes in to investigate the effect of mobile banking on financial performance, and therefore this study assists banks better understand and address this problem to enable achievement of financial performance targets.

1.4 Purpose

The purpose of the study was to investigate the effect of mobile banking on financial performance of banks in Uganda with particular focus on Centenary Bank as a case.

1.5 Objectives

This study focused on the following specific objectives

- a) To establish the effect of mobile financial information services on financial performance of Banks in Uganda.
- b) To assess the effect of mobile transfers and receipts on financial performance of Banks in Uganda.
- c) To examine the effect of mobile deposits and withdrawals on financial performance of Banks in Uganda.

1.6 Research Questions

The research was guided by the following research questions

- a) What is the effect of mobile financial information services on financial performance of Banks in Uganda?
- b) What is the effect of mobile transfers and receipts on financial performance of Banks in Uganda?
- c) What is the effect of mobile deposits and withdrawals on financial performance of Banks in Uganda?

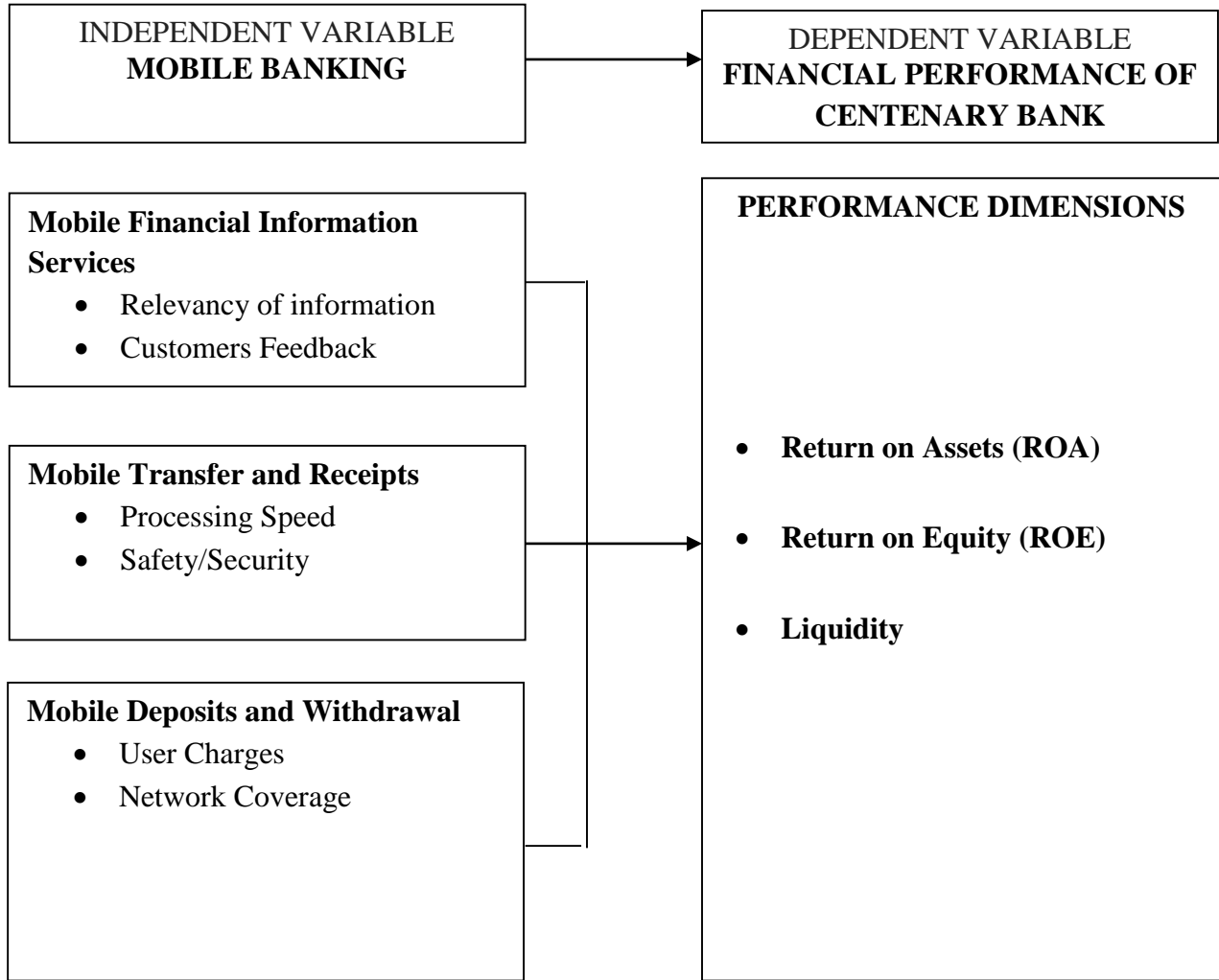
1.7 Hypotheses

The study was guided by the following hypotheses

- a) Mobile financial information services have a significant effect on financial performance of banks in Uganda.
- b) Mobile transfers and receipts have a significant effect on financial performance of banks in Uganda.
- c) There is a significant relationship between mobile deposits/withdrawals and financial performance of banks in Uganda.

1.8 Conceptual Framework

A conceptual framework showing the effect of mobile banking on financial performance of banks, a case of Centenary Bank Uganda



Source: Adopted from Literature (Kiprop, 2016) and modified by the researcher.

Figure 1. 1: A Conceptual Framework for the study

The conceptual framework above illustrates the connection between the independent and dependent variables of the study. It particularly presented the dimensions of mobile financial information services, mobile transfers and receipts, and mobile deposits and withdraws and how these interact with the dependent variable. The variables in the conceptual framework and the

dimensions under each variable were investigated in line with the propositions of the Strategic Constituencies Approach under the Excellence Theory.

1.9 Significance of the study

Commercial Banks in Uganda have faced a number of challenges relating to financial performance. It is anticipated that some of the findings, conclusions, and recommendations in this study will be of significance to some of the key stakeholders in the following ways;

To the owners and operators of Commercial Banks the study results may be used to design better strategies on improving financial performance of Commercial Banks. The owners and leaders in Commercial Banks may also use the study results to learn lessons from past practices, which can be avoided while making future plans.

To the regulators of Commercial Banks such as the Bank of Uganda, the parliament of Uganda, results from the study may be useful in informing future policy proposals and modes of policy implementation. Financial bodies like URA may use results from the study to better understand the circumstances under which commercial banks operate, which may help them develop better ways of dealing with Commercial Banks during determination of revenue levies and their collection.

To researchers and academic students, the results from the study may add the pool of available literature for researchers to use while dealing with matters on the subject of financial performance in the banking sector. Specifically, the successful completion of this study will be a fulfillment that will lead to the researcher earning a master's degree in business administration.

1.10 Justification of the study

Customers are central to any business yet banks in Uganda are overwhelmed by competition from mobile banking by the various telecom companies. This study is justified because it will address the information gap about how mobile banking has affected financial performance of banks in Uganda, specifically Centenary Bank. Thus, this study on the effect of mobile banking on financial performance of commercial banks in Uganda is needed since banks can use its findings and conclusions to reposition themselves as far as winning and maintaining customers is concerned.

1.11 Scope of the Study

This section presents content scope, time scope, and geographical scope that guided the study.

1.11.1 Geographical Scope

The study was carried out in Kampala restricting to Centenary Bank main office in the Kampala business centre. Among the key respondents were the users of mobile banking, the staff and management of Centenary Bank were targeted in this area.

1.11.2 Content Scope

The study focused on the key dimensions in the independent variable, which are; mobile financial information services, mobile transfers and receipts, and mobile deposits and withdrawals, and how they affect financial performance in Centenary Bank. Financial performance of Centenary Bank was investigated in terms of return on assets, return on equity, and liquidity.

1.11.3 Time Scope

The study focused on the period 2014 – 2016 because it is during this period that issues of financial services inclusion and the importance of mobile banking have been more pronounced in Uganda (Bank of Uganda, 2014).

1.12 Operational Definitions

Mobile deposits and withdrawals: This phrase was used in this study to mean the mobile approaches provided by Centenary Bank for its customers to deposit and withdrawal money wherever they are and whenever they want to (UCC Mobile money Guidelines, 2013).

Mobile transfers and receipts: This was used to refer to the mobile ways, channels, avenues, etc. provided by Centenary Bank for its customers to transfer and receive money wherever they are and whenever they want to (UCC Mobile money Guidelines, 2013).

Mobile Financial Information Services: This was used to mean avenues put in place by Centenary Bank to make accessible vital financial information for its clients such as bank statements, pay bills, account balances, etc. by use of mobile devices at any time (UCC Mobile money Guidelines, 2013).

Return on Assets: This was used to mean the financial gain by Centenary Bank on the asset investments made on behalf of the bank's shareholders over the past four years (B.O.U Annual supervision report, 2012).

Return on Equity: This was used to mean financial gains by Centenary Bank on the money invested by the bank's shareholders over the past four years (B.O.U Annual supervision report, 2012).

Liquidity: This term was used in the study to refer to the extent to which Centenary Bank has money in cash form available for use at any one time (B.O.U Annual supervision report, 2012).

In this chapter, the researcher defined the research problem, the study purpose, with clear research objectives, questions and hypotheses and justification of the study. Thus, the next chapter was aimed at addressing the theory that guided the study, reviewing and critiquing any related literature to the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher presented the review of the theory underpinning the study, the reviewed literature in themes, the gaps found and then summarized the literature reviewed. While reviewing the literature, the researcher organized it according to the research objectives.

2.2 Theoretical Review

The “Excellence theory”, mainly focusing on one of its four component approaches; the Strategic Constituencies Approach was used to understand and focus the study. The Strategic Constituencies approach helps to identify factors that affect financial performance. In line with the study, the approach suggests that for an organization to survive within its industry efficiently, it must consider the demands of those members in its environment. There’s need to improve both internal and external factors that influence financial performance for any entity to achieve efficiency and effectiveness, this approach which assesses the successfulness to satisfy multiple strategic members both internal and external to the organization, is appropriate as a basis for this study.

The study compared the Strategic Constituencies Approach to other approaches but realized that this approach, clearly takes into consideration that organizations fulfill their goals, with the advantage that the approach points out clear and achievable goals and objectives in line with the purpose of the organization that all its constituents can easily understand. Relatedly, the approach also facilitates the making of wise business decisions for business continuity. Thus, based on these aspects, the study analyzed how the independent variable of the study affects the dependent variable.

Thus, the Goal Approach which looks at achievement of predetermined goals by the organization and the System Resource Approach that focuses on the entire organization processes from acquisition of inputs up to generation of outputs to be effective, capture the essence of the study but they are not the best to base this study on.

2.3 Mobile Financial Information Services and Financial Performance of Banks

Financial information systems used for financial data analysis during financial planning and decision making aid the provision of mobile information services (World Bank Report, 2013).

Firms like banks for this case use financial information and decision support systems to attain financial objectives as resources are minimized compared to a predetermined margin of safety.

The mobile financial information services offered by the bank to its clientele base are determined by the nature of the bank's financial information system.

Mobile phone usage in Africa has become vital in bridging the gap between the unbanked populations and the mainstream financial systems. Much as mobile phone penetration promotes the saving culture at individual level, it has also enables banks realize their desired financial performance through provision of mobile financial services to its clients. Access to mobile financial services improves the rate and ease of transacting using mobile devices thus growing the saving culture as well. Usage of mobile phones and internet banking encourages savings on mobile accounts and bank accounts linked to telecom sim card. Thus, to the poor and low income earners with limited access to formal financial services, strengthening the area of mobile phone financial services is a way of enhancing saving skills (Cull, et. al., 2014).

One of the easiest possible way to bring the most of Africa's population that does not have a bank account to the financial system is by embracing mobile banking. This has been possible in rural

Kenya where the number that could access a financial account grew by over 33 percent between 2011 and 2014 mainly because of mobile banking adoption. In Kenya, financial inclusion grew by more than 200% in three years among the unbanked with over 63 percent having a financial account by 2014, and this automatically led to improved financial performance of banks.

Mobile banking reduces the time and cost of bringing financial services to the furthest population than investing in physical structures as it is the case in formal banking. This is slowly bringing the unbanked population into the financial system thus also giving business to the banks. According to Rosengard (2016), 19 million users now send 15 billion Kenyan shillings in remittances daily (US \$ 150 million) and Kenya's population with access to a financial account is more than double that of other sub-Saharan African countries and almost triple the typical rate in low-income countries worldwide.

2.4 Mobile Transfers/ Receipts and Financial Performance of Banks

Over two billion people in developing countries around the world face challenges to tasks as simple as receiving wages or sending money to family members. Without access to banking services, their finances are unstable because they don't have a good way to save for the future or borrow in times of need (Jay Rosengard, 2016).

According to the study by Mari (2006) about adoption of mobile banking in Europe, mobile banking would ease the person to person transactions, avail electronic transaction records at any time, make bill payment simplified and reduction of banks productivity within the locality. According to Porteous (2007), most of the unbanked people in Washington DC were unbanked mainly because of unemployment as many believed formal employment was a requirement to have an account.

In 2006, Consolatory Cluster to help the Poor (CGAP) conducted a survey in South Africa where results suggested that a mobile phone was almost equal to a bank account for every mobile phone owner. The study found out that, people who took up WIZZIT's mobile banking services on the average had the next financial gain.

According to Masinge (2010) study on the factors influencing the adoption of mobile banking services and the way they're transferred amongst the customers at all-time low of the pyramid in South Africa. The study discovered that, on average, M-pesa users are wealthier, higher educated, are already banked. The findings show that the majority of the M-pesa transfers are occurring inside urban areas. Access to financial services is highly influenced by gender and education level according to the, "seek for inclusion in Kenya's monetary landscape, 2012" report. The findings discovered that men are more likely to possess M-pesa and bank accounts than women. Having no education reduces the probability of getting M-pesa compared to one with any level of education.

2.5 Mobile Deposits / Withdrawals and Financial Performance of Banks

According to Sharma and Mishra (2014), mobile banking has changed the way people within the developing countries transfer cash and it's likely to refined banking services that may build a true difference in people's lives. This kind of banking can give good type of services starting from account data that should do with alerting the customers on the updates and transactions on their account through their mobile phones. People receive short messages on their phones informing them of their immediate transactions in their bank accounts. In addition, they assist in payment of utility bills, deposits, withdrawals, transfers, purchase airtime, request for bank statements among others in real time over their mobile phones (Buyer and lenders, 2006).

The adoption of mobile banking is on a growth trend as more prefer banking on the go. However, internet banking cannot be achieved minus access to internet enabled devices which is still a

challenge in Uganda. With the unreliable or limited access to internet, mobile banking is still not well explored by most Ugandans especially in the rural or travelers.

Today, a person sets installs a mobile application (Airtel money app, Mobile money app, DFCU app, Barclays app among others) on their phone or uses a short code as provided by the partnering bank to set up an e-money account on their mobile number. Mobile money customers can then deposit money on their numbers and either save it on the account for future use. The customer may decide to withdraw the money and get cash or even transfer to their bank account in case they have bank accounts.

The mobile deposits have helped to improve the saving skills of most customers but however, with the mobile withdrawals where someone has all time access to their accounts preempts extravagance as one does not have to walk to the bank physically.

Janine Aron (2015) argues that with mobile deposits at agent points, customers are not charged but for mobile withdraws and transfers (Person to Person or Person to Bank), customers are charge relatively.

With these double charges, high value customers may find it more practical to physically visit the bank and reduce or avoid the charges since banks do not charge on physical deposits to one's account and also charge less on withdraws compared to mobile withdraws.

2.6 Summary of Literature Review

Literature reviewed about the effect of mobile financial information services on financial performance of banks in Uganda indicated that there was consensus among most authors about the importance of mobile financial information services on the financial performance of banks. Most authors concurred with two World Bank reports that emphasized that for banks to be able to gain clientele responsiveness which would lead to increased uptake of banking services and in turn

grow their financial performance, there is need to provide affordable, easily understood and accessible financial information to customers wherever and whenever they may be. It must be noted however, that while there are various studies on the issue of financial information services, most of these studies were not conducted in the context of Uganda – they do not address the pertinent issues of customer illiteracy, low smart telephone usage and poor network coverage in many parts of the country. This is a gap that this study attempted to fill.

While reviewing literature on the effect of mobile transfers and receipts on financial performance of banks in Uganda, it was established that the numerous relevant studies on mobile transfers and receipts, especially in Uganda, are more qualitative than quantitative. However, the reviewed authors mainly concurred with African Bank reports which indicated that due to mobile transfers and receipts, banks have started realizing increased business transactions not only among premium customers but even among ordinary bankers.

Literature on the effect of mobile deposits and withdrawals on financial performance of banks in Uganda presented a most interesting view assertion by most authors. Most reports, especially those by Bank of Uganda, and a series of internal audits by the various banks in Uganda indicated that, due to mobile deposits among bank clients there has been a tremendous increase of the level and rate of savings over the past six years. These reports, however, do not indicate the extent to which increase in savings have led to financial performance of banks. This is a gap that this study attempted to fill.

CHAPTER THREE

METHODOLOGY

3.1. Introduction

It is in this chapter that the methodology used in the study is presented. It involves the detailed research design used to carry out the study, population for the study, sample size that was used and the specific techniques for sampling. The chapter also focused on the methods and instruments used for data collection, techniques for validity and reliability, how data was collected and analyzed and how the measurement of variables was done.

3.2. Research Design

This refers to a general approach chosen to bring together the different compositions of the research study in a consistent and systematic way thus ensuring the research problem was addressed. Research design involves the primary basics for collecting, sorting and analyzing data. A case study research design, which focusses on an identified entity among as a representation of many in the same industry, was used to undertake this study (Neuman, 2011). A case study research design was chosen because it is helpful in studying a particular research problem in detail like for this study compared to the comprehensive comparative inquiry. According to Anastas (2011), the case study research design scales down a wider research field into simple research problems, it also tests the applicability of a given theory to a research problem and further helpful when not so much is known about the problem under study. Both qualitative and quantitative approaches were used under the proposed research design. According to Russell (2011), using these approaches brings out opinions, views, sentiments, as well rates, percentages, numbers, etc. which are all vital as a basis for conclusions on the effectiveness and efficiency of mobile banking and financial performance of Centenary Bank.

3.3 Study Population

Centenary Bank Limited Kampala Main Office has an actual population of 129 people who make up the team. These include; board members, directors, managers, marketers, communications officers, tellers, engineers, legal advisors, security guards, genitors, as well as drivers. However, the target population for this study is 101 people comprised directors, bank staff, IT engineers, and marketers. The target population categories have been chosen since they are the most relevant to the study focus of mobile banking in Centenary Bank. Using the Krejcie and Morgan tables for sample size determination, a sample/accessible population for this study has been determined to be 90 respondents as detailed in the sections below.

Table 1: Sample Size by Population Categories

Population category	Target Population (N)	Sample (n)	Sampling Technique
Directors	7	7	Census
Bank staff	67	57	Simple Random
IT Engineers	4	4	Census
Marketers	23	22	Simple Random
Total	101	90	

Source: *This data was generated based on data records at Centenary Bank Uganda and also guided by Krejcie and Morgan (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.*

3.4. Sample Size determination.

An appropriate sample size was found out by use of the Krejcie and Morgan Table for sample size determination (1970). The population categories of directors, Bank staff, IT engineers, Marketers, have been chosen as the target categories for this study because they are the categories best positioned to respond constructively to the research questions of the study. It is on the basis of these target categories that the number of the target population was determined, as well as the

sample size for each population category using Krejcie and Morgan (1970) tables for sample size determination.

3.5 Sampling Techniques

A study sample is comprised of part of the items of the study population. It is part of the total population under study that is taken and considered for the study in order to make conclusions about the entire population (it is a representation of the population) from which generalization are made about the entire population (Russell, 2011). Simple random sampling and census techniques were used in this study, as indicated in table 1 above.

3.5.1 Simple Random

A random sample is a sample selected so that every unit of the study population has the same probability of being chosen so that it is possible to confidently make estimates about the total population based on the sample results. This method is selected because it's also preferred for data collection as it minimizes the bias on the side of the researcher while selecting respondents (Maxwell, 2005) and gives an equal chance to each of the individuals in the sample population to be picked to take part in a study (Sarantakos, 2005). The study used simple random sampling to target staff members, and marketers. In agreement with the above authors Babbie (2007) emphasizes that random sampling must be free of bias yet meeting the needs of the researcher.

3.5.2 Census

Census is the where the researcher deliberately targets the entire population or group of respondents due to their group size and resourcefulness on the matters under investigation (Neuman, 2006). The study used census to target directors and IT engineers as both groups are

relatively few in number. A census provides detailed information about the individuals in the population thus enabling a high response rate during the interviews. (Paul Lavrakas, 2018).

3.6 Data Collection Methods

Data collection methods are ways through which the researcher gets data needed from the respondents (Patten & Mildred, 2001). This study used questionnaire survey, interviews and documentary review. According to Russell (2011) questionnaire surveys save time and the respondents have freedom to answer in a way that is suitable and convenient. The study used interviews to collect data since they give opportunity to probe further for in-depth information (De Vaus, 2001).

3.6.1 Questionnaire Survey Method

Questionnaire Survey Method is where a tool that contains open-ended, closed-ended or both categories of questions is administered to the respondent for them to complete it directly or helped to complete by the data collectors. Data was collected through questioning of respondents using self-administered questionnaires. According to Guppy & Gray (2008) successful surveys depend on a carefully executed data collection method. The authors add that in case of questionnaire survey, the researcher must ensure that self-administered and guided questionnaires are easy to understand by the respondent and are not too long. In agreement, Nardi (2006) argues that questionnaires should be concise yet comprehensive. The method targets bank staff. Questionnaire survey method was used because it preserves respondent's privacy; it is also cheap and quick.

3.6.2 Interview Method

Interview means the verbal questioning of respondents during data collection by face to face, over the telephone, or written. The advantage of interviews is that they give the researcher an

opportunity to observe respondents' feelings and address their reservations (Mugenda & Mugenda, 2003). Data was collected through face to face interviews with bank managers. Wengraf (2001) reveals that interviewing is an essential and simple way of data collection. In agreement, Amin (2005) argues that the advantage of using interview is that, it allows on spot explanations, adjustments and variation could be introduced during the data collection process and through respondent's incidental comments, use of facial and body expressions, tone of voice, gestures, feelings and attitudes.

3.6.3 Documentary Review Analysis

Documentary review analysis involves analysis of the relevant literature. The advantages of conducting documentary review analysis is that it allows the researcher to learn more about the subject under investigation as presented by previous researchers focusing on literature that is in line with the objectives of the study. Creswell (2008) indicates that document review focuses on documents that are internal and relevant to the organization that is being researched on. The author adds that documentary review should focus on finding supporting information that is specific to the organization under investigation in line with the study subject. The researcher reviewed relevant pamphlets, new paper articles, minutes for meetings, and reports which particularly talk about Centenary Bank Uganda Ltd.

3.7 Data collection instruments

This section contains the various data collection instruments that was used in the study. Each of the instruments is explained in detail below.

3.7.1 Questionnaires

According to Mildred (2001) a questionnaire is a tool containing a set of questions which, if answered, helps the researcher get varied data about a specific subject under investigation. For a questionnaire to produce good data it must be valid (Patten & Mildred, 2001). Questionnaires was used to avoid subjectivity that results from close contact between researcher and respondent. The questionnaire was preferred because it helps collect necessary information over a short time period less expensively (Fowler, 2008). The questionnaire is categorized into respondents' bio data, questions on mobile financial information services, mobile transfers and receipts and mobile deposits and withdraws duration, as well as on questions on financial performance in Centenary Bank. The questionnaire is the most appropriate data collection instrument to bring out the relevant data on the above mentioned variables. The questionnaire contained two sections; a section on the personal details about the respondent, the rest of the three sections, each, contained questions about the three research questions.

3.7.2 Interview guide

According to Osborne (2008) an interview guide is list of thematic areas or issues that the researcher focuses on while engaging respondents during an interview. This was a list of key themes and question areas on which the face to face interviews focused. An interview guide was used to help the interviewer remain systematic and focused on relevant issues (Sarantakos, 2005). The interview guide is a tool that contains key themes or questions that the interview is supposed to focus on. The interview guide helps the research to stick to the objectives of the research without asking questions that are not in line with the study and ensuring that all key issues about the study are responded to by respondents during interviews (Sarantakos, 2005). The items on the interview guide are developed based on the dimensions under the independent variable and those under the

dependent variable. The items on the interview guide are also based on the three research questions of the study which are also generated from the conceptual framework. The questions on the interview guide are in line with the questions on the questionnaire but these were asked in an in-depth manner that will help bring out deeper insight from bank managers only.

3.7.3 Documentary Review checklist

A documentary review checklist contains a record of the various documents reviewed for specific information about a research case (Yates, 2004). Prior to the study a documentary review checklist of documents about Centenary Bank was developed. It contained relevant pamphlets, newspaper articles, organizational magazines, bank website, minutes for meetings, and reports from the bank. A documentary review checklist is to ensure the research captures the most important sources of information.

3.8 Data Quality Control

This section explains how the study ensured research instruments are valid and data reliable.

3.8.1 Pre-testing

A pre-test is an activity to test suitability of the research questionnaire in totality but also of the individual elements on the questionnaire. The pre-testing ensured clarity and consistency throughout the study (Mugenda & Mugenda, 2003). However, changes may be made to the questionnaires after pre-testing if there is need to. Pre-testing of the sample was done using 5 staff members to validate the questionnaire and interview guide for targeted respondents.

3.8.2 Validity

In research, validity refers to degree to which research instruments measure what they are intended to measure (Amin, 2005). For the researcher to confirm the validity of the instruments, the

judgment of experts in the research field such as the supervisors and other reviewers was used. An evaluation for each item in the research instruments was done by the reviewers to determine how relevant they were to the research objectives. The Content Validity Index (C.V.I) was used to determine validity of the research instruments. C.V.I is the ratio of relevant items as rated by judges to the total number of questionnaire items. This computed as below;

$$\text{CVI} = \frac{\text{No. of items rated relevant}}{\text{Total no. of items}} \quad 26/28 = 0.92$$

Total no. of items

According to Amin (2005), after calculation based on the contents of the questionnaire, the instrument that scores above 0.7 is considered valid.

3.8.3 Reliability

Reliability measures whether an instrument is consistent without error or redundant or vague questions. The Cronbach's Alpha Reliability Coefficient for Likert-type scales test was carried out to make sure the quantitative data was reliable. The Cronbach's alpha was use as it is statistically a coefficient that measures reliability (Russell, 2011). The coefficient is mostly used to measure reliability and internal consistence of a test score for a given sample of questions in a questionnaire. According to Sekaran (2003), an instrument can only be used in research if it has a coefficient of reliability that is 0.7 and above. This coefficient must also have been obtained from a reasonable sample.

The table below shows the Cronbach's alpha coefficients that were computed using SPSS.

Table 2: Reliability Analysis

Study variable	Cronbach's Alpha	Retained items
Mobile financial information	0.788	8
Mobile transfers and receipts	0.841	7
Mobile deposits and withdrawals	0.846	7
Financial performance	0.728	4
Data collection tool	0.875	26

Source: Primary Data

From the above table, the alpha coefficient for mobile financial information was 0.788 for 8 items, 0.841 for mobile transfers and receipts for 7 items, 0.846 for mobile deposits and withdrawals for 7 items, 0.728 for financial performance with 4 items and 0.875 for the entire data collection tool with a total of 26 items. Since all the variables have the alpha coefficient above 0.7, the research instrument is therefore suitable for collection of data for the study.

3.9 Procedure for Data Collection

Successful defense of the proposal was followed by getting a letter of introduction to the field for necessary authorization to start collecting data. Data was collected in one month where the researcher led a team of research assistants to develop and pre-test for reliability and validity of the data collection instruments. During the first week, respondents were contacted and appointments were made. With the help of two university graduate research assistants, questionnaires were administered to the selected respondents in the second week while the interviews for key respondents were handled in the third week. The collected data was sorted and analyzed during the fourth week.

3.10. Data Analysis

Analyzing data involves inspection, cleaning, changing, and modifying data so as to find useful information and draw conclusions that support decision making (Gorard, 2003). According to

Grbich (2007) analysis refers to breaking a whole into its separate components for individual examination. Data analysis also involves obtaining raw data and converting it into information useful for decision-making by users. Data is collected and analyzed to answer questions, test hypotheses or disprove theories (Grbich, 2007).

3.10.1 Qualitative Data Analysis

It involves a series of steps and processes from the collected data in form of explanations, observations, and interpretations of the sample and situations under study. Qualitative data analysis usually bases on how information is understood and interpreted by the use (Neuendorf, 2002). Qualitative data responses were written down, categorized and arranged. The data was analyzed manually and the responses were simplified in a narrative form to show the major study findings. The technique for qualitative data analysis was content analysis.

3.10.2 Quantitative Data Analysis

This is a logical way of handling or transforming research results into numerical data (Yin, 2008). Numerical data was coded, edited and entered into SPSS version 21 for analysis. Data was summarized and explained by the mean. Regression analysis and correlation coefficient were both used to determine the strength of relationship between independent and dependent variables.

3.11. Measurement of variables

Information from the respondents' views was obtained by using a scaled questionnaire. A five point Likert-scale of 1- Strongly disagree, 2- Disagree, 3- Not sure, 4- Agree and 5- Strongly agree was used to get respondents' ideas. The interview and questionnaire questions based on the research objectives in line with the research questions and hypotheses. Data generated from open

ended questions were used in the qualitative analysis. The information was put together according to the content. The Likert-scale was used as it is simpler compared to other methods (Amin 2005).

3.12 Ethical considerations

Any research that involves human beings possesses different behavioral and character issues that may enhance or limit research ethics. Research ethics is specifically interested in the analysis of ethical issues such as moral values and guiding rules that are raised when people are involved as participants in research. It usually puts clear reference on the dos and don'ts for the research (Glicken, 2002).

The researcher sought informed consent of respondent before administering the questionnaires or conducting any interviews. This helped respondents to participate in the research at their choosing. Declaration of research purpose was properly done so that respondents are aware of what they are being asked to get into, and help them to decline if they do not feel comfortable talking about the research topic.

Confidentiality of all information given by respondents was ensured by close supervision of the data collection process so that all data and information given by respondents was presented in its truest form free from any manipulation. Names and other forms of identity of respondents were kept anonymous. Also, the researcher ensured that all materials used in this research are properly cited and referenced, as acknowledgement of use.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESEARCH FINDINGS

4.0. Introduction

In this chapter, the data was analysed and the research results were presented and also interpreted. The data analysis was based on the research objectives and hypotheses. This chapter presents the data, analysis, and the interpretation of the results. During presentation of research findings, it was categorized in three areas basing on the rate of responses, demography of respondents and the research objectives.

4.1. Response rate

The study attained an overall response rate of 66.1 percent where 59 out of 90 questionnaires issued were filled with no errors thus 65.6 percent response and 6 out of the 9 key informants were interviewed thus 66.7 percent response. The table below shows a detailed breakdown of the responses that contributed to the study.

Table 3: Showing response rate

Population category	Sample size	Actual no. of respondents	Response rate(Percentage)
Directors	7	2	28.5
Bank staff	57	41	71.9
IT Engineers	4	1	25.0
Marketer	22	15	68.1
Total	90	59	65.6

Source: Primary data

From the above table, more than half of the study sample responded making up a response rate of 65.6 percent which is good enough for data analysis (Mugenda and Mugenda, 2009).

4.2. Demographic characteristics of the sample

The demographic characteristics of the respondents are presented in this section were for data collected using the questionnaires only. The section presents gender, age, relationship, years of relationship and education level of respondents in Centenary Bank.

Table 4: Respondents according to gender

Gender	Frequency	Percentage
Male	37	62.7
Female	22	37.3
Total	59	100.0

Source: Primary data

From the above table, 62.7 percent were males and the rest were females. The higher percentage of males can be explained by their bigger contribution to the Centenary Bank staff. The relevancy of this to the study is that the voice of majority internal stakeholders to Centenary Bank was well represented.

Table 5: Respondents according to age bracket

Age bracket	Frequency	Percentage
Below 30 years	21	35.5
Above 30 years	38	64.5
Total	59	100.0

Source: Primary data

From the above table, most of the respondents were above 30 years contributing 64.5 percent as these make up a bigger number of staff within the bank based on number of years they have been employed with Centenary Bank.

Table 6: Respondents according to relationship

Relationship	Frequency	Percentage
Directors	2	3.4
Bank staff	41	69.5
IT Engineers	1	1.7
Marketers	15	25.4
Total	59	100.0

Source: Primary data

From the above table, most of the responses were from the bank staff contributing 69.5 percent, while the directors constituted 3.4 percent, compared to IT engineers that contributed 1.7 percent and, 25.4 percent constituted by marketers. The high level of staff participation in the study is because they are the largest category of employees, but also they are at the centre of the organization – so a large number of staff were selected on purpose. This was relevant to the study since the views of the majority employee category were well represented.

Table 7: Respondents according to years of relationship

Years of relationship	Frequency	Percentage
1 - 3 years	27	45.8
4 - 6 years	20	33.9
7 years and above	12	20.3
Total	59	100.0

Source: Primary data

From the above table, 45.8 percent of the respondents were in the category of 1-3 years of relationship with Centenary Bank representing the majority of the respondents. This can be explained by the recent expansion of Centenary Bank that led to increase in their number of staff thus falling in that category.

Table 8: Distribution of respondents according to education level

Education level	Frequency	Percentage
Primary	0	0.0
Secondary	6	10.1
University	53	89.9
Total	59	100.0

Source: Primary data

According to the above table, 53 out of the 59 (89.9 percent) respondents were university graduates and this gave the study more informed views during data collection since the respondents were more informed about the areas under research.

The remaining 10.1 percent constituted of only secondary level respondents and there was none with only primary level education.

4.3 Empirical findings about the effect of mobile banking on financial performance of banks in Uganda with particular focus on Centenary Bank as a case

The findings were presented using the mean, frequencies, correlation coefficient and regression analysis basing on each of the study objectives. The study objectives were as follows: to establish the effect of mobile financial information services on financial performance of banks in Uganda; to assess the effect of mobile transfers and receipts on financial performance of banks in Uganda; to examine the effect of mobile deposits and withdrawals on financial performance of banks in Uganda.

The variables were measured on a five point Likert-scale, that is; 1- Totally Disagree (TD), 2 - Disagree (D), 3 – Not sure (NS), 4 – Agree (A) and 5 –Totally Agree (TA). Frequencies were presented as percentages.

4.3.1. Findings on financial performance of banks in Uganda with particular focus on Centenary Bank as a case

Financial performance of banks in Uganda was investigated by use of a questionnaire. The questionnaire statements were based on the different dimensions of financial performance. The findings from the respondents were presented as shown in the table below.

Table 9: Views of respondents on financial performance of banks in Uganda

Statements measuring Financial Performance	TD	D	NS	A	TA	MEAN	TOTAL
Mobile banking has led to increased financial performance of Centenary Bank	1 (1.7%)	1 (1.7%)	1 (1.7%)	27 (45.8%)	29 (49.1%)	4.39	59 (100%)
Mobile banking has led to increased return on assets in Centenary Bank	0 (0.0%)	0 (0.0%)	4 (6.7%)	20 (34.0%)	35 (59.3%)	4.53	59 (100%)
Mobile banking has led to increased return on equity in Centenary Bank	0 (0.0%)	9(15.3%)	0 (0.0%)	23 (39.0%)	27 (45.7%)	4.15	59 (100%)
Mobile banking has led to increased liquidity in Centenary Bank	0 (0.0%)	12 (20.3%)	0 (0.0%)	30 (50.9%)	17 (28.8%)	3.88	59 (100%)

Source: Primary data

The above table shows that majority of the respondents concurred with the four statements used to measure financial performance of banks in Uganda as elaborated below.

Mobile banking led to increase in financial performance of Centenary Bank as 94.9 percent of the respondents agreed to the statement and this was achieved through increased return on assets and equity according to the respective 93.3 and 84.7 percent. Financial performance of Centenary Bank also improved due to the increase in its liquidity as a result of mobile banking basing on the 79.7 percent of respondents that agreed to the statement.

Majority of the respondents were in agreement that mobile banking has led to increased return on assets, return on equity and liquidity of Centenary Bank because with increased access to money many bank clients are able to invest faster, which may lead to increase in money exchanging hands.

4.3.2. To establish the effect of mobile financial information services on financial performance of Banks in Uganda

Seven statements relating to the above objective were included in the questionnaire to gauge the level of agreement from the respondents and all the 59 responses were quantified and presented in the table below.

Table 10: Showing views of respondents on mobile financial information

Statements measuring mobile financial information	TD	D	NS	A	TA	MEAN	TOTAL
Mobile financial information services are easily accessible to clients	1 (1.7%)	2 (3.4%)	2 (3.4%)	18 (30.5%)	36 (61.0%)	4.46	59 (100%)
Mobile financial information services are accessible all the day and all night	32 (54.2%)	10 (16.9%)	5 (8.5%)	7 (11.9%)	5 (8.5%)	2.03	59 (100%)
Mobile financial information services are more accessible compared to information services inside banks	7 (11.9%)	15 (25.4%)	5 (8.5%)	13 (22.0%)	19 (32.2%)	3.37	59 (100%)
Mobile financial information is easily understood by clients	1 (1.7%)	20 (33.9%)	1 (1.7%)	36 (61.0%)	1 (1.7%)	3.27	59 (100%)
Mobile financial information services is affordable by clients	5 (8.5%)	4 (6.8%)	1 (1.7%)	13 (22.0%)	36 (61.0%)	4.20	59 (100%)
Mobile financial information services are prompt	1 (1.7%)	3 (5.1%)	2 (3.4%)	12 (20.3%)	41 (69.5%)	4.51	59 (100%)
Mobile financial information provided is relevant to clients	2 (3.4%)	23 (39.0%)	3 (5.1%)	24 (40.7%)	7 (11.8%)	3.19	59 (100%)

Source: Primary data

From the above table, most of the respondents agreed to six statements and they disagreed to one statement relating to mobile financial information.

On whether mobile financial information services are easily accessible to clients, 36 respondents (61.0%) totally agreed, 18 respondents (30.5%) agreed, while 2 respondents (3.4%) were not sure. Also, 2 respondents (3.4%) disagreed, and 1 respondent (1.7%) totally disagreed. Concerning whether mobile financial information services are accessible all the day and all night, 5 respondents (8.5%) totally agreed, 7 (11.9%) agreed, while 5 (8.5%) were not sure. Additionally, 10 respondents (16.9%) disagreed, while 32 respondents (54.2%) totally disagreed.

On whether mobile financial information services are more accessible compared to information services inside banks, 19 respondents (31.4%) totally agreed, 13 (22.9%) agreed, while 5 (8.6%) were not sure. Also, 15 respondents (25.7%) disagreed, while 7 (11.4%) totally disagreed. Concerning whether mobile financial information is easily understood by clients, 1 of the respondents (1.7%) totally agreed, 36 respondents (61.0%) agreed, while 1 respondent (1.7%) were not sure, and 20 respondents (33.9%) as well as 1 respondent (1.7%) disagreed and totally disagreed, respectively.

As far as whether mobile financial information services is affordable by clients, 36 respondents (61.0%) totally agreed, 13 respondents (22.0%) agreed, while 1 respondent (1.7%) were not sure. A total of 4 respondents (6.8%) disagreed, and 5 respondents (8.5%) totally disagreed. On the issue of whether mobile financial information services are prompt, 41 respondents (69.5%) totally agreed, 12 (20.3%) agreed, 2 (3.4%) were not sure, while 3 respondents (5.1%), and 1 respondent (1.7%) disagreed and totally disagreed respectively. Concerning whether mobile financial information provided is relevant to clients, 7 respondents (11.8%) totally agreed, 24 respondents

(40.7%) agreed, while 3 respondents (5.1%) were not sure. Also, 23 respondents (39.0%) disagreed, while 2 respondents totally disagreed (3.4%).

Testing Hypothesis Number 1

The researcher proceeded to statistically establish whether mobile financial information has an effect on financial performance of banks in Uganda.

Null Hypothesis: Mobile financial information has an effect on financial performance of banks in Uganda.

Using Pearson’s correlation coefficient, the null hypothesis was tested at a 95% level of significance to measure the degree and direction of relationship between mobile financial information and financial performance of banks in Uganda. The results are presented in the table below.

Table 11: Correlation Matrix mobile financial information on financial performance

Study variables		Mobile financial information	Financial performance
Mobile financial information	Pearson Correlation	1	0.023
	Sig. (2-tailed)		0.852
	N	59	59
Financial performance	Pearson Correlation	0.023	1
	Sig. (2-tailed)	0.852	
	N	59	59

Source: Generated by SPSS from primary data

There is a very weak positive correlation between mobile financial information and financial performance, ($r= 0.023$, $N=59$). However, since the p-value of 0.852 is greater than 0.050, there is no significant relationship at 95% level of confidence.

In order to find out the degree (if any) at which mobile information affects the financial performance of banks, regression analysis was used to determine the coefficient of determination.

The results were shown in the table below.

Table 12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.023 ^a	.001	-.014	.61193

a. Predictors: (Constant), Mobile financial information

Source: Generated by SPSS from primary data

From the above table, the coefficient of determination was -0.014 meaning that the regression model was not statistically significant as all squares must be positive. Analysis of variables (ANOVA) was carried out to understand the general significance of the model and the results are shown in the table below.

Table 13: Analysis of Variables (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.013	1	.013	.035	.852 ^b
	Residual	25.463	68	.374		
	Total	25.476	69			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Mobile financial information

Source: Generated by SPSS from primary data

From the above table, the significance value is 0.852 ($p=0.852$) which is greater than 0.05 meaning that there is no statistically significant effect of mobile financial information on financial performance of banks in Uganda.

Summative to the research question: What is the effect of mobile financial information services on financial performance of banks in Uganda?

According to the study findings, mobile financial information does not have a statistically significant effect on financial performance of banks in Uganda thus the hypothesis that stated that mobile financial information services have a significant effect on performance of banks in Uganda was rejected.

4.3.3. To assess the effect of mobile transfers and receipts on financial performance of banks in Uganda

The researcher used seven different statements to measure the effect of mobile transfers and receipts on the financial performance of banks in Uganda depending on the respondents' level of agreement to the statements. All the findings from 59 respondents were quantified and recorded in the table below.

Table 14: Views of respondents on mobile transfers and receipts

Statements measuring mobile transfers and receipts	TD	D	NS	A	TA	MEAN	TOTAL
Mobile transfers and receipts are preferred by bank clients	4 (6.8%)	19 (32.2%)	5 (8.5%)	25 (42.4%)	6 (10.1%)	3.17	59 (100%)
Mobile transfers and receipts can easily be done by clients without help	2 (3.4%)	19 (32.2%)	2 (3.4%)	30 (50.8%)	6 (10.2%)	3.32	59 (100%)
Mobile transfers and receipts have attracted clients to banks	3 (5.1%)	9 (15.2%)	3 (5.1%)	39 (66.1%)	5 (8.5%)	3.58	59 (100%)
Mobile transfers and receipts are considered convenient for clients	2 (3.4%)	9 (15.3%)	3 (5.1%)	35 (59.3%)	10 (16.9%)	3.71	59 (100%)
Mobile transfers and receipts are affordable to clients	5 (8.5%)	2 (3.4%)	2 (3.4%)	40 (67.8%)	10 (16.9%)	3.81	59 (100%)
Mobile transfers and receipts are considered safe and secure	2 (3.4%)	5 (8.5%)	2 (3.4%)	41 (69.5%)	9 (15.2%)	3.85	59 (100%)
Mobile transfers and receipts are save time	2 (3.4%)	22 (37.3%)	3 (5.1%)	25 (42.4%)	7 (11.8%)	3.22	59 (100%)

Source: Primary data

According to table 14 above, most responses were in agreement with the measures of mobile transfers and receipts as elaborated below.

On whether mobile transfers and receipts are preferred by bank clients, 6 respondents totally agreed (10.1%), 25 respondents (42.4%) agreed, while 5 respondents (8.5%) were not sure. Furthermore, 19 respondents (32.2%) disagreed, while 4 respondents (6.8%) totally disagreed. Concerning whether mobile transfers and receipts can easily be done by clients without help, 6 respondents (10.1%) totally agreed, 30 respondents (50.8%) agreed, while 2 respondents (3.4%) were not sure. Furthermore, 19 respondents (32.2%) disagreed, while 2 respondents (3.4%) totally disagreed. With majority of respondents in agreement that mobile transfers and receipts can easily be done by clients without help means that more people owning mobile phones are able to transact faster due to ease of access to money.

On whether mobile transfers and receipts have attracted clients to banks, 5 respondents (8.5%) totally agreed, 39 respondents (66.1%) agreed, while 3 respondents (5.1%) were not sure. Furthermore, 9 respondents (15.2%) disagreed, and 3 respondents (5.1%) totally disagreed. Similarly, on whether mobile transfers and receipts are considered convenient for clients, 10 respondents (16.9%) totally agreed, 35 respondents (59.3%) agreed, while 3 respondents (5.1%) were not sure. Furthermore, 9 respondents (15.3%) disagreed, while 2 respondents (3.4%) totally disagreed. With majority of the respondents affirming that indeed mobile transfers and receipts are considered convenient for clients' means that clients spend less on movements to look for financial services, which saves time as well. On whether mobile transfers and receipts are affordable to clients, 10 respondents (16.9%) totally agreed, 40 respondents (67.8%) agreed, while 2

respondents (3.4%) were not sure. Furthermore, 2 respondents (3.4%) disagreed, and 5 respondents (8.5%) totally disagreed.

Concerning whether mobile transfers and receipts are considered safe and secure, 9 respondents (15.2%) totally agreed, 41 respondents (69.5%) agreed, while 2 respondents (3.4%) were not sure. Furthermore, 5 respondents (8.5%) disagreed, and 2 respondents (3.4%) totally disagreed.

Concerning whether mobile transfers and receipts are save time, 7 respondents (11.8%) totally agreed, 25 respondents (42.4%) agreed, while 3 respondents (5.1%) were not sure. Furthermore, 22 respondents (37.3%) disagreed, and 2 respondents (3.4%) totally disagreed.

Testing Hypothesis Number 2

The researcher proceeded to statistically assess the effect of mobile transfers and receipts on financial performance of banks in Uganda.

Null Hypothesis: Mobile transfers and receipts affect the financial performance of banks in Uganda.

Using Pearson’s correlation coefficient, the hypothesis was tested at a 95% level of significance to measure the degree and direction of relationship between mobile transfers/receipts and financial performance of banks as shown in the table below.

Table 15: Correlation matrix mobile transfers/receipts and financial performance

Study variables		Mobile transfers/receipts	Financial performance
Mobile transfers and receipts	Pearson Correlation	1	.493*
	Sig. (2-tailed)		.000
	N	59	59
Financial performance	Pearson Correlation	.493*	1
	Sig. (2-tailed)	.000	
	N	59	59

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Generated by SPSS from primary data

From the above table, there is a moderate positive correlation between mobile transfers/receipts and financial performance. The p-value of 0.000 is less than 0.050 thus meaning that there is a statistically significant relationship at 95% level of confidence.

In order to establish the effect of mobile transfers and receipts on the financial performance of banks, regression analysis was done to find the coefficient of determination as shown in the table below.

Table 16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.493 ^a	.243	.232	.53253

a. Predictors: (Constant), Mobile transfers and receipts

Source: Generated by SPSS from primary data

From the above table, the coefficient of determination (0.232) means that 23.2 percent of effects on financial performance of banks is explained by mobile transfers and receipts while the balance of 76.8 percent is explained by other factors.

ANOVA was carried out to assess the general significance of the regression model as the results show in the table below.

Table 17: Analysis of Variables (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.192	1	6.192	21.835	.000 ^b
	Residual	19.284	68	.284		
	Total	25.476	69			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), Mobile transfers and receipts

Source: Generated by SPSS from primary data

From the results above, mobile transfers and receipts have a significant effect on financial performance of banks in Uganda since the p-value (significance value) of 0.000 is less than 0.050.

Summative to research question: What is the effect of mobile transfers and receipts on financial performance of banks in Uganda?

According to the study findings, mobile transfers and receipts have a statistically significant effect on financial performance of banks in Uganda thus accepting the null hypothesis which stated that mobile transfers and receipts affect the financial performance of banks in Uganda.

4.3.4. To examine the effect of mobile deposits and withdrawals on financial performance of banks in Uganda

Mobile deposits and withdrawals were measured using seven different statements relating to performance in order to get the views of the respondents. The findings from all the 59 respondents were quantified and recorded as shown in the table below.

Table 18: Showing views of respondents on mobile deposits/withdrawals and financial performance

Statements measuring mobile deposits and withdrawals	TD	D	NS	A	TA	MEAN	TOTAL
Mobile deposits and withdrawals are preferred by bank clients	2 (3.4%)	9 (15.3%)	2 (3.4%)	29 (49.1%)	17 (28.8%)	3.85	59 (100%)
Mobile deposits and withdrawals can easily be done by clients without help	1 (1.7%)	13 (22.0%)	1 (1.7%)	30 (50.9%)	14 (23.7%)	3.73	59 (100%)
Mobile deposits and withdrawals have attracted clients to banks	1 (1.7%)	14 (23.7%)	2 (3.4%)	24 (40.7%)	18 (30.5%)	3.75	59 (100%)
Mobile deposits and withdrawals are considered convenient for clients	1 (1.7%)	17 (28.8%)	3 (5.1%)	25 (42.4%)	13 (22.0%)	3.54	59 (100%)
Mobile deposits and withdrawals are affordable to clients	2 (3.4%)	15 (25.4%)	2 (3.4%)	31 (52.5%)	9 (15.3%)	3.51	59 (100%)
Mobile deposits and withdrawals are considered safe and secure	5 (8.5%)	17 (28.8%)	2 (3.4%)	25 (42.4%)	10 (16.9%)	3.31	59 (100%)
Mobile deposits and withdrawals save time	1 (1.7%)	21 (35.6%)	2 (3.4%)	27 (45.8%)	8 (13.5%)	3.34	59 (100%)

Source: Primary data

As shown in table 18 above, most of the respondents agreed to the statements used for measuring the effect that mobile deposits and withdraws have on financial performance of banks as detailed below.

Concerning whether mobile deposits and withdrawals are preferred by bank clients, 17 respondents (28.8%) totally agreed, 29 respondents (49.1%) agreed, while 2 respondents (3.4%) were not sure. Furthermore, 9 respondents (15.3%) disagreed, and 2 respondents (3.4%) totally disagreed. On whether mobile deposits and withdrawals can easily be done by clients without help, 14 respondents (23.7%) totally agreed, 30 respondents (50.9%) agreed, while 1 respondent (1.7%) was not sure. Furthermore, 13 respondents (22.0%) disagreed, and 1 respondent (1.7%) totally disagreed.

On whether mobile deposits and withdrawals have attracted clients to banks, 18 respondents (30.5%) totally agreed, 24 respondents (40.7%) agreed, while 2 respondents (3.4%) were not sure. Furthermore, 14 respondents (23.7%) disagreed, and 1 respondent (1.7%) totally disagreed.

Concerning the issue of whether mobile deposits and withdrawals are considered convenient for clients, 13 respondents (22.0%) totally agreed, 25 respondents (42.4%) agreed, while 3 respondents (5.1%) were not sure. Furthermore, 17 respondents (28.8%) disagreed, and 1 respondent (1.7%) totally disagreed.

On whether mobile deposits and withdrawals are affordable to clients, 9 respondents (15.3%) totally agreed, 31 respondents (52.5%) agreed, while 2 respondents (3.4%) were not sure. Furthermore, 15 respondents (25.4%) disagreed, and 2 respondents (3.4%) totally disagreed. Since most of the staff know the values of the organization the likelihood of continuous checks and balances within the organization is high which increases the likelihood of the organization achieving effectiveness.

On whether mobile deposits and withdrawals are considered safe and secure, 10 respondents (16.9%) totally agreed, 25 respondents (42.4%) agreed, while 2 respondents (3.4%) were not sure. Furthermore, 17 respondents (28.8%) disagreed, and 5 respondents (8.5%) totally disagreed. And

on whether mobile deposits and withdrawals save time, 8 respondents (13.5%) totally agreed, 27 agreed (45.8%), while 2 respondents (3.4%) were not sure. Furthermore, 21 respondents (35.6%) disagreed, and 1 respondent (1.7%) totally disagreed.

Testing hypothesis number 3

The researcher proceeded to statistically establish whether mobile deposits and withdrawals have an effect on financial performance of banks in Uganda.

Null hypothesis: There exists a relationship between mobile deposits/withdrawals and financial performance of banks in Uganda.

The correlation coefficient was determined to test the null hypothesis at 95% level of significance as shown in the table below.

Table 19: Correlation matrix mobile deposits/withdrawals and financial performance

Study variables		Mobile deposits/withdrawals	Financial performance
Mobile deposits/withdrawals	Pearson Correlation	1	.322*
	Sig. (2-tailed)		.006
	N	59	59
Financial performance	Pearson Correlation	.322*	1
	Sig. (2-tailed)	.006	
	N	59	59

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Generated by SPSS from primary data

From the results in the table above, the correlation coefficient is 0.322 and that implies that there is a weak positive correlation between mobile deposits/withdrawals and financial performance of banks in Uganda. Since the p-value of 0.006 is less than 0.050, there is a statistically significant relationship between the two variables at 95% confidence level. Further, regression analysis was done to get the coefficient of determination that was used to find out the level at which mobile

deposits and withdrawals affects financial performance of banks in Uganda. The results were as shown below.

Table 20: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.322 ^a	.104	.091	.57941

a. Predictors: (Constant), Mobile deposits and withdrawals

Source: Generated by SPSS from primary data

From the above table, the coefficient of determination is 0.091 implying of all the factors affecting financial performance of banks in Uganda, 9.1 percent can be explained by mobile deposits and withdrawals. ANOVA was also done to assess the general significance of the model as shown in the results below.

Table 21: Analysis of variables (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.648	1	2.648	7.886	.006 ^b
	Residual	22.829	68	.336		
	Total	25.476	69			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), mobile deposits and withdrawals

Source: Generated by SPSS from primary data

The model was statistically significant since the calculated p-value of 0.006 is less than 0.050 thus meaning mobile deposits and withdrawals have a significant effect on financial performance of banks in Uganda.

Summative to research question: What is the effect of mobile deposits and withdrawals on financial performance of banks in Uganda?

According to the study findings mobile deposits and withdrawals significantly affect and have a correlation with financial performance of banks in Uganda thus accepting the null hypothesis.

4.4 Interview Responses

For data collection through interviews, the researcher was guided by the three key research questions of the study which were: What is the effect of mobile financial information services on financial performance of banks in Uganda?, What is the effect of mobile transfers and receipts on financial performance of banks in Uganda?, What is the effect of mobile deposits and withdrawals on financial performance of banks in Uganda?

Respondents, particularly all the two directors and four staff members interviewed said that it is correct Centenary Bank offers financial information services. The respondents added that most of the information offered to the public and clients of the bank concerns the available bank products and services, the terms and conditions of engagement, as well as the rates for the various products and services offered.

When asked about the mobile transfers and receipts, particularly processing speed and safety and security, most of the respondents especially the directors revealed that Centenary Bank takes the issue of transaction processing speeds seriously, since, according to them, many clients are increasingly using their phones and computers to transact with the bank. On the issue of safety and security, the staff members interviewed said that since Centenary was a victim of cyber fraud, the bank has invested heavily in technology to ensure the bank and its clients transact with maximum safety and security.

When asked about mobile deposits and withdrawals, in terms of charges and network coverage, the dominant response was that while the bank relies on network coverage from the technology of the respective telecom services providers, it has plans to invest in its own technology. The respondents also said that the charges for transaction are affordable by clients although the bank

has observed that its operating costs are high thus, there are plans to increase the transaction charges.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary, discussions, conclusions and recommendations from the research findings guided by the research purpose and objectives. The study objectives were as follows: to establish the effect of mobile financial information services on financial performance of banks in Uganda; to assess the effect of mobile transfers and receipts on financial performance of banks in Uganda; to examine the effect of mobile deposits and withdrawals on financial performance of banks in Uganda.

5.1 Summary of findings

The purpose of the study was to investigate the effect of mobile banking on financial performance of banks in Uganda with particular focus on Centenary Bank as a case. There were three independent variables including; mobile financial information services, mobile transfer and receipts, mobile deposits and withdrawals all depending on financial performance as a variable. The analysis of data was done by use of mean, frequencies, coefficient of correlation and regression analysis. The research findings were categorized according to the study objectives as explained below.

5.1.1. To establish the effect of mobile financial information services on financial performance of banks in Uganda

According to the research findings, there was a weak positive correlation between mobile financial information and financial performance of banks in Uganda since the computed p-value of 0.852 was greater than 0.050 thus rejecting any statistically significant relationship between the variable

in this case. Also from regression analysis, mobile financial information did not have a significant effect of financial performance of banks in Uganda. Therefore, according to the study mobile financial information is not significantly affecting financial performance of banks in Uganda.

5.1.2. To assess the effect of mobile transfers and receipts on financial performance of banks in Uganda

From the study findings, there was a moderate positive correlation between mobile transfers/receipts and financial performance of bank in Uganda because the computed p-value for these variables was 0.000 thus being less than 0.050. Also given $r = 0.493$, the research accepted the hypothesis that there is a significant relationship between the variables. With the regression analysis, mobile transfers and receipts had a significant effect on financial performance of banks in Uganda since the p-value of 0.000 is less than 0.050. Therefore, growth of mobile transfer/receipts positively affects financial performance of banks in Uganda while decline in mobile transfers/receipts negatively affects financial performance of banks in Uganda.

5.1.3. To examine the effect of mobile deposits and withdrawals on financial performance of Banks in Uganda

From the findings, there was a weak positive correlation between mobile deposits/withdrawals and financial performance of banks in Uganda and since the computed p-value for these variables was 0.006 thus less than 0.050, the researcher accepted that the relationship was statistically significant. From regression analysis, mobile deposits and withdrawals have a significant effect on financial performance of banks in Uganda since given $r = 0.322$, the p-value of 0.006 is less than 0.050. Therefore any growth in mobile deposits and withdrawals positively affects financial performance of banks in Uganda while any decline in mobile deposits and withdrawals negatively affects financial performance of banks in Uganda.

5.2 Discussion of study findings

In this section, the discussion of the research findings was presented according to the research objectives.

5.2.1. To establish the effect of mobile financial information services on financial performance of banks in Uganda

Under objective one, the study sought to establish the effect of mobile financial information services on financial performance of banks in Uganda. In this study mobile financial information was conceptualized into two dimensions of; relevance of information and customer feedback. The findings of the study revealed that mobile financial information has no significant relationship with financial performance of banks in Uganda. The findings further indicated that mobile financial information does not significantly affect financial performance of banks in Uganda.

Contrary to the above findings, existing literature indicated that the increased usage of mobile phones to provide financial information services in Africa has become key in bridging the gap between the banked and the unbanked. It also improves individual savings and lays a foundation for banks to their clients. Besides saving, the amount of savings increases due to the ease and frequency of transacting using a mobile device. The savings can be both on the virtual mobile account or on the bank account but by using a mobile phone and thus, for the low income groups to adopt a saving culture, mobile financial services through phones should be grown and deepened (Cull, et. al., 2014).

5.2.2. To assess the effect of mobile transfers and receipts on financial performance of Banks in Uganda

Under objective two, the study sought to to assess the effect of mobile transfers and receipts on financial performance of Banks in Uganda. In this study mobile transfers and receipts was

conceptualized mainly into two dimensions namely, processing speed, and safety and security. The findings of the study revealed that there is a significant relationship between mobile transfers/receipts and financial performance of banks in Uganda. The findings further indicated that mobile transfers and receipts have significant effect on financial performance of banks in Uganda.

While the findings of this study revealed that mobile transfers and receipts have a significant relationship with financial performance of banks in Uganda, most of the users of mobile banking are relatively educated, averagely rich, have bank accounts and stay in urban areas (Masinge, 2010).

According to Khrawish (2011), R.O.A measures the bank performance in terms of how the management uses the bank's assets to generate income for the bank. Therefore, a high R.O.A relates to the efficiency of the organization.

5.2.3. To examine the effect of mobile deposits and withdrawals on financial performance of banks in Uganda

Under objective three, the study sought to examine the effect of mobile deposits and withdrawals on financial performance of Banks in Uganda. In this study mobile deposits and withdrawals was conceptualized into two dimensions namely, user charges and network coverage. The findings of the study revealed that mobile deposits and withdrawals have a significant effect on financial performance of banks in Uganda. The findings further indicated that mobile deposits and withdrawals significantly affect financial performance of banks in Uganda.

In line with the findings that mobile deposits and withdrawals significantly affect financial performance of banks in Uganda, Clapper (2014) indicates that the employment of electronic banking is significantly high and as additional and additional users sign in for electronic-banking,

the maturity as regards remote banking (i.e. banking outside the banking hall) is on the rise. With electronic banking, users currently handily do banking transactions, however this convenience cannot be achieved if the user does not have access to the web, hence, in different words, the user cannot do a banking dealing whereas looking ahead to a bus, or maybe whereas having lunch in an eatery.

5.3 Conclusions

The conclusions for the study were presented according to the study objectives relating to findings of the different dimensions of the independent variable.

5.3.1. To establish the effect of mobile financial information services on financial performance of banks in Uganda

According to the research findings, mobile financial information has no significant effect on financial performance of banks in Uganda implying that improvements in mobile financial information, for instance, by simplifying the process of accessing and utilizing the information, mobile financial information will have a positive significant effect on financial performance of banks since users will easily be able to access vital financial information. If management of banks in Uganda improves on mobile financial information, for instance, by improving on both access and cost shall contribute to better financial performance of banks in Uganda.

5.3.2. To assess the effect of mobile transfers and receipts on financial performance of banks in Uganda

According to the study findings, the researcher concluded that mobile transfers and receipts have a significant effect on financial performance of banks in Uganda. This implies that improvements in mobile transfers and receipts, specifically; easing the process and costs shall have a significant

positive effect on financial performance of banks in Uganda. If all banks in Uganda improve on mobile transfer and receipts services, for example, by making the process more user friendly through easy to use software this may in turn increase financial performance of banks in Uganda.

5.3.3. To examine the effect of mobile deposits and withdrawals on financial performance of banks in Uganda

According to the study findings, the researcher concluded that mobile deposits and withdrawals have a significant effect on financial performance of banks in Uganda. This implies that improvements in mobile deposits and withdrawals such as reduced transaction costs, reduced process of transaction shall have a positive significant effect on financial performance of banks in Uganda.

5.4 Research recommendations

The research recommendations were organized according to the study objectives basing on the conclusions in the previous sections.

5.4.1. To establish the effect of mobile financial information services on financial performance of banks in Uganda

Leaders in banks should provide more relevant and easy to understand mobile financial information for users.

Regulators of banks, especially Bank of Uganda should standardize the kinds of mobile financial information that banks provide so that every bank provides the most needed financial information.

5.4.2. To assess the effect of mobile transfers and receipts on financial performance of banks in Uganda

Banks should introduce shortened and user friendly processes of mobile transfer and receipt transactions for its customers.

Financial policy regulators like the Parliament of Uganda should start stricter monitoring of banks to ensure they provide user friendly technology for transfer and receipt services.

5.4.3. To examine the effect of mobile deposits and withdrawals on financial performance of Banks in Uganda

The central bank should ensure that charges by banks for deposit and withdrawal services are regulated to avoid over charging the users.

Banks should clarify to clients and potential clients the kinds of charges on the deposit and withdrawal services provided for all transactions.

5.5 Others research areas

For more research in relation to this study, the fields below are recommended;

Influence of monetary policy on the performance of banks in Uganda. Government of Uganda through the Central Bank uses monetary policy tools like open market operations, central bank rate and cash reserve ratio for commercial banks with the objective of growing, improving business cycle, preventing financial crises and the real exchange rate. These have some impact on financial performance of commercial banks, thus recommending further research about the influence of the mentioned monetary policy tools on performance of banks in Uganda.

The role of Information and Communication Technology (ICT) on performance of banks in Uganda. ICT refers to the wide range of computerized technologies that enables communication and the electronic capturing, processing and transmission of information. These technologies

include products and services such as desktop computers, laptops, hand-held devices, software, network security etc. (Ashrafi and Murtaza, 2008). With the use of ICT, business can interact more efficiently and enables digital networking. The effects of ICT are seen in improvements in productivity and economic growth at the level of the firm thus recommending for further research about the role of ICT on performance of banks in Uganda.

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APPENDICES

**Annex I: Questionnaires
MOBILE BANKING AND FINANCIAL PERFORMANCE OF CENTENARY BANK IN**

UGANDA

SECTION A:

Personal Data (circle or tick only as appropriate to you)

1. Gender: a) Male b) Female
2. Age: a) Below 30 years b) Above 30 years
3. Relationship with Centenary Bank:
a) Staff b) Client
4. Years of relationship with Centenary Bank:
a) 1-3 years b) 4-6 years c) 7 years and above
5. Education Level:
a) Never studied b) Primary c) Secondary d) University

SECTION B:

Totally Disagree	Disagree	Not Sure	Agree	Totally Agree
1	2	3	4	5

Using the scale above please tick the box you think is most appropriate

**MOBILE FINANCIAL INFORMATION SERVICES AND FINANCIAL
PERFORMANCE**

S/N	Parameters	1	2	3	4	5
1	Mobile financial information services are easily accessible to clients					
2	Mobile financial information services are accessible all the day and all night					
3	Mobile financial information services are more accessible compared to information services inside banks					

4	Mobile financial information is easily understood by clients					
5	Mobile financial information services is affordable by clients					
6	Mobile financial information services are prompt					
7	Mobile financial information provided is relevant to clients					
8	Mobile financial information services provide feedback to clients who need it					

MOBILE TRANSFERS / RECEIPTS AND FINANCIAL PERFORMANCE

S/N	Parameters	1	2	3	4	5
9	Mobile transfers and receipts are preferred by bank clients					
10	Mobile transfers and receipts can easily be done by clients without help					
11	Mobile transfers and receipts have attracted clients to banks					
12	Mobile transfers and receipts are considered convenient for clients					
13	Mobile transfers and receipts are affordable to clients					
14	Mobile transfers and receipts are considered safe and secure					
15	Mobile transfers and receipts save time					

MOBILE DEPOSITS / WITHDRAWALS AND FINANCIAL PERFORMANCE

S/N	Parameters	1	2	3	4	5
16	Mobile deposits and withdrawals are preferred by bank clients					
17	Mobile deposits and withdrawals can easily be done by clients without help					

18	Mobile deposits and withdrawals have attracted clients to banks					
19	Mobile deposits and withdrawals are considered convenient for clients					
20	Mobile deposits and withdrawals are affordable to clients					
21	Mobile deposits and withdrawals are considered safe and secure					
22	Mobile deposits and withdrawals save time					

FINANCIAL PERFORMANCE OF CENTENARY BANK

S/N	Parameters	1	2	3	4	5
23	Mobile banking has led to increased financial performance of Centenary Bank					
24	Mobile banking has led to increased return on assets in Centenary Bank					
25	Mobile banking has led to increased return on equity in Centenary Bank					
26	Mobile banking has led to increased liquidity in Centenary Bank					

Annex II: Interview guide

1. About mobile financial information services offered
2. About mobile transfers and receipts services provided
3. About mobile deposits and withdrawal services provided

Annex III: Documentary review checklist

1. Centenary Bank Annual business plan 2016/2017
2. Centenary Bank internal audit report 2016
3. Centenary Bank Board Meeting Minutes 2016
4. Centenary Bank annual reports 2015/2016
5. Centenary Bank financial statements 2016

Annex IV: Krejcie & Morgan's (1970) table for determining sample size for finite population

N= Population, S= Sample size

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2,800	338
15	14	110	86	290	165	850	265	3,000	341
20	19	120	92	300	169	900	269	3,500	346
25	24	130	97	320	175	950	274	4,000	351
30	28	140	103	340	181	1,000	278	4,500	354
35	32	150	108	360	186	1,100	285	5,000	357
40	36	160	113	380	191	1,200	291	6,000	361
45	40	170	118	400	196	1,300	297	7,000	364
50	44	180	123	400	201	1,400	302	8,000	367
55	48	190	127	440	205	1,500	306	9,000	368
60	52	200	132	460	210	1,600	310	10,000	370
65	56	210	136	480	214	1,700	313	15,000	375
70	59	220	140	500	217	1,800	317	20,000	377
75	63	230	144	550	226	1,900	320	30,000	379
80	66	240	148	600	234	2,000	322	40,000	380
85	70	250	152	650	242	2,100	327	50,000	381
90	73	260	155	700	248	2,200	331	75,000	382
95	76	270	159	750	254	2,300	335	100,000	384

Source: Amin, 2005

Annex V: Introductory Letter

Annex VI: Field Research Letter

Annex VII: Anti-Plagiarism Report