THE EFFECTS OF ELECTRONIC BANKING (E-BANKING)
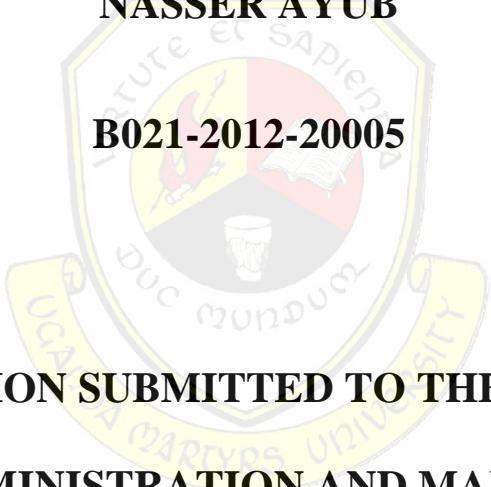
ON BANKS PERFORMANCE

CASE STUDY OF CENTENURY BANK, RUBAGA BRANCH

BY

NASSER AYUB

B021-2012-20005

A DISSERTATION SUBMITTED TO THE FACULTY OF

BUSINESS ADMINISTRATION AND MANAGEMENT IN

PARTIAL FULFILLMENT FOR THE AWARD OF BACHELOR

DEGREE IN BUSINESS ADMINSTRATION AND

MANAGEMENT OF UGANDA MARTYRS UNIVERSITY

APRIL 2015

DEDICATION

I would like to dedicate this report to my parents, brother and my close friends. Last but not least, I dedicate this report to my university supervisor and finally to ALLAH.

ACKNOWLEDGEMENT

My gratitude goes to my lecturers at Uganda Martyrs University, my course mates; and my supervisor who laid the foundation for this research through encouragement, guidance and supervision that enabled me to complete this report.

Special thanks also go to the employees of Centenary Bank, Rubaga Branch for their special and selfless help during my field research.

LIST OF ACRONYMS

ABM   Automated Bank Machine

ATM   Automated Teller Machine

E-Banking   Electronic Banking

ES   Efficiency Structure

EU   European Union

G2B   Government to Banks

I.T   Information Technology

ICT   Information Communication Technology

KCB   Kenya Commercial Bank

LAN   Local Area Network

MAN   Metropolitan Area Network

M-Banking   Mobile Banking

MTN   Mobile Telecommunication Network

NCR   National Cash Register

PIN   Personal Identification Number

ROE   Return on Equity

SGBN   Moribound Societe Generale

SME   Small Medium Enterprises

SMS	Short Messages
UK	United Kingdom
US	United States of America
WAN	Wider Area Network

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

ABSTRACT

The study was aimed at finding the effects of electronic banking on bank performance. It was conducted from Centenary bank, Rubaga Branch and it was where the 10 respondents were randomly selected.

The study was guided by three objectives that is to say; to find analysis of the effects of smart card system on bank performance; to examine the effect mobile money services have on the financial performance of banks and to investigate the impact of internet banking on the bank performance

The study was conducted in two phases that is to say investigating and analyzing impact of electronic banking and bank performance; and the second was interpretation of the findings. The research design was quantitative in nature and the instrument used to obtain data was the questionnaire.

Data was analyzed and presented using tables and SPSSv16 (Software Package for Social Scientist). Most of the respondents stated that electronic banking smart card system, mobile banking and online greatly affect the performance of banks.

The performance is crucial issue not only for the survival of a company, but also for the growth and development of the whole economy.

The researcher sided with the findings of the study and concluded that electronic banking greatly affected the performance of banks because of the positive impacts it offers to meet both the customers' needs and banks' quest to stay competitive in the banking industry.

Therefore, the researcher recommends that there should be sensitisation of bank customers on how to protect their smart cards, personal identification numbers to reduce on the cases of ATM frauds and banks should encourage more of their customers to perform more of mobile banking and online banking to reduce the chances of theft and overcrowding in the banking hall.

CHAPTER ONE
BACKGROUND OF STUDY

1.0 Introduction

This chapter will focus on the background, problem statement, and objective of the study, research questions and scope of the study

1.1 Background of study

Electronic banking is the conduct of banking business electronically which involves the use of information communication technology to drive banking business for immediate and future goals. Daniel (1999) cited in Alhajri, (2008) describes e-banking as the provision of banking services to customers through internet technology.

According to Basel Committee on banking supervision, (2003) electronic banking is defined to include the provision of retail and small value banking products and services through electronic channels as well as a large value electronic payment and other wholesale banking services delivered electronically Though, Alsmadi and Alwabel, (2011) expressed that the definition of electronic banking varies among researchers partially because electronic banking refers to several types of services through which bank customers can request information and carry out banking services.

1.1.1 Global background of electronic banking

The introduction of Universal banking practice and the adoption of electronic banking by Deposit Money banks have offered increased services to customers with attendant increase in customer risk exposure. The changing environment of bank management has impacted much on the number of services and risk which banks face.

However, the revolution in the banking industry started with the advent of electronic devices to assist in the discharge of quality services to bank customers. The introduction of these electronic devices has increased competition in the industry which has gone a long way to reducing customers' waiting time for banking transactions. This innovation is brought in by the use of computers and other networking gadgets. In Nigeria, the networking started with the LAN (Local Area Network), MAN (Metropolitan Area Network) and subsequently the WAN (Wider Area Network) which help banks in coordinating their activities to achieve high levels of efficiency and effective performance.

Generally, the automation of banks makes transaction and data processing very easily accessible for quick management decision making. This led to another level of benefit which ushered in what is today referred to as electronic banking. Electronic banking helps the banks to speed up their retail and wholesale banking services. The banking industry believes that by adopting the new technology e-banking, the banks will be able to improve customer service level and tie their customers closer to the bank. According to Simpson, (2002) what actually motivate the investment in electronic banking are largely the prospects of minimizing operating costs and maximizing operating revenue.

Nevertheless, the adoption of electronic banking (e-banking) has brought major challenges to the banking industry in terms of risk exposure. The volume of deposits has increased as well as the fraudulent practices experienced by banks since its adoption in the economy. This is the reason why Ovia, (2001) posits that banking scene has witnessed phenomenal changes, especially in the mid 1980s and these have manifested in the enormous volume and complexity in product or service delivery, financial liberalization and business process re-engineering. The effectiveness of deploying information Technology in banks therefore cannot be put to doubt. The fact remains that the reality of using IT in banks is necessitated by the huge amount of information being

handled by these banks on a daily basis. On the customers' side, cash is withdrawn or deposited, cheques are deposited or cleared, statement of accounts are provided, money transfers etc. At the same time, banks need up-to-date information on accounts, credit facilities and recovery, interest, deposits, charges, income, profitability indices and other control of financial information.

In recent times, electronic banking has spread rapidly all over the globe. According to Onay e-t al, (2008) the increased adoption and penetration of internet has recently redefined the play ground for retail banks. In East Africa, all banks are making greater use of e-banking facilities to provide better services in order to excel in the competitive banking industry. The spread of e-banking has also greatly benefited the ordinary customer in general and corporate world in particular. Consequently, electronic banking (e-banking) has been the greatest challenge to the banking industry going by the sophistication and volume of fraudulent practices associated with this form of banking.

1.1.2 National background of electronic banking

In the past few years, banking activities in Uganda have increasingly depended on the deployment of information and communications technology. Customers' insatiable appetite for efficient services has compelled financial institutions to fast track to a more radical transformation of their business systems and models for embracing e-banking (Munaye, 2009).

E-banking appeal as well its product development is rapidly growing, and the global acceptance has strongly encouraged its penetration, Malhotra (210). The success of e-banking is contingent upon reliable and adequate data communication infrastructure. Therefore, it is efficient for banks to invest in online transactions through the creation of networks. However, there has been a mix up between electronic banking and internet banking. The fact is that internet banking is subsumed in electronic banking.

Banking has come a long way from the time of ledger cards and other manual filing systems. Most banks today have electronic systems to handle their daily voluminous tasks of information retrieval, storage and processing (Munaye, 2009). Irrespective of whether they are automated or not, banks by their nature are continually involved in all forms of information management on a continuous basis.

The computer is of course an established tool for achieving a competitive edge and optimal resource allocation (Onay, 2008). The most obvious application of computers in the banking industry is in the area of customer services, information management and control. Computerized banks respond immediately to requests from customers for statement of accounts, balance and account activity enquiries (Olweny, 2011). With signature and image verification systems, the time taken to offer typical cashier services like receiving and paying out of cash is minimized. Also with the advent of automated Teller machines (ATM), banks are able to serve customers outside the banking hall all round the clock, Muhammad (2009).

1.1.3 Local background of electronic banking at centenary bank

Centenary Bank is a commercial bank established in 1995 that is now in its eighteenth year of operation and has a branch network of up to over 40 branches and employs more five hundred staff in Uganda. Centenary Bank as of December 2012 was the second largest commercial bank (out of twenty six) in Uganda. The bank is the largest indigenous Uganda Commercial bank as of October 2013; its customer base was estimated at about 600,000 or more. Centenary Bank offers the entire suite of Banking & Financial services. Products which include Personal Banking, Small Medium Enterprises (SME) Banking, Corporate/Business Banking, Agricultural Finance, International Money Transfers, VISA services, Government to Bank (G2B) services, Internet Banking (Personal & Corporate) and Securities & Brokerage services (www.centenary.co.ug).

1.2 Problem statement

The revolution in the banking industry occasioned by the adoption of electronic banking has compelled banks to invest more in assets to meet up with competitive positioning, Ovia, (2001). Since much earnings have been retained to meet up this obligation, shareholders have been denied dividend with the expectation that future dividend will be fatter.

The banking software such as smart card systems, mobile banking and internet banking is usually improved on short term basis causing huge financial costs to the banks, Centenary Bank Annual Report (2012). To the capital providers, they expect that there would be tremendous returns accruing from the project if information driven technology (e-banking) like smart card system, mobile banking and internal banking is adopted. Going through annual financial reports of banks in recent years, they reveal that dividend returns are dwindling while other performance indicators like return on assets, return on equity and net interest margin seem to be weak contrary to the expectation of the shareholders or investors (Olweny et'al, 2011). Generally, there appears not to be improvement on banks' returns on equity and assets as speculated; therefore, this study tries to fill the gap and to complement previous literature available on electronic banking in Uganda. Although, there has been vast study on the benefits the banks customers will derive on adoption of electronic banking like use of smart card system, mobile banking and online or internet banking, there is however less benefits in the area of returns on assets and returns on equity to investors. This study therefore investigates the pattern of returns on equity and assets of banks in this era of e-banking with the aid of smartcard systems, mobile banking and internet banking.

1.3 Objectives

1.3.1 Main objective

The main purpose of this is to investigate the impact of electronic banking on bank's performance in Uganda today.

1.3.2 Specific objectives

This study will basically use four specific objectives as listed below;

i) To find analysis of the effects of smart card system on bank performance.

ii) To examine the effect mobile money services have on the financial performance of banks.

iii) To investigate the impact of internet banking on the bank performance

1.4 Research questions

The study will further be governed by the following research questions;

i) What are the effects of smart card system on bank performance?

ii) Examine the effect mobile money services have on the financial performance of banks.

iii) What are the impacts of internet banking on the bank performance?

1.5 Scope of the study

1.5.1 Contextual scope

The study is about the impact electronic banking has in improving the banks' performance in Uganda, this will cover the areas that concerns the use of smartcard system, mobile banking and internet banking with focus being put on how the affect the performance of banks especially while looking the benefits in terms of return on assets, return on equity and net interest rate; and will be governed by the following objectives; to find out the types and delivery channels of electronic banking; to examine the benefits associated with electronic banking; to investigate the electronic banking risks and control measure; and to find out the impacts of electronic banking on bank performance with the case study being of Centenary Bank, Rubaga branch

1.5.2 Geographical scope

Centenary Bank's Rubaga branch which is the case study and is located next to Rubaga Catholic church in Rubaga south constituency Kampala district.

1.5.3 Time scope

The study will cover the period between February-April 2015.

1.6 Justification of the study

The researcher wants to show the people in the business environment the various advantages that are brought about by the using e-banking in their banking industries. Many of the businesses here are still procuring logistics the old fashioned way which takes more time and money.

The researcher wants to show on the level of technological development in the business organisations. Many businesses are now developing and upgrading their systems to use e-procurement which will ease the work load.

1.7 Significance of the study

The researcher fills that the research proposal will be used by other students as reference text when expanding their knowledge on e-banking. Therefore, it will be a guideline for future researchers which will boost the development of longitudinal studies.

This research will boost the researcher's knowledge of e-banking. The researcher will view different literature which will enable a greater understanding of information and communication Technology.

1.8 Anticipated limitations and solution

The researcher anticipated problem of limited and scanty literature: some required literature is scanty whereas other literature is not up to date economic levels. This will be overcome by getting information from internet.

The researcher anticipates spending a lot of money in printing of relevant data and searching for it on the internet. This however, will be solving by seeking for financial resources from the parents.

The researcher anticipates to get a challenge of resistance from some respondents who might not be willing to give information but this will be overcome the researcher obtaining an introductory letter from the university to prove that actually the researcher is a student and he is conducting the research strictly for academic purposes only.

1.9 Conceptual frame work

This shows the proportions of the variables in the topic of study that is to say; e-banking as the independent variable and bank's performance as the dependent variable as below;

Figure 1: Shows the conceptual frame work

```
┌──────────────────────────────────────────────────────────────────────────┐
│     Independent variable                         Dependent variable        │
│   ┌─────────────────────┐                 ┌──────────────────────────┐    │
│   │      E-banking      │                 │     Bank performance     │    │
│   │                     │                 │       (indicators)       │    │
│   │   Smart card system │                 │                          │    │
│   │                     │════════════════▶│    Return on Asset       │    │
│   │ Mobile money banking│                 │    Return on Equity      │    │
│   │                     │                 │                          │    │
│   │   Internet banking  │                 │    Net Interest Margin   │    │
│   └─────────────────────┘      ▲          └──────────────────────────┘    │
│                      ┌─────────┴────────┐                                  │
│                      │Moderating variable│                                 │
│                      │                  │                                  │
│                      │ Access to internet│                                 │
│                      │                  │                                  │
│                      │Bank of Uganda policy│                               │
│                      │                  │                                  │
│                      │  Public banking  │                                  │
│                      │technology literacy│                                 │
│                      │                  │                                  │
│                      │ Technology policy│                                  │
│                      └──────────────────┘                                  │
└──────────────────────────────────────────────────────────────────────────┘
```
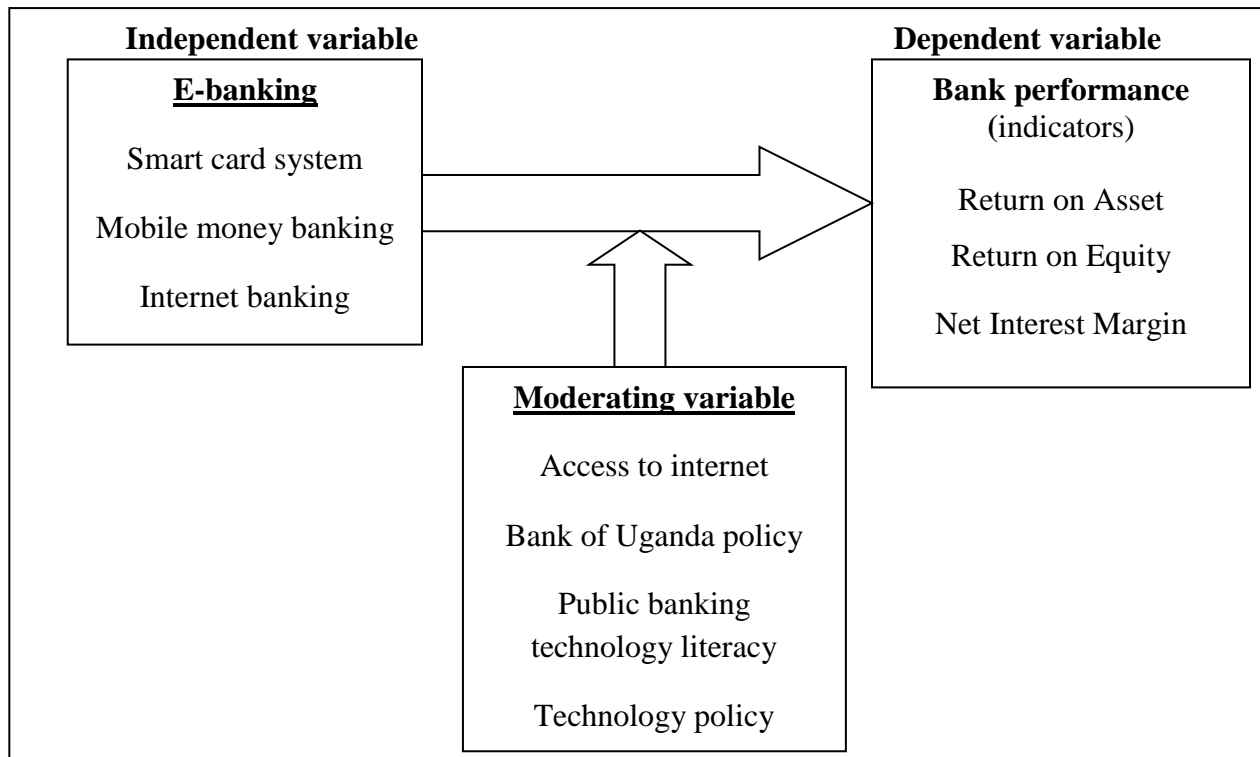
Source: Own conceptualization, 2015

Internet banking offers customers the possibility of enjoying banking services from the comfort of their homes and offices; the smart card system makes it easy for bank customers to have access to cash, carry out transfers and make enquiries about their accounts without visiting the banking hall. This involves the conduct of business through the use of mobile phones or fixed wireless phones Instructions are passed via voice or short messages (SMS) to the computer, all these aimed at improving and increasing the Return on Asset, Return on Equity and Net Interest Margin eventually leading to positive improvement in bank's performance; however, all these is made possible through access to internet services, bank of Uganda policy, technology policy and the rise in public technology literacy.

1.10 Definition of key terms

Smart card system

Is a pocket sixed card with embedded integrated circuits. They are made of plastic

Mobile money banking

This is a system that allows customers of a financial institution to conduct a number of financial transactions through a mobile device such as a mobile phone or tablet

Internet banking

This is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution.

Return on assets

This shows the percentage of how profitable a company's assets are in generating revenue.

Return on equity

This measures the rate of return for ownership interest of common stock owners.

Net interest margin

This is a fee paid by a borrower of assets to owner as a form of compensation for the use of the assets

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

In this chapter, the researcher will focus on the work of others and what they have written that is related to the researcher's topic or specific objectives. This chapter lays out what has been done before by other researchers on the problem under investigation and the ongoing debate in the area of study

2.1 Theoretical review

This section reviews theories that will guide the study. It consists of the theories governing the performance of commercial banks in their operations. In particular, the section looks at the financial intermediation theory which deals with the core function of financial institutions which in intermediating between the surplus and the deficit units for sustained economic development. It also reviews the modern economics theory which holds that for a business to make returns, it has to obey the modern economics. It also reviews that market power theory that holds that states that increased external market forces results into Market Power.

2.1.1 Financial Intermediation Theory

Financial intermediation is a process which involves surplus units depositing funds with financial institutions who then lend to deficit units. Bisignano (1992) identified that financial intermediaries can be distinguished by four criteria. First, their main categories of liabilities or deposits are specified for a fixed sum which is not related to the performance of a portfolio. Second, the deposits are typically short-term and of a much shorter term than their assets. Third, a high proportion of their liabilities are chequeable which can be withdrawn on demand and fourthly, their liabilities and assets are largely not transferable. The most important contribution of intermediaries is a steady flow of funds from surplus to deficit units.

Diamond and Dybvig (1983) analyses the provision of liquidity that is transformation of illiquid assets into liquid liabilities by banks. In their model identical investors or depositors are risk averse and uncertain about the timing of their future consumption need without an intermediary all investors are locked into illiquid long term investments that yield high pay offs to those who consume later.

According to Scholtens and van Wensveen (2003), the role of the financial intermediary is essentially seen as that of creating specialized financial commodities. These are created whenever an intermediary finds that it can sell them for prices which are expected to cover all costs of their production, both direct costs and opportunity costs. Financial intermediaries exist due to market imperfections. As such, in a 'perfect' market situation, with no transaction or information costs, financial intermediaries would not exist.

Numerous markets are characterized by informational differences between buyers and sellers. In financial markets, information asymmetries are particularly pronounced. Borrowers typically know their collateral, industriousness, and moral integrity better than do lenders. On the other hand, entrepreneurs possess inside information about their own projects for which they seek financing (Leland and Pyle, 1977). Moral hazard hampers the transfer of information between market participants, which is an important factor for projects of good quality to be financed.

2.1.2 Modern Economics Theory

Modern economics has gone far in discovering the various pathways through which millions of expectations of, and decisions by, individuals can give rise to emergent features of communities and societies like rate of inflation, productivity gains, and level of national income, prices, and stocks of various types of capital, cultural values, and social norms. Two factors make economic theory particularly difficult (Sohail and Shanmugham, 2003). First, individual decisions at any moment are themselves influenced by these emergent features, by past decisions learning,

practice, and habit, and by future expectations. Second, the emergent features that can be well handled by existing economic theory and policy concern only fast-moving variables. The more slowly emergent properties that affect attitudes, culture, and institutional arrangements are recognized, but are poorly incorporated.

According to Tiwari, Buse and Herstatt (2006), economists know that success in achieving financial return from fast dynamics leads to slowly emergent, nearly hidden, changes in deeper and slower structures, changes that can ultimately trigger sudden crisis and surprise. But the complexities that arise are such that most modern economists are frustrated in their attempts to understand the interactions between fast- and slow-moving emergent features.

2.1.3 Market Power and Efficiency Structure Theories

The MP theory states that increased external market forces results into market power which is defined as the capacity of an organisation to increase its prices without losing all its clients. In banks, as in other business organisations, Market Power can take two forms: differentiation of products and services, or ease of search. There is a trade-off between differentiation and loss of legitimacy which is optimized at a strategic balance point (Shepherd, 1986). Likewise, there is a trade-off between ease of search and security that must be taken into account. This theory categorizes Information Communication and Technology (ICT) investments into Market-Power driven initiatives profit. Moreover, the hypothesis suggest that only firms with large market share and well differentiated portfolio can win their competitors and earn monopolistic profit.

Efficiency structure theory (ES) suggests that enhanced managerial and scale efficiency leads to higher concentration and then to higher profitability. According to Olweny and Shipho (2011) balanced portfolio theory also added additional dimension into the study of bank performance. It states that the portfolio composition of the bank, its profit and the return to the shareholders is the result of the decisions made by the management and the overall policy decisions.

From the above theories, it is possible to conclude that bank performance is influenced by both internal and external factors. The internal factors include bank size, capital, management efficiency and risk management capacity. The same scholars contend that the major external factors that influence bank performance are macroeconomic variables such as interest rate, inflation, economic growth and other factors like ownership.

2.2 LITERATURE REVIEW

This section involves the review of literature of other authors so as to give a deeper insight on the topic of e-banking and performance of banks.

2.2.1 Smart card system or ATM and bank performance

Smartcard banking or ATM system: This is the conduct of banking transactions through the use of electronic cards (Value Card, ATM Card, Debit Card, Credit Card etc.). The smart card system makes it easy for bank customers to have access to cash, carry out transfers and make enquiries about their accounts without visiting the banking hall. Smart card facility is usually mounted at strategic places in the cities such as supermarkets, Hotels, Transport terminals, shopping malls.

In today's business world, globalization and international experience has become critically important. Banking industries can no longer get away with operating loosely connected groups of businesses that happen to be located around the world, but must strategically integrate their activities. Mitroff (2003) stated that, only the banks, businesses, industries, and whole by societies that clearly understand the new rules of doing business in a world economy will prosper. Global competition in the banking sectors has forced management and executives to recognize that they must think differently about banking activities and management. As a global banking, the only way to succeed is to develop an effective global banking management system

with personnel capable of designing and implementing transnational business strategies through the use of modern technology such as automated teller machines (ATMs).

Technology has tremendously stimulated expansion of the banking networks and range of the offered services during recent years. All banking services, such as electronic payments, loans, deposits, or securities have become heavily dependable on information and telecommunication technology. This is the main reason why banks are the biggest users of modern technology equipment. Due to the complexity of banking services, every opportunity to speed up their performance or to make them more accessible for customers is very well welcomed by banks. However with improvements of the quality of services, the important question appears if this process can provide the economic values for banks?

Unfortunately not every increase in the customers' satisfaction transfers into the higher bank profits, especially in the case of very expensive investments in technology like automated teller machines (ATMs).

Although every banking operation requires some technology applications, researchers vary on the subject of the relationship between the level of employed automated teller machines, and the value of the banking efficiency increase. All researchers agree on the importance of ATMs for the further developments of the banking industry, but some of them have found lack of proportionality between the increased in the scale of technology utilization and the increase in banks profitability (Thakor et' al, 2003).

Automated Teller Machine (ATM), also known as a automated banking machine (ABM) or Cash Machine and by several other names, is a computerised telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. On most modern ATMs, the customer is

identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip, which contains a unique card number and some security information such as an expiration date or CVVC (CVV). Authentication is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawals, credit card cash advances, and check their account balances as well as purchase prepaid cell phone credit.

Ogbuji, et al. [2012] postulate that ATM allows a bank customer to conduct his/her banking transactions from almost every other ATM machine in the world. However, the spread of the machines has been generating a lot of heat, as customers face a splurge of frustration in using it; either the machines will not dispense cash, or debit transactions when cash is not dispensed or cards get stuck in them.

Dapo [2008] indicate that the proliferation of the machines is giving more concern. As with every other technological breakthrough the ATMs have generated astronomical challenges and problems for the beneficiaries of financial services in Nigeria. Most users of ATM have encountered the problem of Scam. Apart from epileptic services rendered by the machines, faceless crooks steal from the accounts of hundred of bank customers via the ATM technology. The fraudsters perpetrate this financial crime by stealing the personal identification number, PIN, a special secret code that grants access to the usage of the cards, and consequently, getting hold of the funds of the susceptible ATM users.

The relationship between banking efficiency and the use of ATM (Automated Teller Machine) is a complex one. This is because the overall levels of efficiency and productivity do influence the organization overall success [Paul, 1998]. This explains why most modern banking sectors develop ways of increasing organization and workers' efficiency. Some of these ways include goal setting, job enrichment, adoption information technology, globalization, training and

development. All these represent several practical ways of increasing banking sector's performance, which could also be a reflection of institutions efficiency.

The achievements, goals, profit and attainment of banking sector depends largely on the proper management and technology such as ATM adopted in the banking activities. It's upon this basis that the level of efficiency, effectiveness and performance of banking sector and other organization is measured. The impact of ATM on the performance of banking institutions has been without some challenges. There have been near lack of empirical research efforts on the effect of ATM on performance of the providers, using FCMB as case study. Arguably, the most revolutionary electronic innovation in this country has been the ATM. In Nigeria, banks with ATM offerings have them networked and this has increased their utility to customers. The ATM has been the most successful delivery medium for consumer banking in this county.

The banking system with all its complexities, challenges and opportunities touches virtually all aspects of the daily lives. Using a credit card to make a purchase, writing a personal or business check, paying bills and moving funds online or accessing funds through an automatic teller machine (ATM) are just a few examples of how people may participate daily in the banking system. Even the micro-finance banks provides banking-related services such as loans and check cashing in communities where those services are either not readily available or where consumers perceive the micro finance bank to be their best or only-banking alternative.

The techniques of managing of banking industries through the use of Automated Teller Machine (ATM) towards improving banking industry performance is a basket full where every financial institution is expected to pick that which is applicable to it. According to the Fannie Mae Foundation, automated teller machine as used in banking sector serve approximately 420 million transactions annually for a total of $3.3 billion in gross annual revenues. In this article, we will address a number of topics including the types of services provided by full service banks,

technological changes and the use and important of automated teller machine and fringe banking services.

ATMs are known by various other names including automatic banking machine (or automated banking machine particularly in the United States) (ABM), Automated Transaction Machine, Cash point (particularly in the United Kingdom), Money Machine, Bank Machine, Cash Machine, Hole-In-The-Wall, Auto teller (after the Bank of Scotland's usage), Cash line Machine (after the Royal Bank of Scotland's usage), MAC Machine (in the Philadelphia area), Bank mat (in various countries particularly in Europe and including Russia), Multibank (after a registered trade mark, in Portugal), Mini-bank in Norway, Geld Automat in Belgium and the Netherlands, and All Time Money in India.

Rose [1999] cited by Abor, describes ATMs as follows: "an ATM combines a computer terminal, record-keeping system and cash vault in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized records 24 hours a day". Once access is gained, it offers several retail banking services to customers. They are mostly located outside of banks, and are also found at airports, malls, and places far away from the home bank of customers. They were introduced first to function as cash dispensing machines.

However, due to advancements in technology, ATMs are able to provide a wide range of services, such as making deposits, funds transfer between two or accounts and bill payments. Banks tend to utilize this electronic banking device, as all others for competitive advantage.

Using an ATM card, a debit card, or a credit card, bank patrons can electronically access their accounts and withdraw or deposit funds, make payments, or check balances. ATMs have

eliminated the need to enter a bank for basic transactions and allow access to accounts at machines throughout the United States.

Financial institutions started charging fees to use their ATMs in the mid-1990s, making the transactions very profitable for the host banks. The use of ATMs has cut service staff in traditional banks, impacting employment in the industry. As many machines are now commercially owned and leased in public venues, a technical industry for cresting, leasing, and maintaining the machines has developed [Rose, 1999].

Ogbuji, C. N. et al. (2012), observed the Automated Teller Machines (ATMs) is one of existing replacements of the cascading labour-intensive transaction system effected through what is popularly referred to as paper-based payment instruments. An automatic teller machine allows a bank customer to conduct his/her banking transactions from almost every other ATM machine in the world. The ATM, therefore, performs the traditional functions of bank cashiers and other counter staff. It is electronically operated and as such response to a request by a customer is done instantly.

The combined services of both the Automated and human tellers imply more productivity for the bank during banking hours. Also, as it saves customers time in service delivery as alternative to queuing in bank halls, customers can invest such time saved into other productive activities. ATMs are a cost-efficient way of yielding higher productivity as they achieve higher productivity per period of time than human tellers (an average of about 6,400 transactions per month for ATMs compared to 4,300 for human tellers Rose (1999).

Furthermore, as the ATMs continue when human tellers stop, there is continual productivity for the banks even after banking hours. Automated Teller Machine (ATM) machine works on the ATM cards, as when a user inserts an ATM card into the card reader component of the ATM

machine, then it prompt for the authentication through ATM PIN (Personal Identification Number (Aditi, 2013). Each and every ATM machine is programmed with a unique TID (Terminal ID number) assigned to identify the ATM machine in different location.

The ATM transactions are done through over the phone line via internet connection (lease line). All the ATM machines are globally interconnected with each other with the financial institutions through the global ATM network like Master Card, Maestro, Cirrus, Visa, etc. In back side of every ATM card some logos are printed which refers to the ATM network. So the ATM machine connects to ATM network through processing centre and the card holder's bank. After the authorization step, if there is sufficient fund in the ATM card holder's account, then the transaction is completed successfully.

According to Ugwu [2008], ATMs are set up to provide 24 hour services to bank customers, who cannot expect to be able to transact with banks in the same period of time. ATM technology allows customers carry out the above-mentioned transactions using an ATM card, which could be a debit or a credit card.

An ATM machine authenticates the card by reading and verifying the magnetic strip, card number, expiration date, and an already provided or pre-selected PIN number. Like with most technological advances, there is always a flaw which criminal-minded individuals identify and exploit to perpetuate fraud. Technology is being constantly evolved so that ATM transactions can be an enjoyable experience to its customers, especially if one has to pay for goods or services in cash by 1.00am in the morning and has no money.

The Automated Teller Machine (ATM) was introduced into Nigeria market in 1989, as a matter of fact the very first Automated Teller Machine (ATM) in Nigeria was first installed by National Cash Registers (NCR) for the defunct Society General Bank in 1987.

Adeoti[2011] disclosed that in Nigeria, the first bank to introduce ATM was the Moribund Societe Generale (SGBN) in 1990. The trade name for SGBN's ATM was "Cash Point 24". One of the first generation banks then, First Bank Plc came on stream with their own ATM in December 1991, a year behind SGBN. They also gave a trade name "FIRST CASH" to their ATM. While that of SGBN was the drive-in-system that of the First Bank ATM was through-the-wall. Access to ATM is through the use of Personal Identification Number (PIN) and a plastic card that contains magnetic strips with which the customer is identified. Banks usually hand over the PIN to the customer personally and the customer is usually instructed not to disclose the number to a third party. ATM card is about the size of a normal credit card and apart from the need to ensure its safety, its surface strips could be mutilated which may make the machine to reject it even though the PIN number is entered correctly.

Automated Teller Machine (ATM) are located in banks and customers convenience areas. This allows customers to drive up and complete financial transaction without ever leaving the safety of their belongings. Automated Teller Machine (ATM) are interconnected to allow anyone with a bank card, debit card, or credit card to have access anywhere in the world because each station is connected to an inter-bank network such as PULSE, PLUS, CIRRUS and LINK to mention but few.

Other functions which the machines are capable of performing include: Printing of statements, Transfer of funds, Payment of bills, Cash advances and Display of promotional messages (Adeoti, [2011]). Impact of Automated Teller Machine on Banking Performance Bank customers in Nigerian have a collective sign-of-relief when the Automated Teller Machine (ATM) was introduced as an instrument to aid banking operations in 2006. The introduction of the ATM by financial institutions changed the face of banking in Nigeria but with some inherent challenges.

According to [Adeoti, 2011] in his paper, Automated Teller Machine and Electronic Payment System in Nigeria, "ATM played a key role in any retail banks' efforts to use technology as a quality weapon to defeat competition". Automated Teller Machine provides a major role in offering convenience, speedy and round the clock services.

Adeoti (2011), stressed that the use of ATM is safe and convenient. The ATM has made settlement of bills in the Nigerian banking system easy and saver. These benefits have resulted into phenomena growth in number of ATMs in Nigeria. The growth of ATMs in Nigerian banks has risen from 83% in 2006 to 289% in 2007 (Adeoti, 2011). Almost all banks introduced the ATM in their bank premises in 2007. Another great impact of automated teller machine and information Technology is that it contributes immensely to the promotion of marketing banking services. With the aid of Information Technology, funds can be moved one account to another at the push of a button, essential information relating to a transaction could be made available thousands of miles away within minutes.

Today, banks are developing and deployed better – personalized services through the use of automated teller machine. For example in Nigeria today, banks are providing customers with "Access Terminals" with which they (customers) can access their balances and view or print movement in their accounts. These are special services, enjoyed by special, customers, which has been impossible hitherto. They identified the advantages of ATM to the bank as follow: investment opportunities, reduction in costs (i.e. cost savings), effective service delivery, branding of shared network, satisfaction of customers and competitiveness etc. Moutinho [2000] established that ATM facility resulted in speed of transactions and saved time for customers. Other value added services of ATM include college fee payment, online collection of application fee, mobile top up, religion/trust Donation, bill settlement, insurance premium payment, and funds transfer card to account, amongst others. Increased ATM usage is also helped by the fact

that customers have now the flexibility of using ATMs of other banks, as most of the banks are part of major interbank networks. The interbank networks have brought together ATMs of several banks so that consumers would gain access to any of the participating banks' ATMs. Banks find it cheaper to pay membership fees to these networks as against setting up additional units in expensive-to-deploy areas. According to the Director, Switching and Processing, Inter-switch cited in Siyanbola (2013), 16 out of the 26 million ATM cards currently in Nigeria were inter-switch verve cards issued by over 16 commercial banks and well over 14 microfinance banks; while the remaining 10 million e-Payment cards are shared by MasterCard and Visa, two global payment card players. Many ATM vendors have devised specialised machines, embedded with biometric devices for authentication. Catering to the rural population, these machines have enabled them to interact with the machine in their local language and on a graphical user interface. The rural customer has seemed to accept this new medium. This has the potential to further widen the scope of ATM usage in the interior parts of the country. There is also interest towards white-label ATMs. Many companies are interested in this model, where the ownership of the ATM will not be with the banks but with third parties who deploy them and make money on fees charged on every transaction.

The concept is prevalent in the American continent. Wide acceptance of ATMs by consumers, introduction of biometric ATMs, and increasing scope of value-added ATM services will maintain growth in the industry. However, the advantages of safety and convenience of ATM has unfortunately been lessened by the frauds that are perpetrated by 'plastic money'. The increase in number of customers using ATM has also increased the propensity to fraudulent practices by the ATMs fraud perpetrators. Ihejiahi [2009] cited in [Siyanbola, 2013] expressed concern about the lack of cooperation among banks in the fight to stem the incidence of ATM related frauds now plaguing the industry. He expressed that the silence among banks on ATM frauds makes it difficult for banks to share vital information that will help curb the menace.

Muhammad [2009] postulates that the level of ATM fraud tend to have overshadowed the improvements which it has brought into the service delivery systems of Nigerian financial institutions. Similarly, [Moutinho, 2000] posit that despite the reality that the introduction of ATM terminals as a banking instrument was lauded by several customers as an alternative to the frustrating queues that characterized the country's banking hall, the situation today has changed drastically; it has become a source of worry to users and providers (banks) because the function it was meant to provide has been eroded seriously.

Obiano [2009] blamed the menace of ATM frauds on indiscriminate issue of ATM card without regard to the customer's literacy level. According to him one of the frequent causes of fraud is when customers are careless with their cards and pin numbers as well as their response to unsolicited e-mail and text messages to provide their card details. Omankhanleu [2009] opined that the current upsurge and nefarious activities of Automated Teller Machine (ATM) fraudster is threatening electronic payment system in the nation's banking sector with uses threatening massive dumping of the cards if the unwholesome act is not checked. As with any device containing objects of value, ATMs and the systems they depend on to function are the targets of fraud. Fraud against ATMs and people's attempts to use them takes several forms. These include: Shoulder Surfing; Lebanese Loop; Using Stolen Cards; Card Jamming; Use of Fake Cards; Duplicate ATMs; Card Swapping: Diversion; and ATM Burglary (A Report on Global ATM Frauds, 2007). Some if not all are found in the Nigerian banking environment which ultimately undermined the effectiveness of ATM facility. ATM fraud is now a recurrent decimal that speaks ill of the Nigerian financial system which ought to be checkmated.

2.2.2 Mobile banking and its effects on bank performance

Mobile banking: This involves the conduct of banking business through the use of mobile phones or fixed wireless phones. It takes the following steps: Instructions are passed via voice or short messages (SMS) to the computer; the computer decrypts the message and executes the instructions through a highly coded device. Then, the response is given back to the customer electronically.

The perceived low level of demand, low levels of bank of income, high bank fees, untailored products and services and limited geographical reach ensured only a small percentage of Kenyan population had access to banking services (Chogi, 2006). Banking was driven by income generated from fees for services rendered, interest earned deposits and interest received from loans. The move from traditional banking to agency banking and currently mobile banking has been beneficial to both the banks and customers as it reduces operating cost of the institution and its convenient and cheap as lesser fees are charged on mobile transaction.

Mobile banking is the provision or availment of banking services with the help of mobile devices. The advent of M-banking was fostered by competition from telecommunication industry mainly safaricom with their M-pesa services to their customers and Airtel with Airtel money services, MTN with MTN mobile money. These services facilitated the customers to deposit money into their account, transfer money to other user for instance sellers of goods and services, relatives and friend; this brought convenience.

The banking sector has had to adopt technological change to remain competitive. In search of competitive advantages in the technological financial service industry, banks have acknowledged value of differentiate themselves from others financial institution through new service distribution channels (Daniel 1999). Banks bureaucratic process of account opening cut out many rural poor as they could not qualify to own accounts. With competition banks had to

simplify the process and had to come up with innovative ways of doing so. Quite a number of banks have innovated various M-banking products for example Equity bank M-kesho, KCB Mobi-bank, Family bank Pesa pap and more recently M-swari of Commercial bank of Africa.

Mobile banking provides a number of advantages for both banks and customers. Mobile banking removes geographical limitation to customers and therefore bringing convenience. There is no time limitation i.e. banking maybe performed throughout the day and in any place. Mobile banking also provides efficient cash management and security of cash

Mobile banking offers millions of people a potential solution in emerging markets that have access to a cell phone, yet remain excluded from the financial mainstream. It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches (CGAP, 2006) as well as reducing the bank's own overheads and transaction- related costs. Mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market (Lee, Lee and Kim, 2007).

Simpson (2002) suggests that e-banking is driven largely by the prospects of operating costs minimization and operating revenues maximization. A comparison of online banking in developed and emerging markets reveal that in developed markets lower costs and higher revenues are more noticeable. While Sullivan (2000) finds no systematic evidence of a benefit of internet banking in US click and mortar banks, Furst, Lang, and Nolle. (2002) find that federally chartered US banks had higher ROE by using the click and-mortar business model. Furst et al (2002) also examine the determinants of internet banking adoption and observe that more profitable banks adopt internet banking after 1998 but yet they are not the first movers. Jayawardhena and Foley (2000) show that internet banking results in cost and efficiency gains for banks yet very few banks are using it and only a little more than half a million customers are online in U.K.

2.2.3 Internet banking and bank performance

Internet banking: This is a type of e-banking service where customers' instructions are taken and attended to through the internet. Internet banking offers customers the possibility of enjoying banking services from the comfort of their homes and offices. What this means is that customers can buy goods by placing orders from the net, instruct their banks to pay the vendor the invoice amount involved, and the products are delivered to the destination where the buyer wants.

Using information drawn from banks in Italy, Hasan et al. (2002) found that the Internet banking institutions were performing significantly better than the non-Internet groups. Additionally, the risk variables associated with the Internet group continued to be lower relative to the non-Internet group. The asset-liability variables revealed that on average the banks in this Internet group were larger and had significantly higher trading and investment activities and less dependent on retail deposits (both demand and saving deposits) relative to the non-Internet group. The only category where the Internet group showed a lower performance was the noninterest expense category. It found a significant and positive link between offering of Internet banking activities and banks' profitability and a negative but marginally significant association between the adoption of Internet banking and bank risk levels particularly due to increased diversification.

Hernando and Nieto (2005) examined the performance of multichannel banks in Spain between 1994 and 2002. The study found higher profitability for multichannel banks through increased commission income, increased brokerage fees and (eventual) reductions in staffing levels and concluded that the Internet channel was a complement to physical banking channels. In contrast to earlier studies, the multichannel banks in Spain relied more on typical banking business (lending, deposit taking and securities trading). The adoption of the Internet as a delivery channel had a positive impact on banks' profitability after one and a half years of adoption. It was

explained by the lower overhead expenses and in particular, staff and IT costs after the same period.

Sathye (2005) investigated the impact of the introduction of transactional Internet banking on performance and risk profile of major credit unions in Australia. Similar to the results of Sullivan (2000), the Internet banking variable didn't show a significant association with the performance as well as with operating risk variable. Thus, Internet banking didn't prove to be a performance enhancing tool in the context of major credit unions in Australia. It neither reduced nor enhanced risk profile.

DeYoung et al. (2006) observed the change in financial performance of Internet community banks in U.S. during 1999-2001. The results found that Internet adoption improved community banks' profitability, particularly through increased revenues from deposit service charges. Internet adoption was also associated with movements of deposits from checking accounts to money market deposit accounts, increased use of brokered deposits and higher average wage rates for bank employees. It found little evidence of changes in loan portfolio mix. The findings suggested that Internet adoption was associated with an economically and statistically significant improvement in bank profitability.

DeYoung (2001a, 2001b, 2001c and 2005) analyzed systematically the financial performance of pure-play Internet banks in U.S. The study found relatively lower profits at the Internet-only institutions than the branching banks, caused in part by high labour costs, low fee based revenues and difficulty in generating deposit funding. However, consistent with the standard Internet banking model, the results indicated that Internet-only banks tended to grow faster than traditional branching banks. Internet-only banks have access to deeper scale economies than branching banks and because of this; they are likely to become more financially competitive over time as they grow larger. Delgado et al. (2004 and 2006) found similar results for Internet-only

banks in the EU. Nevertheless, the magnitude of technology based scale economies found in Delgado et al. (2004 and 2006) was substantially larger than that estimated by DeYoung studies.

The evidence of the impact of the adoption of Internet as a delivery channel on financial performance is mixed at both sides of the Atlantic. Nevertheless, the latest studies seem to find a positive relationship with profitability. It can be argued that as the intensity and experience in the usage of Internet increases, the financial performance of multichannel banks is likely to improve. In Indian context, many publications throw light over the importance of Internet banking and also its prospects for the Indian banking industry. However these studies don't depict any empirical relationship between banks' profitability and Internet banking. The purpose of this paper is to study the same correlation applicable in Indian context. This paper also proposes and tests the existence of financial gaps between Internet banks and non-Internet banks in India.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This helped the researcher to put forth the information regarding the research design population of the study, sample size and sampling methods. It also discussed how the data was organized and the tabulation instrument that was used to collect the data. Singleton et al (1998). It also described the data collection methods and instruments, methods of processing and analysis of data that the researcher employed. This chapter also showed how reliability and validity of the instruments were guaranteed. . The chapter also captured the population and the sampling methods used during the study.

3.1 Research design.

The study adopted a descriptive research design. This is because descriptive research design helped the researcher make a systematic, empirical inquiring into the independent variable since the researcher did not have a direct control of, due to fact that their manifestation had already occurred and could not be manipulated like financial performance. Descriptive studies are concerned with the what, where and how of a phenomenon hence more placed to build a report on that phenomenon (Mugenda and Mugenda, 2003). Descriptive research design was more appropriate because the study sought to build a report about the impact of e-banking on the performance of banks.

3.2 Study area

The research was conducted the Centenary bank, Rubaga Branch, near Rubaga catholic church in Kampala. This was an appropriate place because it contained the most relevant information that felt under the researchers' topic of research since it does offer internet banking and there was the use of smartcard system like ATM machines.

3.3 The study population size

The study consisted of a population size of 10 staff; and these were employees of Centenary bank. This was because the bank branch did not have many staff in the banking section and also these staff members were the ones acquainted with the operation of the bank in addition to the limited time; and it was from this study population that the sample size were taken.

3.4 Sample size

The sample size was 10 selected respondents due to the small number of staff working at Rubaga branch and this sample size had been derive with the aid of Krajcie and Morgan (1978) sample size determination table; these respondents involved the Centenary Bank Rubaga branch employees. According to Sekaran (1992), a sample size larger than 30 and less than 500 are appropriate for most research.

3.5.0 Sources of data

The major sources of data were both primary and secondary data. The primary data were obtained through answered questionnaires and secondary data were got from handouts and brochures containing relevant information about the study. The researchers used interview by designing and issuing questionnaire booklets to the respondents in order to obtain data.

3.5.1 Primary data

These are the data, which are collected fresh and for the first time from the study and therefore primary data is in its original form. The data were collected from live events using questionnaires.

3.5.2 Secondary data

These are published and documented sources which aided the study of the problem. This involved the use of documents, textbooks, brochures, newspapers, magazines, press release and

other printed materials consulted to supplement the information that will got by using the above methods and many others, all having information that were relevant to the study.

3.6.0 Data collection tools

Data were collected using tools such as Questionnaires. Both open and closed questionnaire were used. Questionnaires were used because it saved time and the fact that it upholds confidentiality (Collis and Hussey, 2003). It was also often used for descriptive and exploratory research (Saunders et al, 2009), both primary and secondary sources of data were used and the information or data were collected using the following methods:

3.6.1 Questionnaires

The primary data were collected using the questionnaire tool of data collection and was designed to cover quantitative data. The method was the most used in collecting data during the study since the respondents of the study were literate. Since it had the beauty of being able to wait for the most appropriate person to fill it in, the questionnaire instrument was widely used because sometimes the respondents were not available when the researcher went to seek for information. The use of questionnaire was further advantageous because it covered a large number of respondents within a short time span and because the respondents answered at their own convenience. The researcher employed the use of open and closed ended questionnaires, though this was distributed to selected respondents who could read, interpret and answer the questionnaires.

3.7.0 Data processing, analysis and presentation

3.7.1 Data processing

The data were analyzed by taking into consideration the main concepts and themes that emerge. These were recorded under relevant categories. The amounts of data generated from the field

were reduced to forms that guided meaningful interpretation of results. Data were then be tabulated where necessary or put into text and coded in order to show the presentation.

3.7.2 Data analysis.

The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-groups. After collection, data was edited to detect errors and omissions and to correct these when possible. As a matter of fact, a careful scrutiny of the completed questionnaires were done to ensure that the data were accurate, consistent with other facts gathered, uniformly entered as completed as possible and were well arranged to facilitate coding and tabulation using SPSS.

Thus in the process of analysis, relationships or differences supporting or conflicting with original work from literature review or new hypotheses was subjected to statistical tests of significance to determine validity of data that is said to indicate any conclusions Kothari, 2004(7).

3.7.3 Data presentation

The researcher used tables to present their field findings in order to give a clear and better visual expression and impression of the information presented to other users.

3.8.0 Validity and Reliability.

3.8.1 Validity

Validity is where an instrument or research study measures what it claims to measure (Saunders, 2009). According to Joppe (2000), validity determines whether the research truly measures that which it is intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit "the bull's eye" of your research object? (Joppe, 2000) Researchers generally determine validity by asking a series of questions. Kombo and Tromp

(2006) argued that, the manner in which a question is formulated could result in inaccurate response. Validity was therefore ensured basing the study on relevant literature and well-designed questionnaires, which enabled all the relevant information to be collected. The designed questionnaires were allowed respondents to express the intensity of attitudes through their degree of agreement or disagreement on the attribute qualities of an object (Saunders et al, 2009).

3.8.2 Reliability

Reliability is the quality of consistency of a study or measurement (Saunders, 2000). Brewton and Milward (2002) argue that a researcher can ensure reliability by a thorough description of the research process, which will in turn increase transparency. For this case, the researcher designed questionnaire in a way that did not create ambiguity.

3.9 Ethical considerations

The issue of the ethics is very important in research. The researcher ensured that ethical requirements were upheld in the study. The major ethical issues of concern were consent, privacy and confidentiality anonymity and researchers responsibility. The major anticipated ethical problem in the study were privacy and confidentiality of the respondents in that some respondents did not want to give out information for fear of being held responsible for likely consequences. However the respondents were the choice or freedom to ignore items they do not wish to respond.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF THE FINDINGS

4.0 Introduction

This chapter presented empirical findings and references to the research questions in chapter one. The findings were obtained from both primary and secondary sources. They presented and analyzed using frequency tables.

4.1 Bio-data information of the respondents

Table 1: Shows responses on the respondents' gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	7	70.0	70.0	70.0
	Male	3	30.0	30.0	100.0
	Total	10	100.0	100.0	

Source: *Primary data*

From the field findings, 70% of the respondents were female and 30% of the respondents were male; signifying that there are more female employees at centenary bank Rubaga branch, henceforth implying that the research findings was gender bias.

Table 2: Shows responses on the respondents' age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29 years	6	60.0	60.0	60.0
	30-39 years	2	20.0	20.0	80.0
	40-49 years	2	20.0	20.0	100.0
	Total	10	100.0	100.0	

Source: *Primary data*

From table 2 above, 60% of the respondents were between the ages 20-29years, 20% were between the ages of 30-39years and 20% of the respondents were also between the ages of 40-49years; this implies that majority of the respondents were young, enthusiastic, productive and were more involved electronic banking operations of the bank. This helped the researcher to get information from respondents who were well conversant with electronic banking and performance.

Table 3: Shows responses on the respondents' education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Postgraduate	6	60.0	60.0	60.0
	Degree	3	30.0	30.0	90.0
	Others	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

Source: *Primary data*

In table 3 above, majority (60%) of the respondents had postgraduate education level, with 30% of the respondents having degree educational level whereas only 10% of the respondents responded to others (masters' degree level). This implies that majority of the respondents had more adequate knowledge of electronic banking due to their levels of education. This is because

people who attain post graduate levels and work in banks are often introduced to all the aspects involved in banking.

Table 4: Shows responses on the position held by the respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Human resource officer	1	10.0	10.0	10.0
	Tellers	5	50.0	50.0	60.0
	Branch manager	1	10.0	10.0	70.0
	Operation manager	1	10.0	10.0	80.0
	Loan officers	2	20.0	20.0	100.0
	Total	10	100.0	100.0	

Source: *Primary data*

From table 4 above, 50% of the respondents were tellers, 20% of the respondents were loan officers where 10% of the respondents were the human resource officers and branch manager. This implies that the majority of the respondents tellers who were always transacting business online, it further helped the researcher to obtain relevant information concerning electronic banking and bank performance from the ideal respondents.

Table 5: Shows responses on the duration respondents' spent working at the bank

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Less than 1 year	1	10.0	10.0	10.0
	1-2 years	3	30.0	30.0	40.0
	3-4 years	4	40.0	40.0	80.0
	Above 5 years	2	20.0	20.0	100.0
	Total	10	100.0	100.0	

Source: *Primary data*

From table 5 above, only 10% of the respondents had spent less than 1 year working at centenary bank, 30% of the respondents had spent between 1-2 years working at the bank, 40% 0f the respondents spent between 4-5 years at the bank and 20% of the respondents had spent above 5 years working at the bank. This implies that the majority of the between 3-4 years working at centenary bank; this helped the researcher in obtaining adequate and relevant information since these respondents had seen effects posed by electronic banking on bank performance within centenary bank.

4.2 Analysis of the effects of smart card system/ATM on bank performance

Table 6: Show the descriptive Statistics of the effects of smart card system/ATM on bank performance

	N	Minimum	Maximum	Mean	Std. Deviation

	N	Minimum	Maximum	Mean	Std. Deviation
Makes it easy for bank customers to have access to cash without visiting the banking hall	10	1.0	2.0	1.300	.4830
Speed up bank performance or make them more accessible for customers	10	1.0	3.0	1.500	.7071
The value of the banking efficiency are increased	10	1.0	3.0	1.800	.6325
Allows a bank customer to conduct banking transactions from almost every other ATM machine in the world	10	1.0	4.0	2.300	.9487
ATM has also increased the propensity to fraudulent practices	10	2.0	3.0	2.400	.5164
Increased ATM usage is also helped by increases in customer flexibility of using ATMs of other banks	10	1.0	3.0	2.000	.6667
ATM facility has resulted in speed of transactions and saved time for customers	10	1.0	3.0	1.800	.7888
Valid N (List wise)	10				

Source: *Primary data (2015)*

From table 6 above on the respondents' views that smart cards, revealed that smart cards makes it easy for bank customers to have access to cash without visiting the banking hall as (mean = 1.300 and standard deviation = 0.4830) which implies that respondents agreed with low variation of responses. According to the findings in the table, most respondents were in agreement with the response statement and the finding of Mitroff (2003), who started that the smart cards system makes it easy for bank customers to have access to cash without visiting the banking hall.

The respondents were required to give their views on whether smart cards system does really speed up bank performance or make them more accessible for customers, as (mean =1.500 and standard deviation = .7071), this therefore implied that respondents were in agreement with low variation in response and henceforth in relation to Mitroff (2003) findings which stated that due to complexity in banking services, every opportunity to speed up bank performance or make them more accessible for customers is welcomed and that is what smart card provide to banking services

Whereas on the response that the value of the banking efficiency are increases by smart cards system as respondents were required to air their views, as (means =1.800 and standard deviation = 0.6325) henceforth implying that majority of the respondents agreed with low variation of the responses. From the findings, most of the respondents were in agreement with the statement and the findings of Thakor et' al, (2003) that stated, the level of employed automated teller machines which uses smart cards and the value of the banking efficiency has increased by smart cards system with further developments of the banking industry.

In addition, the respondents were necessitated to give their views on whether smart card system allows a bank customer to conduct banking transactions from almost every other ATM machine in the world, as showed by the results (mean =2.300 and standard deviation = 0.9487) thus implying that the respondents agreed with low variation in responses and as well most respondents were in agreement with the statement and the findings of Ogbuji, et al. (2012) who postulated that ATM allows a bank customer to conduct banking transactions from almost every other ATM machine in the world.

As required of the respondents to give their views on whether ATM or smart card system has also increased the propensity to fraudulent practices, with the results as (mean = 2.400 and standard deviation =0.5164); therefore this implied that the respondents agreed with low

variation of the responses and most of the respondents were in agreement with the statement and the findings of Ihejiahi (2009) who stated that the increase in number of customers using ATM or smart cards, has also increased the propensity to fraudulent practices by the ATMs fraud perpetrators. Ihejiahi (2009) cited in (Siyanbola, 2013) who expressed concern about the lack of cooperation among banks in the fight to stem the incidence of ATM related frauds now plaguing the industry.

Furthermore, the respondents were required to give responses on whether the increased ATM or smart card usage is also helped by the fact that customers have now the flexibility of using ATMs of other banks and the results showed (mean = 2.000 and standard deviation= 0.6667); for that reason this implied that the respondents agreed with low variation of the responses and thus most of the respondents were in agreement with the response and the finding of Moutinho (2000)who established that increased ATM or smart cards usage is also helped by the fact that customers have now the flexibility of using ATMs of other banks, as most of the banks are part of major interbank networks which has improved on bank performance.

Finally, regarding respondents' view on whether ATM or smart cards facility has resulted in speed of transactions and saved time for customers and the result showed (mean = 1.800 and standard deviation = 0.7888); thus the respondents agreed with low variation of the responses, this findings showed that most of the respondents were in agreement with the statement and with Moutinho (2000) who in his findings established that ATM facility resulted in speed of transactions and saved time for customers which increases on the level of bank performance. These findings indicated that smart cards system or ATM greatly affects the performance of banks and thus providing the validity and reliability to the analysis of the effects of smart cards system or ATM on banks' performance.

4.3 Effect mobile money services have on the financial performance of banks.

Table 7: Shows the descriptive Statistics of the effect mobile money services have on the financial performance of banks.

	N	Minimum	Maximum	Mean	Std. Deviation
It reduces operating cost of the institution	10	1.0	5.0	2.900	1.5239
It is convenient	10	1.0	2.0	1.800	.4216
Cheap as lesser fees are charged on mobile transaction	10	1.0	4.0	3.000	1.2472
There is no time limitation i.e. banking maybe performed throughout the day and in any place	10	1.0	4.0	1.900	1.1972

	N	Minimum	Maximum	Mean	Std. Dev
Mobile banking also provides efficient cash management and security of cash	10	1.0	5.0	3.100	1.4491
It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches	10	1.0	2.0	1.600	.5164
Mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market	10	1.0	3.0	1.600	.6992
Valid N (List wise)	10				

Source: *Primary data (2015)*

From table 7 above on the respondents' views on whether mobile money services reduces operating cost of the institution shows (mean = 2.900 and standard deviation = 1.5239), this implies that the respondents agreed with high variation in their responses. The majority of the respondents were in agreement with the statement and the finding of Chogi, (2006) which suggested that the move from traditional banking to agency banking and currently mobile banking has been beneficial to both the banks and customers as it reduces operating cost of the institution hence having a positive effects financial performance of banks.

The respondents revealed that it mobile money services are convenient as showed with (mean= 1.800 and standard deviation= 0.4216) implied that respondents agreed with the statement but with low variation of the responses from the employees. Therefore most respondents were in agreement with the statement and the Chogi, (2006) findings which suggest that the move from traditional banking to agency banking and currently mobile banking has been beneficial to both the banks and customers as it is convenient.

The respondents were required to reveal whether mobile money services are cheap as lesser fees are charged on mobile transaction, (mean= 3.000and standard deviation= 1.2472) this implied that the respondents were in disagreement with high variation of responses gotten from them. This therefore gives an impression that most respondents did not believe that mobile money service are cheap as lesser fees are charged on mobile transaction. This finding was not in connection with Chogi, (2006) whose findings postulated the move from traditional banking to agency banking and currently mobile banking has been beneficial to both the banks and customers as it is cheap as lesser fees are charged on mobile transaction

The respondents revealed there is no time limitation that is to say banking maybe performed throughout the day and in any place when using mobile money services, (mean= 1.900 and standard deviation= 1.1972) implied that respondents agreed with the statement with wide variation of the nature of. This is therefore in line with the response statement.

The respondents were required to reveal whether mobile banking also provides efficient cash management and security of cash, (mean= 3.100 and standard deviation=1.4491) implied that respondents were in the borough of agreement with high variation in the nature of responses made. This is therefore in connection to a statement by Daniel, (1999) which suggested that with competition banks had to simplify the process and had to come up with innovative ways of doing so, mobile banking also provides efficient cash management and security of cash.

The respondents revealed that mobile money services can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches, (mean=1.600 and standard deviation=0. 5164) implied that respondents were in agreement with low variation in the response rate among the employees. However the response was in line with the findings in CGAP, (2006) report which stated that mobile money services can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches.

The respondents revealed that mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market, (mean = 1.600 and standard deviation = 0 .6992) implied that the respondents were in agreement with low variation in the nature of responses. This finding was therefore in line with the findings of authors like Lee, Lee and Kim, (2007) which stated that mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market. These findings showed that mobile money services greatly affected banks' financial performance and thus validating the effects of mobile money services on financial performance of banks.

4.4 The impact of internet banking on the bank performance

Table 8: shows the descriptive Statistics of the impact of internet banking on the bank performance

	N	Minimum	Maximum	Mean	Std. Deviation
Increased commission income	10	1.0	4.0	2.500	.9718
Increased brokerage fees	10	2.0	4.0	2.800	.6325
Reductions in staffing levels	10	1.0	3.0	1.800	.7888
Lower overhead expense	10	2.0	4.0	2.700	.8233
Increased revenues from deposit service charges	10	2.0	3.0	2.300	.4830
Lower profits due to difficulty in generating deposit funding	10	1.0	5.0	3.600	1.2649
Valid N (List wise)	10				

Source: *Primary data (2015)*

From the results in table 8 above on the respondents' views on whether internet banking increases commission income, (mean = 2.500 and standard deviation = 0.9718) implied that respondents were neither in agreement nor disagreement and they responded with low variations in the nature of responses. These findings were not in line with Hernando and Nieto (2005) who examined the performance of multichannel banks in Spain between 1994 and 2002 and in their study found higher profitability for multichannel banks through increased commission income due to internet banking.

The respondents revealed that internet banking increases brokerage fees, (mean = 2.800 and standard deviation = 0.6325) implied that respondents neither agreed nor disagreed with the statement but with low variation of the responses from the employees. This is therefore was not in relation to Hernando and Nieto (2005) who examined the performance of multichannel banks in Spain between 1994 and 2002 and in their study found higher profitability for multichannel banks through increased brokerage fees due to internet banking.

The respondents were required to reveal whether internet banking leads to reductions in staffing levels, (mean =1.800and standard deviation = 0.7888) implied that the respondents were in agreement with low variation of responses obtained from the respondents; therefore giving notion that most respondents supposed that internet banking leads to reductions in staffing levels.

The respondents revealed that internet banking lower overhead expenses, (mean = 2.700 and standard deviation= 0.8233) implied that respondents agreed with the statement with small variation of responses. This is therefore in line with the response statement and the findings of Hernando and Nieto (2005) which stated that the adoption of the Internet as a delivery channel had a positive impact on banks' profitability by the lower overhead expenses.

The respondents were required to reveal whether internet banking leads to increase revenues from deposit service charges, (mean = 2.300 and standard deviation = 0.4830) which implied that the respondents were in the agreement with low variation in the nature of responses made by the employees. For that reason the finding was in connection to a statement by De Young et al. (2006) who observed the change in financial performance of Internet community banks in U.S. during 1999-2001 and found that Internet adoption improved community banks' profitability, particularly through increased revenues from deposit service charges.

The respondents revealed that internet banking lower profits due to difficulty in generating deposit funding, (mean = 3.600 and standard deviation = 1.2649) implied that respondents were in disagreement with high variation in the response rate among the employees. Nonetheless the response is not in line with De Young (2001a, 2001b, 2001c and 2005) who analyzed systematically the financial performance of pure-play Internet banks in U.S and in their study found relatively lower profits due to difficulty in generating deposit funding.

4.5 Correlation Analysis

In order to find out the relationship between the independent variable and the dependent variable, the Pearson correlation analysis was conducted to examine the effect of the different dimensions of the independent variable; that is, smart card system/ATM, Mobile money services and internet banking on the dependent variable- bank performance. This was done also to show the significance of those effects as presented below:

Table 9: Shows the effects of smart card system/ATM on bank performance

Correlations

		Smart card system/ATM	Bank performance
Smart card system/ATM	Pearson Correlation	1	.745[*]

			.013
	N	10	10
Bank performance	Pearson Correlation	.745[*]	1
	Sig. (2-tailed)	.013	
	N	10	10

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

Source: *Primary data (2015)*

The correlation table above shows that the correlation coefficient between Smart card system/ ATM and Bank performance was a strong correlation suggesting that there was a relationship between the two variables. The correlation coefficient ($r = 0.745^{*}, p \geq 0.05$) suggests that there was a positive and significant relationship between smart card system/ATM and Bank performance. This is in agreement with the findings of authors like

Mitroff (2003), Thakor et' al, (2003), Ogbuji, et al. (2012), Ihejiahi (2009) and Moutinho (2000) that showed significant relationship between the two variables due to the massive effects smartcard system/ATM have on bank performance.

Table 10: shows the effects of mobile money services on bank financial performance
Correlations

		Mobile money services	Bank financial performance
Mobile money services	Pearson Correlation	1	.288
	Sig. (2-tailed)		.420
	N	10	10

Bank financial performance	Pearson Correlation	.288	1
	Sig. (2-tailed)	.420	
	N	10	10

Source: *Primary data (2015)*

The correlation table above indicates that the correlation coefficient between Mobile money services and Bank financial performance was a weak correlation. The correlation coefficient (r = 0.288, p ≤ 0.05) suggests that there is a positive and moderately significant relationship. The correlation results are in connection with Chogi, (2006), Daniel, (1999) and Lee, Lee and Kim, (2007) whose suggestion indicated that mobile money services has effects on banks financial performance.

Table 11: shows the impact of internet banking on bank performance
Correlations

		Internet banking	Bank performance
Internet banking	Pearson Correlation	1	.181
	Sig. (2-tailed)		.617
	N	10	10
Bank performance	Pearson Correlation	.181	1
	Sig. (2-tailed)	.617	
	N	10	10

Source: *Primary data (2015)*

The correlation table above indicates that the correlation coefficient between internet banking and bank performance was a strong correlation. The correlation coefficient (r = 0.181, p ≥ 0.5)

suggests that there is a positive and a very significant relationship since the correlation coefficient at 2-tailed is $\geq$ 0.6. This possibly implies that internet banking affect bank performance greatly, this is agreement with the literature review from authors such as Hernando and Nieto (2005), De Young et al. (2006) and De Young (2001a, 2001b, 2001c and 2005) which postulated that internet banking has impacts on bank performance.

4.6 Conclusion

This chapter presented the analysis and discussion the findings from the study objective by objective and correlation analysis was also undertaken to analyse the effect of dimensions of the independent variable on the dependent variable.

CHAPTER FIVE

5.0 Summary of the findings, conclusion and recommendations.

5.1 Introduction

This Chapter looks at summary of the findings based on the objectives, conclusions and recommendations of the study and suggested areas of further research.

5.2 Summary of the findings

The researcher in her study based the discussions on the objectives of the study.

5.2.1 The analysis of the effects of smart card system on bank performance.

From the findings, the results revealed that the correlation coefficient between Smart card system/ ATM and Bank performance was a strong correlation suggesting that there was a relationship between the two variables. The correlation coefficient ($r = 0.745^{*,}$ $p \geq 0.05$) suggests that there was a positive and significant relationship between smart card system/ATM and Bank performance. This is in agreement with the findings of authors like Mitroff (2003), Thakor et' al, (2003), Ogbuji, et al. (2012), Ihejiahi (2009) and Moutinho (2000) that showed significant relationship between the two variables due to the massive effects smartcard system/ATM have on bank performance.

5.2.2 The effect mobile money services have on the financial performance of banks.

The results revealed that the correlation coefficient between Mobile money services and Bank financial performance was a weak correlation. The correlation coefficient ($r = 0.288$, $p \leq 0.05$)

suggests that there is a positive and moderately significant relationship. The correlation results are in connection with Chogi, (2006), Daniel, (1999) and Lee, Lee and Kim, (2007) whose suggestion indicated that mobile money services has effects on banks financial performance.

5.2.3 The impact of internet banking on the bank performance

The outcome of the finding indicated that the correlation coefficient between internet banking and bank performance was a strong correlation. The correlation coefficient ($r = 0.181$, $p \geq 0.5$) suggests that there is a positive and a very significant relationship since the correlation coefficient at 2-tailed is ≥ 0.6. This possibly implies that internet banking affect bank performance greatly, this is agreement with the literature review from authors such as Hernando and Nieto (2005), De Young et al. (2006) and De Young (2001a, 2001b, 2001c and 2005) which postulated that internet banking has impacts on bank performance and thus provided prove of validity and reliability on the effects of internet banking on bank performance.

5.3 Conclusion

From the findings, it is evident that electronic banking has a great impact on the performance of banks. The study reveals that banks are able to maintain or improve their performance with the implementation electronic banking facilities such as smart card system, mobile banking and online. The researcher sides with findings of the study and concludes that electronic banking greatly impacts performance of banks.

5.4 Recommendations

Basing on the findings of the study, the researcher made the following recommendations for the company and similar organizations in improving on bank performance.

There should be sensitisation of bank customers on how to protect their smart cards, personal identification numbers to reduce on the cases of ATM frauds.

Banks should encourage more of their customers to perform more of mobile banking and online banking to reduce the chances of theft and overcrowding in the banking hall.

5.5 Areas of further research

There is need for more research to be undertaken in the area of electronic banking and bank performance.

Effects of mobile banking on employee productivity.

Contribution of smart cards systems on the level of bank fraud.

The impact of ICT on professional practice in the banking industry.

REFERENCES

A Report on Global ATM Frauds (2007); Available online at http://www.icmrindia.org/casestudies/catalogue/Business%20Reports/BREP041.htm.

Adeoti, J.A. (2011). Automated Teller Machine (ATM) Frauds in Nigeria: The Way Out. Journal of Social Sciences, 27(1): 53-58.

Aditi, O. (2013). Working of Automated Teller Machine (ATM). Avalable at http://www.techs24x7.com/blog/working-of-automated-teller-machine-atm/.

Al-hajri, S. (2008) "The adoption of e-banking: The Case of Omani Banks" International Review of Business Research Papers Vol. 4 No. 5 PP 120-128

Al-Smadi, M.O. and Al-wabel S.A. (2011)"The Impact of Electronic Banking on the Performance of Jordanian Bank "Journal of Internet Banking and Commerce Vol.16 No.2

Awe J. (2006), "Don't Open an Account, If It isn't an E-Bank" (http www.jida.com) retrieved 9th September, 2008.

Bisignano, J. (1992). Banking competition, regulation and the philosophy of financial development: a search for first principles,' in the internationalization of capital markets and the regulatory response, John Fingleton (ed.). London: Graham and Trotman.

Bradley L. and Stewart K. (2003) Delphi Study of Internet banking, MCB UP Limited pp.272-281

Brewton and Milward.(2002). Organization Research Methods. London: Sage Publication.

Central Bank of Barbados (2002) Guideline for Electronic Banking

CGAP (2006). *Mobile Phone Banking and Low-Income Customers Evidence from South Afric. Journal of Financial Management, 15, 745-782 retrieved from: http://www.globalproblems-globalsolutions- Retrieved on 12 March, 2013*

Chogi B. F. M. (2006). *The Impact of Mobile Communication Technologies in Medium and Small Enterprises: Case Study of Nairobi City, MSc. Thesis submitted at the University of Nairobi, School of computing and Informatics.*

Collis and Hussey. (2003). *Business Research: Apractical Guide for Undergraduates and postgraduate students. Palgave MacMillan.*

Daniel, E. (1999), *Provision of Electronic Banking in the UK and the Republic of Ireland, International Journal of Bank Marketing, 17(2), 72-83.*

Dapo, A. A. (2008). *The impact of ICT on professional practice in the Nigerian construction industry. The Electronic Journal of Information Systems in Developing Countries. 24(2), p1-19.*

Delgado, J., Hernando, I. and Nieto, M. J. (2004), *"Do European Primarily Internet Banks Show Scale and Experience Efficiencies?" Working Paper No. 0412, Banco de España, Madrid.*

Delgado, J., Hernando, I. and Nieto, M. J. (2006), *"Do European Primarily Internet Banks Show Scale and Experience Efficiencies?" European Financial Management (forthcoming).*

DeYoung, R (2001a), *"The Financial Performance of Pure Play Internet Banks", Economic Perspectives, Vol. 25 No. 1, pp. 60-75.*

DeYoung, R. (2001b), "The Financial Progress of Pure-Play Internet Banks", BIS Papers No 7, November.

DeYoung, R. (2001c), "Learning-by-Doing, Scale Efficiencies, and Financial Performance at Internet-Only Banks", Working Paper 2001-06, Federal Reserve Bank of Chicago, September.

DeYoung, R. (2005), "The Performance of Internet-based Business Models: Evidence from the Banking Industry", Journal of Business, Vol. 78 No. 3, pp. 893-947.

DeYoung, R., Lang, W. W. and Nolle, D. E. (2006), "How the Internet Affects Output and Performance at Community Banks", Journal of Banking and Finance (forthcoming).

Diamond, D. W., and Dybvig P. H., (1983), Bank Runs, Deposit Insurance, and Liquidity, Journal of Political Economy; 91(3), pp. 401-19

Furst, K., Lang, W.W. and D.E. Nolle (2002) Internet Banking, Journal of Financial Services Research, 22:1/2 95-117.

Hasan, I., Maccario, A. and Zazzara, C. (2002), "Do Internet Activities Add Value? The Italian Bank Experience", Working Paper, Berkley Research Center, New York University.

Hernando, I. and Nieto, M. J. (2005), "Is the Internet Delivery Channel Changing Banks' Performance? The Case of Spanish Banks", Banco de Espana, Unpublished Manuscript.

Hernando, I. and Nieto, M.J. (2006) "Is the internet delivery Channel Changing Banks' Performance? The Case of Spanish Banks" Banco de Espana Working Paper Series, Madrid No.0624

Ihejiahi R 2009. How to fight ATM fraud online. Nigeria Daily News, June 21, P. 18.

Jayawardhera C. and Foley P. (2000) Changes in the banking sector- the case of internet banking in the UK, Electronic Networking Application and Policy Vol. 10, No.1, pp.19-30, MCB UP.

joppe, M. (2000). Research process. Retrieved june 3, 2012, from Http://www. htn.uoguelph.ca

Khrawish, H.A. and Al-Sa'di (2011) "The Impact of E-banking on Bank Profitability: Evidence from Jordan" Middle Eastern Finance and Economics, Euro Journals Publishing Inc No.13 pp142-158

Kombo and Tromp.(2006). Proposal and Thesis writing. Nairobi: Paulines.

Kothari, C. (2004). Research Methodology. New Delhi: New age.

Lee, K. S., Lee, H. S. and Kim, S. Y. (2007), Factors Influencing the Adoption Behavior of Mobile Banking: A South Korean perspective, Journal of Internet Banking and Commerce, Vol. 12 No. 2, 2007,

Leland, H. and Pyle, D. (1977) "Informational Asymmetries, Financial Structure Munaye. H. (2009). The application of mobile banking as a strategic response by equity bank Kenya limited to the challenge in the external environment. Unpublished MBA Thesis, University of Nairobi.

Malhotra, P. and Singh, B. (2010) "Experience in Internet Banking and Performance of Banks", International Journal of Electronic Finance, Vol. 4 (1) (http://www.inderscience.com)

Mitroff, I. I. (2003). Do not Promote Religion under the Guise of Spirituality. Organization, 10(2), 375-377.

Moutinho, L. and Smith, A. 2000. *Modelling bank customer satisfaction through mediation of attitudes toward human and automated banking, The International Journal of Bank Marketing 18(3): 124.*

Muhammad, A. K. (2009). *An empirical study of automated teller machine service quality and customer satisfaction in Pakistani banks. European Journal of Social Sciences , Vol. 13 No.3, pp. 333-344.*

Murthy, Y., and Sree, R. (2003). *A Study on Financial Ratios of major Commercial Banks . Research Studies, College of Banking & Financial Studies, Sultanate of Oman.*

Nikolai L. and Bazlay J.D (1997) *Intermediate Accounting, South- Western College Publishing, Ohio.*

Obiano W 2009. *How to fight ATM fraud. online Nigeria Daily News, June 21, P. 18*

Ogbuji, C. N. et al. (2012). *Analysis of the Negative Effects of the Automated Teller Machine (ATM) as a Channel for Delivering Banking Services in Nigeria. International Journal of Business and Management 7, No. 7; April 2012.*

Okafor, F.O. (2006), *"Valedictory Lecture" B & F Publications, Enugu September, 2005.*

Olweny, T., and Shipho, T.M (2011),*"Effects of banking sectoral factors on the profitability of commercial banks in Kenya," Economic and Finance Review, Vol. 1, No.5, pp.1-30.*

Omankhanlen Odidison 2009. *ATM fraud rises: Nigerians groan in Nigeria. Daily News, Sunday, June 21, pp. 8-10.*

Onay, C., Ozsoz, E. and Helvacioglu, A.D. (2008) *"The impact of Internet Banking on bank profitability- the case Turkey" Oxford & Economics Conference programme June 22-24*

Ovia J. (2001) Internet Banking: practice and Potentials in Nigeria. Paper Delivered at a Workshop organized by ICAN at Lagos,

Paul, D.R. (1998). Towards a more efficient use of payment instruments. Available online at http://www.econ.kuleuven.ac.be/ew/academic/intecon/Degrauwe/PDG.

Rogers, E.M. (1995), Diffusion of Innovation 4th Edition. New York, The Free Press

Rose, P. S. (1999). Commercial bank management. Boston, Irwin/McGraw-Hill.

Rose, P. S. (2001) Commercial Bank Management; 5th Edition McGraw-Hill Irwin

Sathye, M. (2005), "The Impact of Internet Banking on Performance and Risk Profile: Evidence from Australian Credit Unions", The Journal of International Banking Regulation, Vol. 6 No. 2, February.

Saunders et al. (2009).Research methods for Business students. London: Prentice Hall.

Scholtens, B. and Wensveen, D. (2003). The theory of financial intermediation: an essay on what it does (not) explain, SUERF – The European Money and Finance Forum, 50:10, 20- 16

Sekaran.(1992). Research Methods for Business.Askill building approach. USA: Wiley and Sons.

Shepherd, W.G. (1986). Tobin's q and the Structure Performance Relationship: Reply. American Economic Review, Vol. 76, pp. 1205-1210.

Siam, A.Z. (2006) "Role of the Banking Services on the Profits of Jordanian Banks" American Journal of Applied Science 3(9) 1999-2004

Simpson, J. (2002) "The Impact of the Internet in Banking: Observations and Evidence from Developed and Emerging Markets" Telematics and Informatics, 19, pp315-330

Simpson, J. (2002). The Impact of the Internet in Banking: Observations and Evidence from Developed and Emerging Markets. Telematics and Informatics, 19, pp. 315- 330.

Siyanbola, T.T. (2013). The effect of cashless banking on nigerian economy. E-Canadian Journal of Accounting and Finance, 1(2): 9-19.

Sohail, M. and Shanmugham, B. (2003) E-banking and customer preferences in Malaysia: An empirical investigation, Information Sciences, Vol. 150, No. 3/4: 207-217, 2003.

Sohail, M. and Shanmugham, B. (2003) E-banking and customer preferences in Malaysia: An empirical investigation, Information Sciences, Vol. 150, No. 3/4: 207-217, 2003.

Sullivan, R. J. (2000) "How Has the Adoption of Internet banking Affected Performance and Risk of Banks? A look at Internet Banking in the 10th Federal Reserve District" FRB Financial Industry Perspectives 1-16

Sullivan, R. J. (2000), "How Has the Adoption of Internet Banking Affected Performance and Risk at Banks? A Look at Internet Banking in the Tenth Federal Reserve District", Financial Industry Perspectives, Federal Reserve Bank of Kansas City, December, pp. 1-16.

Sullivan, R. J., (2000). How has the adoption of Internet banking affected performance and risk at banks? A look at Internet banking in the tenth Federal Reserve district, Federal Reserve Bank of Kansas City. Financial Industry Perspectives (December), 1–16.

Thakor, A. V and Olazabal, N. (2002) Banking: The IT Paradox. McKinsey Quarterly 1(1): 45-51.

Tiwari, R. Buse, S and Herstatt, C. (2006) Mobile Banking As Business Strategy: Impact Of Mobile Technologies On Customer Behaviour And Its Implications For Banks, Mobile

Banking As Business Strategy: Impact Of Mobile Technologies On Customer Behaviour And Its Implications For Banks. Working Paper No. 37. Presented at "Portland International Conference on Management of Engineering and Technology" (PICMET) 2006, 8 – 13 July 2006, Istanbul (Turkey).

Ugwu, E. (2008). CBN, banks to tackle ATMs' hitches. Retrieved April 25, 2013, from http://www.guardiannewsngr.com.

Yang J., Whitefield M. and Bhanot R. (2005) "E-banking in the Rural Area- Recent Trend and Development" communication of the HMA 25(4)

APPENDIX ONE

Krajcie and Morgan (1978) sample size determination table

N	S	N	S	N	S	N	S	N	S
10	**10**	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	256	3000	341
20	19	120	92	300	169	900	269	3500	341
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	1000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	243	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	255	2600	335	100000	384

APPENDIX TWO

QUESTIONNAIRE FOR RESPONDENTS

This questionnaire is based on the thesis; effect of electronic banking on bank performance; case study of centenary bank, Rubaga branch. You are kindly requested to fill in this questionnaire accordingly to facilitate the researchers' study findings. All information disseminated will be handled and treated with utmost confidentially; your assistance is highly appreciated. Please tick the appropriate alternative or fill in where applicable.

SECTION A: BIO DATA INFORMATION

1. What is your gender?

   Male ☐   Female ☐

2. Which age bracket do you belong

   20-29 yrs ☐   30-39 yrs ☐   40-49 yrs ☐   Above 50 yrs ☐

3. What is your level / class of education?

   PHD ☐   Postgraduate ☐   Degree ☐   diploma ☐   others ☐

4. Which position do you hold and which department do work in?

   Position...

   Department...

5. For how long have you worked for this firm?

   Less than 1 yr ☐   1-2 yrs ☐   3-4 yrs ☐   Above 5 yrs ☐

SECTION B

For section B, C and D please choose the most correct option and tick

SA- Strongly Agree	A- Agree	N- Not sure	D- Disagree	SD- Strongly Disagree

6. What are the effects of smartcard system/ATM on bank performance?

Response	SA	A	N	D	SD
Makes it easy for bank customers to have access to cash, carry out transfers and make enquiries about their accounts without visiting the banking hall					
Speed up bank performance or to make them more accessible for customers					
The value of the banking efficiency increase					
Allows a bank customer to conduct his/her banking transactions from almost every other ATM machine in the world.					
ATM has also increased the propensity to fraudulent practices					
Increased ATM usage is also helped by increases customers flexibility of using ATMs of other banks					
ATM facility has resulted in speed of transactions and saved time for customers.					

Others

....

....

....

....

....

SECTION C

7. What are the effects of mobile banking services on the financial performances of banks?

Response	SA	A	N	D	SD
It reduces operating cost of the institution					
It is convenient					
cheap as lesser fees are charged on mobile transaction					
There is no time limitation i.e. banking maybe performed throughout the day and in any place					
Mobile banking also provides efficient cash management and security of cash					
It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches					
Mobile banking presents an opportunity for financial institutions to extend banking services to new customers thereby increasing their market					

Other reasons, please indicate

....

....

....

....

....

....

SECTION D

8. What are the impacts of internet banking on the bank performance?

Response	SA	A	N	D	SD
Increased commission income					
Increased brokerage fees					
Reductions in staffing levels					
lower overhead expenses					
increased revenues from deposit service charges					
lower profits due to difficulty ingenerating deposit funding					

Other impacts, please indicate

....

....

....

....

....

....

....

Thank you for your cooperation

Be Blessed

Interview guide

What kind of smart cards/ATMs is used?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

………………………………………………………………………………………

In your opinion what are the effects of using smart cards/ ATMs on the performance of the bank?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

…………………………………………………………………………………..

Which network services providers are you in collaboration with?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………….

According to your views, to what extent does mobile money banking affect the financial performance of the bank?

………

………

………

………

………………………………………………………………………………………….

Are there reliable connections to the internet?

………

………

………………………………………………………………………………………………………

What kind of serveries are offered through internet banking?

………

………

………

…………………………………………………………………………………………………

How do you think internet banking has impacted bank performance?

……

……

……

……………………………………………………………………………………………

What are the forms of electronic banking services that are offered by the bank?

……

……

……

…………………………………………………………………………………………..

How has electronic banking improved on performance of the bank?

……

……

……

…………………………………………………………………………………………….