ELECTRONIC BANKING AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN RWANDA:

A CASE STUDY OF BANK OF KIGALI

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A Research Project Report submitted to the Department of Business Administration in the School of Business in partial fulfillment of the requirement for the award of Master Degree in Business Administration (Finance Option) of Jomo Kenyatta University of Agriculture and Technology

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DECLARATION

This research study is my original work and has not been presented to any other Institution. No part of this research should be reproduced without the authors' consent or that of Jomo Kenyatta University of Agriculture and Technology.

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DEDICATION

This work is dedicated to my husband MR. NSHUTI KHALID for his encouragement and assistance.

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First of all, I give glory to almighty God for his protection in health, knowledge, wisdom and determination to cover this journey.

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May God bless you all!

ABSTRACT

The purpose of this research is to examine the contribution of E-banking towards banking on performance of banking Institutions in Rwanda because according to National bank of Rwanda (NBR Report, 2012) there is delay in payment of checks between banks; time wasted in banks as people line in queue waiting for service, errors as a result of manual work and fraud related cases was common. As a result some clients complain of the above hence the researcher would like examined the contribution of this system to banking efficiency in Rwanda. The study will be significant to the researcher; Bank of Kigali, Jomo Kenyatta University of Agriculture and Technology and other scholars who have interest in the same area. Literature by different scholars was reviewed especially on the contribution of E-banking towards banking on performance of banking Institutions. The researcher will use descriptive method of study based on qualitative and quantitative approach in order to get better analysis of the study. He will use both primary and secondary data collection tools with their relevant tools like questionnaire and documentary analysis in order to come up with required data. In the findings it was established that Electronic banking system like ATM, Pay direct, electronic check conversion, mobile telephone banking and E transact has a great impact on bank performance because they increase profitability, reduce bank cost of operations, and increase bank asset and bank efficiency. The great contributions of e banking on banking performance is shown in table 4.21 which provides the relationship between E banking and Performance of bank of Kigali in Rwanda whereby the respondents N is 44 and the significant level is 0.01, the results indicate that independent variable has positive high correlation to dependent variable equal to $.656^{**}$ and the p-value is .000 which is less than 0.01. When p-value is less than significant level, therefore researchers conclude that variables are correlated and null hypothesis is rejected and remains with alternative hypothesis. This means that there is a significant relationship between E banking and Performance of bank of Kigali in Rwanda. As conclusion E banking contributes to positive performance of banks as witnessed by of bank of Kigali.

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ACRONYMS AND ABBREVIATIONS

ALLL	Allowance for Loan and Lease Losses
ATM	Automated Teller Machines
BSC	Balance Score Card
CAMELS	Capital Asset Management Earnings Liquidity Sensitivity
CEO	Chief Executive Officer
EFT)	Electronic Fund Transfer
GNPA	Gross Non Performing Asset
ICT	Information and Communication Technology
IT	Information Technology
JKUA	Jomo Kenyatta University of Agriculture and Technology
LQD	Liquidity
NBR	National Bank of Rwanda
PC	Personal computer
PDA	Personal Digital Assistant
PINS	Personal Identification Numbers
POS	Point of Sales
SMS	Short Message Service
SPSS	Scientific Packages for Social Sciences
TV	Television
WWW	World Wide Web

DEFINITION OF TERMS

Performance

According to Fitzgerald (1991), performance entails effectiveness which refers to the firm's ability to produce and serve what the market requires at particular time and efficiency which means meeting the objectives at the lowest possible cost with the highest possible benefit. In order to assess performance, the managers use actions designed to generate sustainable long term improvements

Financial Performance

Financial performance is a measure of how well a firm can use assets from its primary mode of business and generate revenues (Keown, Martin, Petty, & Scott, 2002). This term is also used as a general measure of a firm's overall financial health over a given period of time and it is one of major indicator of organisational performance. Organizational performance encompasses three specific areas of firm outcomes which are: financial performance (profits, return on assets, return on investment, etc.); product market performance (sales, market share, etc.); and shareholder return (total shareholder return, economic value added, etc.).

Electronic Banking

Electronic banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels(Simpson 2002). The definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone. Electronic banking can also be defined as a variety of following platforms: (i) Internet banking (or online banking), (ii) telephone banking, (iii) TV-based banking, (iv) mobile phone banking, and e-banking (or offline banking).

CHAPTER 1

INTRODUCTION

1.1 Background of the study

The new millennium brought with it new possibilities in terms of information access and availability simultaneously, introducing new challenges in protecting sensitive information from intruders while making it available to others. Today's business environment is extremely dynamic and experience rapid changes as a result of technological improvement, increased awareness and demands Banks to serve their customers electronically. Banks have traditionally been in the forefront of adapting technology to improve their products and services (Aladwani 2001).

The Banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and Communication Technology (ICT) is at the centre of this global change curve of Electronic Banking System in Africa today (Stevens 2002). Assert that they have over the time, been using electronic and telecommunication networks for delivering a wide range of value added products and services, managers in Banking industry in Rwanda cannot ignore Information Systems because they play a critical impact in current Banking system, they point out that the entire cash flow of most fortune Banks are linked to Information System.

The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concerns to all banks and indeed a prerequisite for local and global competitiveness Banking.

The advancement in Technology has played an important role in improving service delivery standards in the Banking industry. In its simplest form, Automated Teller Machines (ATMs) and deposit machines now allow consumers carry out banking transactions beyond banking hours.

With online banking, individuals can check their account balances and make payments without having to go to the bank hall. This is gradually creating a cashless society where consumers no longer have to pay for all their purchases with hard cash hence improving customer relationship management system. For example: bank customers can pay for airline tickets and subscribe to initial public offerings by transferring the money directly from their accounts, or pay for various goods and services by electronic transfers of credit to the sellers account. As most people now own mobile phones, banks have also introduced mobile banking to cater for customers who are always on the move. Mobile banking allows individuals to check their account balances and make fund transfers using their mobile phones. This was popularized in Rwanda first by Bank of Kigali; customers can also recharge their mobile phones via SMS. E-Banking has made banking transactions easier around the World and it is fast gaining acceptance in Rwanda. For the purpose of this study the researcher has chosen Bank of Kigali Rwanda Ltd as a case study in order to study the contribution of e-banking to banking efficiency or performance in Rwanda.

1.2 Statement of Problem

According to National bank of Rwanda (NBR Report, 2012) there is delay in payment of checks between banks; time wasted in banks as people line in queue waiting for service, errors as a result of manual work and fraud related cases was common. As a result some clients complain of the above, it is upon this that is why the researcher would like to examine the contribution of E-banking towards banking on performance of banking Institutions because researcher believes that adoption of electronic banking will ease banking transactions and woe customers basing on experience from other developed countries.

1.3 Objectives of the Study

The purpose of this research is to examine the contribution of E-banking towards banking on performance of banking Institutions in Rwanda.

1.3.1 Specific objectives

i. To identify e-banking tools used by Bank of Kigali.

ii. To analyze performance of bank of Kigali before and after adoption of e banking system.

iii. To identify challenges faced by the banks while using e banking system.

1.4 Research questions

i. What are e-banking tools used by Bank of Kigali?

ii. How e banking affected performance of bank of Kigali before and after adoption of e banking system?

iii. What are the challenges faced by the banks while using e banking system?

1.5 Scope of the Study

This research seeks to examine the impact of E banking on performance of bank of Kigali in Rwanda. The study will be conducted in Bank of Kigali headquarters in Kigali City. The researcher will analyze E banking and performance of bank of Kigali for a period of five years (2008 - 2012), since when e commerce became fully recognized in banking institutions in Rwanda

1.6 Significance of the Study

1.6.1Researcher

This study is of importance to the researcher as it equips him with the knowledge of E banking on performance of financial institution. It will also enable the researcher to obtain a Masters degree in Business Management (MBA).

1.6.2 Bank of Kigali

The research report will help the bank to improve on their E banking and financial performance accordingly especially if they adopt the recommendations highlighted.

1.6.3 Jomo Kenyatta University of Agriculture and Technology

The research report will be available in library of JKUAT and will be used by other future researchers who would be interested in this area of my research.

1.7 Profile of Bank of Kigali

Bank of Kigali (BK) is a commercial bank in the Republic of Rwanda. The bank is one of the commercial banks licensed by the National Bank of Rwanda, the country's banking regulator. Bank of Kigali was started in 1966 to provide commercial banking services to individuals, small businesses and large corporations.

Vision

Bank of Kigali aspires to be the leading provider of most innovative financial solutions in the region.

Mission

The Mission is to be the leader in a creating value for our stakeholders by providing the best financial services to businesses and individual customers, through motivated and professional staffs.

The Bank has 33 branches in Rwanda, 15 branches are in Kigali City and the district has18 branches**.** It is one of the most dominant bank in Rwanda due to its sustained performance and growth in loans and deposits, which has seen the bank increase its branches and agencies all over the country. Bank of Kigali produces the following products: Loans, checking, savings, investments, debit cards**.**

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter gave overall view of earlier works and theories in areas of the contribution of E-banking towards banking on performance of banking Institutions in Rwanda. This section attempts to present a critical review of the available literature on the subject of research. It presents the historical element of E-banking, it looks at different E-banking tools used, and reviews E-banking towards banking on performance of banking.

2.1 Theoretical Review

The concept of e-banking is a delivery channel for banking services. Banks have used electronic channels for years to communicate and transact business with both domestic and international corporate customers. With the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s, banks are increasingly using electronic channels for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as e-banking or Internet banking, although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. The definition of e-banking varies amongst researches partially because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Sathye, 1999). Salehi and Zhila, (2008), describes e-banking as an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Electronic banking can also be defined as a variety of following platforms: (i) Internet banking (or online banking), (ii) telephone banking, (iii) TV-based banking, (iv) mobile phone banking, and e-banking (or offline banking).

E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet or mobile phone. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone. While some literature restricts the use of the term to internet banking (Daniel 1999), elsewhere the term is limited to retail banking or both retail and corporate banking (Simpson 2002). Banking Supervision (1998), “e-banking refers to the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money”.

Electronic banking has long been recognized to play an important role in economic development on the basis of their ability to create liquidity in the economy through financial intermediation between savers and borrowers. It also offers financial services and products that accelerate settlement of transactions and in the process reduce cash intensity in the financial system, encourage banking culture, and catalyses economic growth (Al-Gahtani, 2001).

However, for the effective functioning of the financial system, the payment systems must be safe and efficient; otherwise they can be a channel for the transmission of disturbances from one part of the economy or financial system to others. This is why central banks have been active in promoting sound and efficient payments system and in seeking the means to reduce risks associated with the system (Al-Gahtani, 2001).

Rwanda historically operated a cash-driven economy particularly in the consumer sector, however the system has witnessed improvements over the years, and particular in recent times has moved from its rudimentary level of the early years of banking business to the current state of sophistication comparable to other economies at the same level of development.

One important reason for financial liberalization and deregulation is the need to develop a good payment system which promotes an appropriate mechanism for efficiency in mobilizing and allocating financial resources in the economy. The payment system occupies an important place in the development of a country economy, in fact the level of development of a countries payment system is a reflection of the state or condition of the country’s economy (Aladwani 2001).

Rwanda payment system is paper-based and this accounts for the high level of cash in the economy (cash outside bank), the concept “payment system” has different meanings among writers the definition range from a more simple to a more complex definition. According to

Report on the survey of developments in the e-payments and services products of banks and other financial institutions in Rwanda payment system is defined as a system which consists of net works which link members, the switches for routing message and rules and procedures for the use of its infrastructure (NBR, 2008).

Anyanwaokoro (1999), in theory and policy of money and banking, payment system is defined as a system where settlement of financial obligations are done by the use of credit cards or even pressing some bottoms that transfer the amount in their bank to the account of another person through the computer. According to Orjih (1999) a payment system is defined as one which consists of different methods of payments which are checks, credit cards, Bankers drafts, standing order, documentary credits swift etc for the settlement of transactions.

2.2 Application of Electronic Banking

For many consumers, electronic banking means 24-hour access to cash through an automated teller machine (ATM) or Direct Deposit of paychecks into checking or savings accounts. But electronic banking involves many different types of transactions (Simpson 2002, Fox and Beier, 2006).

According to Simpson (2002), Fox and Beier (2006), Electronic fund transfer (EFT) is a components of electronic banking uses computer and electronic technology as a substitute for checks and other paper transactions. EFTs is initiated through devices like cards or codes that let you, or those you authorize, access your account (Fox and Beier, 2006). Many financial institutions use ATM or debit cards and Personal Identification Numbers (PINs) for this purpose. Some use other types of debit cards such as those that require, at the most, your signature or a scan. For example, some use radio frequency identification (RFID) or other forms of “contactless” technology that scan your information without direct contact. The federal Electronic Fund Transfer Act (EFT Act) covers some electronic consumer transactions (Simpson 2002, Fox and Beier, 2006).

ATMs are electronic terminals that let you bank almost any time. To withdraw cash, make deposits, or transfer funds between accounts, you generally insert an ATM card and enter your PIN. Some financial institutions and ATM owners charge a fee, particularly if you don’t have accounts with them or if you engage in transactions at remote locations. Generally, ATMs must tell you they charge a fee and its amount on or at the terminal screen before you complete the transaction. Check the requirements with your institution and at ATMs you use for more information about these fees (Simpson 2002).

Direct Deposit lets you authorize specific deposits, (like paychecks and Social Security check and other benefits) to your account on a regular basis. You also may pre-authorize direct withdrawals so that recurring bills (like insurance premiums, mortgages, utility bills, for Consumers) are paid automatically. Be cautious before you pre-authorize direct recurring withdrawals to pay companies you aren't familiar with; funds from your bank account could be withdrawn improperly. Also monitor your bank account to ensure that direct recurring payments from your account to others are for the correct amount (Simpson 2002).

Pay-by-Phone Systems let you call your financial institution with instructions to pay certain bills or to transfer funds between accounts. You must have an agreement with the institution to make such transfers (Simpson 2002). Personal Computer Banking lets you handle many banking transactions via your personal computer. For instance, you may use your computer to view your account balance, request transfers between accounts, and pay bills electronically (Simpson 2002).

Debit Card Purchase or Payment Transaction let you make purchases or payments with a debit card, which also may be your ATM card. This could occur at a store or business, online, or by phone. The process is similar to using a credit card, with some important exceptions (Fox and Beier, 2006). While the process is fast and easy, a debit card purchase or payment transfer's money – fairly quickly – from your bank account to the company's account. So it's important that you have funds in your account to cover your purchase. This means you need to keep accurate records of the dates and amounts of your debit card purchases, payments, and ATM withdrawals. Also be sure you know the store or business before you provide your debit card information to avoid the possible loss of funds through fraud. Your liability for unauthorized use, and your rights for error resolution, may be different for a debit card than a credit card (Simpson 2002).

Electronic Check Conversion converts a paper check into an electronic payment or when a company receives your check in the mail (Fox and Beier, 2006). When you give your check to a cashier, the check is run through an electronic system that captures your banking information and the amount of the check. You're asked to sign a receipt and you get a copy for your records.

When your check is handed back to you, it should be voided or marked by the merchant so that it can't be used again. The merchant electronically sends information from the check (but not the check itself) to your bank or other financial institution, and the funds are transferred into the merchant's account.

When you mail-in a check for payment to a merchant or other company, they may electronically send information from your check (but not the check itself) through the system, and the funds are transferred from your account into their account. For a mailed check, you should still receive advance notice from a company that expects to send your check information through the system electronically. For example, the merchant or other company might include the notice on your monthly statement. The notice also should state if the merchant or company will electronically collect from your account a fee – like a "bounced check" fee – if you have insufficient funds to cover the transaction (Simpson 2002).

2.2.1 Where should the real e-banking be?

First of all the bank must fully understand and appreciate the fact that the banking industry now exist, in a global village. It must therefore strive to provide local and global banking services using the infrastructure of the global village. Most current E-banking applications use the internet. The advantages of on line banking are in providing convenience and flexibility for customers (Anyawaokoro, 1999). Some online banking allows customers to get current account balances at any time. Customers do not need to wonder whether a check of has cleared or a deposit has been posted. At the click of a button, customers can easily check the status of their current savings and money-market accounts through online banking. Banks can provide immediate account enquires or statements online for customers (Casalo …et al, 2007).

2.2.1.1 Internet

Most of the applications mentioned involved the use of internet, E-banking is more than just Internet banking in the still evolving e-climate in the economy; it involves using the net to exploit new opportunities by transforming products and markets and business processes (Fox and Beier, 2006). E-banking also means developing new relationship with customers, regulatory authorities', suppliers and banking partners with digital age tools, for example, it requires all understanding. Customer/bank relationships will be more personalized resulting in novel modes of transaction processing and services delivery.

E-banking is essentially about banks using new age methods and tools to expand into new banking markets and grow. Creating a corporate online presence for your bank should be more than just buildings a website. It should be about building a web business for your bank, to do this effectively the people in charge, i.e. the CEOs not just IT directors and managers must have a deep knowledge of what E-banking culture demands (Clive, 2007).

2.2.1.2 E-business

IT or E-business or E-commerce is not about routine information management or automation, it is about using these unique tools to create opportunities, create new markets, new processes and growth or increase the creation of e- wealth (Hampton-Sosa et al. 2005). E-banking monitors the environment local and global with the aim of understanding and mastering its environment. E-banking thus involves collaboration (local and international) on payments systems, cashless transactions, digital cash and other electronic based projects.

It can be seen that other immense potentials can only be realized if bank management and staff, not just the systems staff are sufficiently literate and aware, and presently the banking industry still has a lot to do in terms of training staff. The speed of change together with the need for proper orientation for the e-world makes training even more of a necessity (Usman, 1998).

For E-banking to be effective, an area that must be addressed is security, for any IT based service associated with e-banking increases the need for security, in e-banking the core security areas should be addressed. A key concern is that of privacy. Business on the net cannot be undertaken without addressing the privacy concerns of people you do business with. It requires the existence of a privacy policy. No customer wants to click away to a negative balance. Security in online banking is typically provided through the use of an electronic Identity (ID) and password. These and other security measures must be effective to prevent not only the breach of privacy, but other security concerns like the alteration of data (Hampton-Sosa …et al. 2005).

In conclusion to be a true E-bank each bank must identify its own unique targets, focus and style. Banks needs to realize that E-banking is more than simply banking on the internet, E-banking is more than having a web-site, E-banking is about building a web business for your banks.

2.2.2 Type of Electronic Banking

Electronic banking consists of the following: mobile banking, internet banking, telephone banking, electronic card etc.

2.2.2.1 Mobile banking

Mobile banking involves the use of mobile phone for settlement of financial transactions. It supports person to person transfers with immediate availability of funds for the beneficiary. Mobile payments use the card infrastructure for movement of payment instructions as well as secure Short Message Service (SMS) messaging for confirmation of receipt to the beneficiary. Mobile banking is meant for low value transactions where speed of completing the transaction is a key. The services covered under this product include account enquiry, funds transfer, recharge phones, changing of passwords and bill payment which are offered by few institution (Sathye, 1999).

2.2.2.2 Internet banking

Internet banking involves conducting banking transactions such as account enquiry printing of statement of account; funds transfer payments for goods and services, etc on the internet (World Wide Web) using electronic tools such as the computer without visiting the banking hall. E-commerce is greatly facilitated by internet banking and is mostly used to effect payment. Internet banking also uses the electronic card infrastructure for executing payment instructions and for final settlement of goods and service over the internet between the merchant and the customer, currently the most common internet payments are for consumer bills and purchase of air ticket through the websites of the merchants (Littler, 2006).

2.2.2.3 Telephone banking

These are banking services which a customer of a financial institution can asses using a telephone line as a link to the financial institution’s computer centre. Services rendered through telephone banking include account balance funds transfer, change of pin, and recharge phones and bills payment (James, 2009).

2.2.2.4 Electronic card

An electronic card is a physical plastic card that uniquely identifies the holder and can be used for financial transactions on the internet. For instance, Automated Teller Machine (ATM) and Point-of Sales (PoS) terminal are used to authorize payment to the merchant or seller (James, 2009). The various types of electronic cards include debt, credit cards; releasable cards require visiting banks for replenishment. Debit cards are linked to local bank accounts and offer immediate confirmation of payment. Credit cards can be used to link a customer to a credit line and can also be used for accessing local and international networks and are widely accepted in most countries. The underlying infrastructure and operational rules are often provided by global trusted schemes (such as visa and master card) in addition to local lines (James, 2009).

2.3Aanalysisof performance of financial Institutions

2.3.1 Performance Measurement

Performance measurement is the process of regular and systematic data collection, analysis and reporting to be used by a firm to follow up the resources it uses, the results it obtained with the produced goods and services (Bamberger, 2003).

According Kaplan and Norton (2002), performance can be assessed by the use of the balanced score card (BSC), it addresses other aspects that do not incorporate financial measurements but rather intangible and intellectual assets such as high quality services or royal customers which are more critical to the success of the business.

According to Dixon (2000), Measuring performance aims at facilitating employee develop and for the following major purposes: to provide feedback and guidance, to set performance goals, to identify training needs and to provide input for management of pay administration, reward and promotion. The steps involved in effective performance include: identification of key performance areas and setting yearly objectives for each key performance indicator, identification of critical of attributes of effective performance, periodic review of performance, and discussion of performance with employees and identification of training and development needs.

When you run your own business or have a vested interest in one through your investments, you need to know how to evaluate its performance based on facts and numbers. There are several parts in a business to watch. Here are some tips to measure the performance of a business and make appropriate changes to achieve your goals effectively (Mercy, 2001) evaluate the assets and liabilities of the business from the balance sheet, review the cash flow to assess operating, financial and investing activities, the effects of these activities can be understood through income and expenses from the statement of income do internal comparison of cost and sales to understand if the amount of stock accumulated is increasing while sales remains stagnant, indicating poor utilization of stock. Compare the debtor and creditor values between past and present balance sheets to measure credit history, understand the customer satisfaction level through complaints and reviews from the end users, having consistency and quality in performance and reliability improves Dixon (2000), Likert (2008) opine that performance measure initiatives fail because of poor design and difficulties in its implementation. Organizational performance needs to be measured along both organizational level and work unit level requiring complementary dimensions and information for planning, tracking, analysis and improvement.

Wahab (2000) argues that performance measures must focus attention on what makes, identifies and communicate the drivers of success, support organizational learning and provide a basis for assessment and reward. Dixon (2000) adds that appropriate performance measures are those which enable the firm to direct their actions towards achieving their strategic objectives. Performance measures used are those which support the business objectives, this is because the firm's performance is central to the future well being and prosperity of an enterprise.

According to Ssejaka (1996), profitability has been the widely used measure of financial performance. Profitability is the excess of income over expenditure which can be expressed by the ratios like gross profit margin, net profit margin and return on equity. However, profit as a measure of performance has got a lot of limitations. Burns (1999) argued that profit is ambiguous as it can be looked at differently by different people for example Economists and Accountants. It also involves a lot of estimations like depreciation and stock valuation which end up giving different values according to methods used.

Drucker (1990) points out that the common accounting performance measure of profit and cost rarely support changes in the organizational structure and size, thus non financial measures like management and employee skills and their turnover must be used to fit within the strategic framework.

2.3.2 Business Performance dimensions

Business competitiveness, Herciu and Ogrean (2008) and Lopez et al.,(2005) describe competitiveness as comparison between a firm's performance and standard performance in the industry in terms of relative market share and position, sales growth and measure of customer base.

Financial performance in terms of profitability, liquidity, capital structure and market ratio, quality of services in terms of reliability, responsiveness, appearance, cleanliness/tidiness, comfort, friendliness, communication, courtesy, access and availability of security, flexibility in terms of delivery speed and specification, resource utilization in terms of productivity and efficiency, innovation (Fitzgerald et al., 2006).

2.3.3 Analyzing Banks Using CAMELS Methodology

Camels approach is use to analyze bank risk and it was developed in US. This approach helps to evaluate banks with complete coverage of factors affecting banks creditworthiness (Maheshwari, 2009). This methodology is now industry standard**.** It came in India in early 1990's, In 1995, RBI had set up a working group. A rating system for domestic and foreign banks based on the international CAMELS model was introduced

An international bank rating system where bank supervisory authorities rate institutions according to six factors. The six factors are represented by the acronym "CAMELS." C - Capital adequacy A - Asset quality M - Management quality E - Earnings L - Liquidity S - Sensitivity to Market Risk (Maheshwari, 2009).

2.3.3.1 Capital adequacy

Capital Adequacy Ratio (CAR), also known as Capital to Risk (Weighted) Assets Ratio (CRAR), is the ratio of a bank's capital to its risk. National regulators track a bank's CAR to ensure that it can absorb a reasonable amount of loss and complies with statutory Capital requirements. How much capital a bank should set aside as a proportion of risky assets, it helps to reduce the risk of default Capital adequacy is measured by the ratio of capital to risk-weighted assets (CRAR). A sound capital base strengthens confidence of depositors

2.3.3.2 Asset quality

One of the indicators for asset quality is the ratio of nonperforming loans to total loans (GNPA).The gross non-performing loans to gross advances ratio is more indicative of the quality of credit decisions made by bankers. Higher GNPA is indicative of poor credit decision-making. Hence management must follow four steps – 1. Adopt effective policies before loans are made – 2. Enforce those policies as the loans are made – 3. Monitor the portfolio after the loans are made – 4. Maintain an adequate Allowance for Loan and Lease Losses (ALLL) (Maheshwari, 2009).

2.3.3.3 Management

To asses a bank's management quality, it requires professional judgments of banks compliance to policies and procedures, aptitude for risk-taking, development of strategic plans. The performance of the other five CAMELS components will depend on the management quality. The ratio of non-interest expenditures to total assets can be one of the measures to assess the working of the management. This variable, which includes a variety of expenses, such as payroll, workers compensation and training investment, reflects the management policy stance. Another ratio helpful to judge management quality is Cost per unit of money lent which is operating cost upon total money disbursed (Maheshwari, 2009).

2.3.3.4 Earnings

The quality and trend of earnings of an institution depends largely on how well the management manages the assets and liabilities of the institution. An FI must earn reasonable profit to support asset growth, build up adequate reserves and enhance shareholders' value. It can be measured as the return on asset ratio.

2.3.3.5 Liquidity

An FI must always be liquid to meet depositors' and creditors' demand to maintain public confidence. Cash maintained by the banks and balances with central bank, to total asset ratio (LQD) is an indicator of banks liquidity. In general, banks with a larger volume of liquid assets are perceived safe, assets are perceived safe, since these assets would allow banks to meet unexpected withdrawals (Maheshwari, 2009).

2.3.3.6 Sensitivity to Market risks

The main concern for FIs is risk management. Reflects the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect a financial institution's earnings. The major risks to be examined include: – (i) market risk; – (ii) exchange risk; – (iii) maturity risk; and – (iv) contagion risk (Maheshwari, 2009).

2.3.3.7 Ratings

Rating symbol indicates: Symbol A Bank is sound in every respect B Bank is fundamentally sound but with moderate weaknesses financial, operational or compliance weaknesses that give cause for supervisory C concern. Serious or immoderate finance, operational and managerial weaknesses that could D impair future viability critical financial weaknesses and there is high possibility of failure in the near future.

2.4 Challenges faced by the banks while using E banking

The development of an efficient monetary transfer system is associated with so many factors. These problems are infrastructural deficiency such as erratic power supply and communication link especially in developing countries. In this case it requires government or organizations to provide stable and efficient power supply and telecommunication system (Oleka, 2009).

Inadequate skilled managers and requisite tools on end users and client systems, here efforts should be done in provision of infrastructure and skilled man power, another problem is the large accumulation of cash in the economy and in this the government should compel legislation that would charge the dominance of cash usage to electronic payments. Also there is high charge or cost for the e-payment terminals (ATMs) so the banking legislation should set out standard charges for e-payment services (Littler, 2006).

Non-provision of adequate security for fraud prevention, banks should endeavor to provide stand-by-camera in every ATMs machine for confirming identify of operators account and employ a good computer wizard in dictating and preventing frauds committed by computer hackers.

Lack of government support for the improvement of e-banking, there should be an involvement of central banks in public awareness campaign and escalating infrastructural challenges to the relevant government agencies.

2.4.1 Power Failure and Communication Link

Constant electric failure leads to deficiencies in infrastructures such as ATMs computers etc which slows down the rate of electronic transactions and also failure links from Nitel lines which are often as a result of spikes and surges caused consistent electronic power supply (Akinuli, 1999).

2.4.2 Lack of computer bank up

As a result of lack of computer backup when the bank system is corrupt there will be a loss of information about a customer, and this may lead to misappropriation of customers account, therefore the bank should have a manual backup (ledger) containing all data about the customers (Akinuli, 1999).

2.4.3 Lack of adequate investment capital

Funds that can be used to buy new information technologies and for modernizing existing systems is generally in short supply. While there are a number of modern banking applications in use, there is also integrated banking system, which continued to experience innovations in terms of product development specifically, and there has been tremendous improvement in the speed in which funds are transferred within and outside the domestic economy (international money transfer) (James, 2009).

2.4.4 Reduces employment in the country

Electronic banking in the country today has reduced the rate of employments in the country whereby most works that should be done by human are done by machines thereby lead to minimum rate of employment and high rate of unemployment in the country (Oleka, 2009).

2.4.5 High charges on machines

The rate of commission or charges imposed by banks is too high thereby discouraging customers from using the electronic machine for exchange of transactions example of such charges are charged on withdraw ATMs and online transfer from one bank branch to another (James, 2009).

2.4.6 Low public acceptance

Customers and public do not have trust in the machine in the sense that fraudulent personals uses the system in carryout fraudulent activities, even today banks uses the machine in looting customers money from their accounts. Some customer complains that sometimes when they go for withdraw with their ATM the machine will seize the card while their account will still be debited with un withdraw sum in course of ratification of this problem, the customer might be discouraged because it will take a longer time or end up unsolved (James, 2009).

2.4.7 Insecurities in banks

Most electronic machines today are not secure thereby making it easier for fraudulent personnel to carry out their fraudulent activities without been caught. Due to insecurity, banks cannot prevent stop or dictate any fraudulent activity. Computer hackers also use the system in stealing data or information by breaking of codes (Hodagho, 1996).

2.4.8 Encourages excessive withdrawal

Un-operational days like Saturdays when banks are not in operation customers can go and withdraw with their ATM cards, especially when there is a function like weeding ceremonies, customers with little or no money can rush to a nearby ATM machine to withdraw money for excessive spending, customers complained about this in an interview conducted by banks (James, 2009).

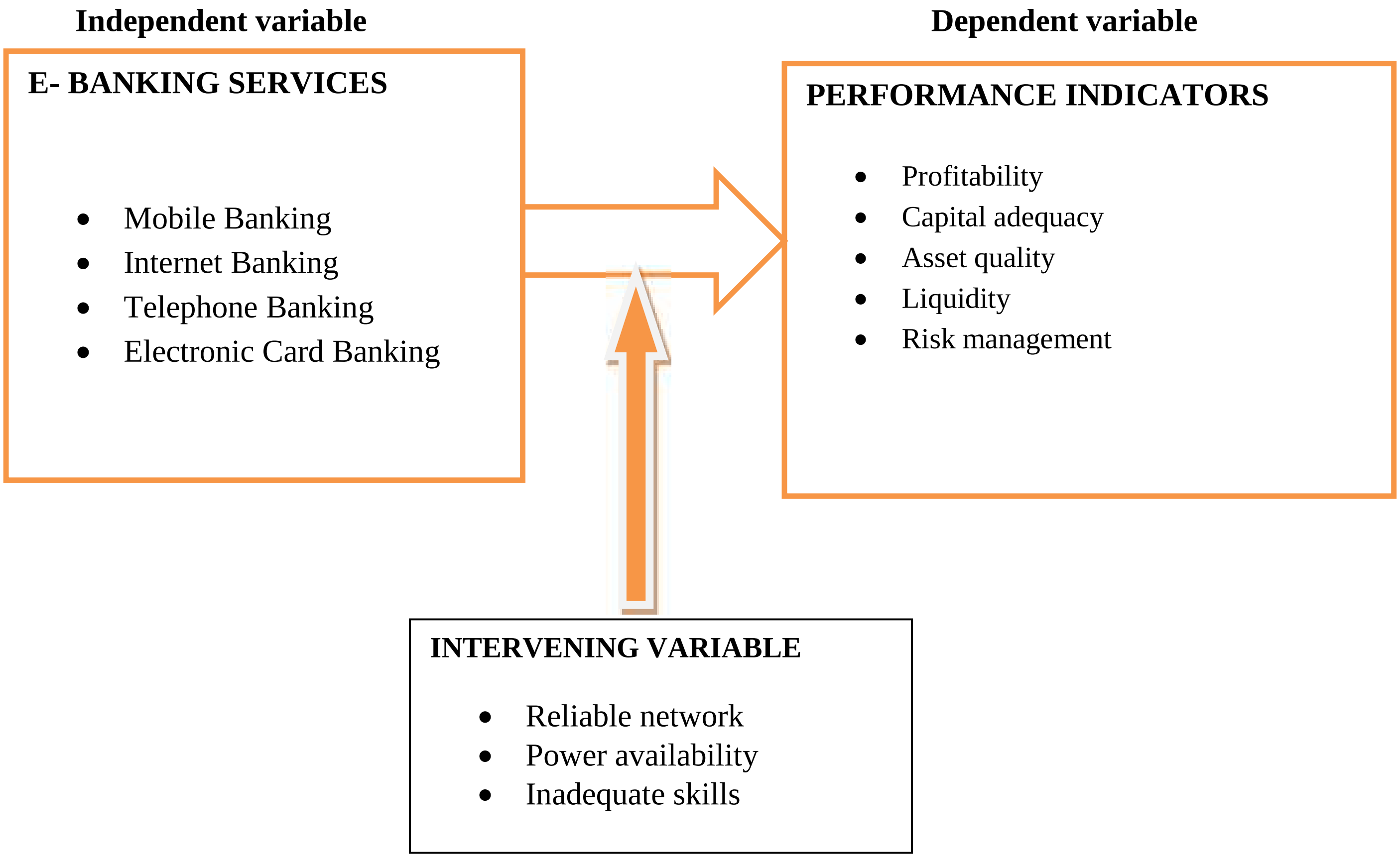
2.5 Critical review and gap in the literature

Commercial banks assaulted by the pressure of globalization and competition from nonbanking new ways to add value to the services. The question of what drives performance is at the top in understanding superior performance and hence striving for it. Substantial research efforts have gone into addressing this question, starting from the strategic level and going down to operational details. A key study bench marking the strategies of leading retail banks was carried out by the bank strategies of leading retail banks (Vander Velde 1992). This study is based on the opinions of heads of retail banks at all commercial banks established the linkage between marketing, operations, organizing excellence. This finding led to the formulation of the service management strategy encapsulated in the trail operational capabilities service quality-performance, (Foth and Jackson 1995). The capabilities service quality-performance trail is, in turn, a focused view of the service profit chain described by (Heskettet all, 1994) based on their analysis of successful service organizations.

However for the case of Rwanda in spite of banks trying to enforce the e banking services Rwanda is still faced with come challenges which need to be addressed in order to promote effective and efficient banking performance and these are: The development of an efficient monetary transfer system in Rwanda has been hampered by so many factors. Rwanda is faced with infrastructural deficiency such as erratic power supply and communication link in some areas, inadequate skilled managers and requisite tools on end users and client systems, high charge or cost for the e-payment terminals (ATMs) so the banking legislation should set out standard charges for e-payment services. Hence these factors are believed to hampered e banking services performance in the country hence affecting banks performance. It should also be noted no substantial academic research has been done in Rwanda especially on performance of commercial banks hence the researcher would like to examine the impact of e banking on performance of commercial banks in Rwanda despite of the above factors in order to come up with recommendations to improve on e banking services in the country.

2.6 Conceptual Framework

Figure 2.1 Conceptual framework



Source: Researcher Compilation

The above concept implies that E banking types such as Mobile Banking, Internet Banking, Telephone Banking, and Electronic Card Banking improves banks profitability, liquidity, asset quality, earnings, and risk management especially if other factors remain constant and this factors include network coverage, reliable internet service provider, adequate skills on how to use the system, government policy on IT, power supply and many other connections.

2.7 Summary

Information technology generates fundamental changes in the nature and application of technology in business. Information Communication Technologies (E banking) can provide powerful strategic and tactical tools for organizations including banks, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness. The proliferation of the different e banking tools like Internet, is a main stream communication media and as an infrastructure for business transactions has generated a wide range of strategic implications for businesses in general as well as for the banking industries in particular (Li-Hua and Khalil, 2006). Internet technology and web based commerce have dramatically transformed the banking in the decade (Werthner and Klein, 2005). Information and Communication Technologies (ICT)have always played a predominant role in the banking sector performance(Poon, 2003) but with the advent of the Internet and open source technology their impact is becoming increasingly more crucial and evident (Buhalis, 2004; Jacobsen *et al*., 2008).

CHAPTER 3

RESEARCH METHODOLOGY

3.0. Introduction

This chapter indicates various methods and techniques used by the researcher during the course of gathering relevant information from the field. It also desecribes methods and techniques used i.e. Research design, target population, sample design, data collection procedures and data analysis.

3.1 Research Design

According to Kothari (2008), research design is the conceptual structure within which research is conducted, it constitutes the blueprint for the collection, measurement and analysis of data as such the design includes an outline of what the researcher did from writing the hypothesis and its operational implications to the final analysis of data.

The researcher used a descriptive research design, where qualitative and quantitative approach will be used. In quantitative approach the researcher employed data in form of numbers collected from employees on e banking and performance of financial institutions. Qualitative was used through interviews in order to describe the activities and its impact of e banking on performance of financial institutions.

3.2 Target Population

All the items under consideration in any field of inquiry constitute a ‘universe’ or ‘population’. It can be presumed that in such an inquiry when all the items are covered no element of chance is left and highest accuracy is obtained (Kothari, 2004).

The case study of this research is Bank of Kigali and the population 50 comprising of bank of Kigali employees from head office especially from the department of accounting and finance, audit and Information technology.

3.3 Sample design

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample (Kothari, 2004).

3.3.1 Sampling Technique

Stratified sampling technique was used to choose department to be investigated and this followed Census and purposive whereby the researcher took the whole population which is 44 out of 50 staff members: administration, Information technology, internal audit, risk management, staff from finance department of the institution was chosen to take part in the research; this information can be illustrated as follows:

Table3.1: Justification of the target population and Sample design to be used

Department	Population	Sample size	Sampling design
Electronic Banking	8	8	Census
Administration	14	8	Census
Risk and Audit	8	8	Census
Finance and accounting	22	20	Purposive
Total	50	44	

Source: Bank of Kigali (2015)

With this kind of technique, the researcher is certain to include elements that are presumed to be typical of a given population about which the researcher seeks information. According to Black (1976), census does not involve any random selection process. Further, according to Welman and Kruger (2001), the advantage of non-probability sampling is that it is economical and less complicated. Purposive sampling procedure was used because the researcher believes it is convenient and time saving. Purposive sampling techniques were used in the sample selection in order to enable the researcher pick respondents who meet the purposive of the study. The members were purposively selected depending on their ability to easily analyze and understand the problem of study. Also a fair representation from each office and the stakeholders were considered when sampling.

3.3.2 Sample size determination

When it is not possible to study an entire population but the population is known, a smaller sample is taken using a random sampling technique. Krejcie and Morgan (1970) formula allows a researcher to sample the population with a desired degree of accuracy (Krejcie and Morgan, 1970). The formula was used to calculate the sample size. “Table for determining needed size S of a randomly chosen sample from a given finite population of N cases such that the sample proportion p was within ± .05 of the population proportion P with a 95 percent level of confidence" Krejcie, & Morgan (1970). For this case the sample size of a population of 50 was44 as seen in table below.

Table 3.1: Sample selection and Size

Total	Sample	Total	Sample	Total	Sample
10 ⇒	10	220 ⇒	140	1200 ⇒	291
15 ⇒	14	230 ⇒	144	1300 ⇒	297
20 ⇒	19	240 ⇒	148	1400 ⇒	302
25 ⇒	24	250 ⇒	152	1500 ⇒	306
30 ⇒	28	260 ⇒	155	1600 ⇒	310
35 ⇒	32	270 ⇒	159	1700 ⇒	313
40 ⇒	36	280 ⇒	162	1800 ⇒	317
45 ⇒	40	290 ⇒	165	1900 ⇒	320
50 ⇒	44	300 ⇒	169	2000 ⇒	322
55 ⇒	48	320 ⇒	175	2200 ⇒	327
60 ⇒	52	340 ⇒	181	2400 ⇒	331
65 ⇒	56	360 ⇒	186	2600 ⇒	335
70 ⇒	59	380 ⇒	191	2800 ⇒	338
75 ⇒	63	400 ⇒	196	3000 ⇒	341
80 ⇒	66	420 ⇒	201	3500 ⇒	346
85 ⇒	70	440 ⇒	205	4000 ⇒	351
90 ⇒	73	460 ⇒	210	4500 ⇒	354
95 ⇒	76	480 ⇒	214	5000 ⇒	357
100 ⇒	80	500 ⇒	217	6000 ⇒	361
110 ⇒	86	550 ⇒	226	7000 ⇒	364
120 ⇒	92	600 ⇒	234	8000 ⇒	367
130 ⇒	97	650 ⇒	242	9000 ⇒	368
140 ⇒	103	700 ⇒	248	10000 ⇒	370
150 ⇒	108	750 ⇒	254	15000 ⇒	375
160 ⇒	113	800 ⇒	260	20000 ⇒	377
170 ⇒	118	850 ⇒	265	30000 ⇒	379
180 ⇒	123	900 ⇒	269	40000 ⇒	380
190 ⇒	127	950 ⇒	274	50000 ⇒	381
200 ⇒	132	1000 ⇒	278	75000 ⇒	382
210 ⇒	136	1100 ⇒	285	100000 ⇒	384

Krejcie and Morgan (1970) Sample size for a population of 50 is 44.

3.4 Data Collection Instrument

3.4.1Questionnaires

This is an important method of data collection. Judd (1991) said that a questionnaire is justifiable in data collection mainly because; it enables the researcher to collect large amount of data within a short time period, it also provides opportunity for respondents to give frank, anonymous answers. One set of questionnaire was designed for the community members; it included both open and closed ended set of questions that to be answered. The questionnaire was written in a simple and clear language for the respondent to feel free while answering. In addition to that the use of questionnaire is considered vital to the research since it provides accurate information regarding the study.

3.4.2 Documentary Review

This research also reviewed literature obtained from the case study organization. This literature included bank financial statement, annual reports and other reports from the bank. This method was chosen because; it is vital in providing background information and facts about e banking on performance of the bank before primary data could be collected. Indeed, before field data is collected, a wide collection of data had been collected and this was used to cross check with the primary data that is to be obtained by the field.

3.5 Validity and Reliability

The validity of data was checked before processing the results. This helped to establish the reliability of the tools to be used in data collection. This was done by pre-testing the questionnaires using sample of 5 respondents, similarly interview guide was checked by interviewing 5 respondents. This process is aided correction of the mistakes and errors within the tools of data collections to verify how they are reliable to produce significant information from the field. The reliable data was got and this minimized statistical errors.

3.6 Data Analysis

The data collected was processed and analyzed using SPSS. This involved data coding, editing and tabulation especially quantitative data. The purpose of all these is to make the information clear and understandable for other people. Qualitative analysis techniques were used. The Qualitative analysis techniques were complemented with some statistics that were mainly obtained from the secondary data that were obtained through documentary analysis from the case study organization. A few statistics to be obtained from the primary data and was included in this research.

3.6.1 Coding

To ensure that all answers are coherently and logically recorded to provide consistent information in order to facilitate the understanding of phenomenon and cross check the data collected, the process of editing and coding was considered. The responses to the questionnaire were analyzed descriptively and reported as frequency of responses and percentages and later is analyzed and interpreted using tables.

3.6.2 Editing

The editing helped the researcher to examine data, detect any errors and omission, and to correct them where possible. This was done through checking, inspection, correcting and modifying collected data to ensure the completeness, accuracy, uniformity and comprehensiveness.

3.6.3 Tabular presentation

Tabular presentations was used for presentation of data inform of frequency and percentages. The graphs indicate the number of occurrence of responses to particular questions statically. The researcher used SPSS software to analyze data and the presentations were in tables and graphs. Graphical presentations gives clear understanding of the research interpretations for clear and easy understanding of the phenomenon studied.

The Mean ($\overline{X}$)

According to Aggresti (2009), Mean ($\overline{x}$): is the average value calculated by adding up the values of each case for a variable and dividing by the total number of cases.

$$\overline{X} = \frac{1}{n}\sum_{i=1}^{n} xi$$

Where, $\overline{X}$ = mean; n = number total of respondents;

xi = scale value of respondent

Table 3.2: Evaluation of Mean

Mean	Evaluation
1.00 -2.49	Very weak
2.50 -3.49	Weak
3.50 -4.49	Strong
4.50 - 5.00	Very Strong

Source: Aggresti (2009)

Standard deviation (SD)

The standard deviation is a value which indicates the degree of variability of data. It indicates how close the data is to the mean. The formula of standard deviation is: $(S) = \sqrt{S^2}$ Where,

$$S^2 = \frac{1}{n-1}\sum_{i=1}^{n}(xi - \overline{X})^2$$

Table 3.3: Evaluation of standard deviation

Standard Deviation	Level spreading
SD<0.5	Homogeneity
SD>0.5	Heterogeneity

Source: Aggresti (2009)

Pearson Correlation test: The Pearson correlation coefficient is a very useful way to measure the statistical relationship that exists between independent and dependent variables.

Table 3.4: Evaluation of corrélation

Correlation coefficient (positive or negative)	Label/positive or negative
r=1	Perfect linear correlation
0.9 < r < 1	Positive strong correlation
0.7 <r < 0.9	Positive high correlation
0.5 < r < 0.7	Positive moderate correlation
0< r < 0.5	Weak correlation
r=0	No, relationship
-1 <r = < 0	Negative relationship

Source: (Saunders, 2003)

CHAPTER 4

RESEARCH FINDINGS AND DISCUSSION

This chapter presents empirical findings in reference to the research questions in chapter one. These findings were obtained from both primary and secondary sources. They were presented and analyzed using frequency tables and percentages were used to determine the contribution of e banking on performance of Bank of Kigali.

4.1 Profile of the Respondents

4.1.1 Gender of the respondents

Table 4.1 shows gender of the respondents

Table 4.1: Gender of the respondents

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	18	40.9	40.9	40.9
	Female	26	59.1	59.1	100.0
	Total	44	100.0	100.0	

Source: Primary Data, 2015

From table 4.1 show that, 59.1% were female while 40.9% were males. This shows that respondents were more male than female. This was confirmed by the responses from the questionnaires filled where males were more than females. More significantly it shows that data obtained is free of gender bias.

4.1.2 Age structure of the respondents

Table below shows age structures of the respondents

Table 4.2: Age structure of the respondents

Age group		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21 - 30	4	9.1	9.1	9.1
	31 - 40	24	54.5	54.5	63.6
	41 - 50	13	29.5	29.5	93.2
	50 and above	3	6.8	6.8	100.0
	Total	44	100.0	100.0	

Source: Primary Data, 2015

From table 4.2 shows that, 54.5% of the respondents were between 31 - 40, 29% were between 41 – 50, 9.1% between 21 - 30 and 6.8% above 50 years. This implies that there was fair representation of the population as almost all classes were represented and the data provided reflected the views of the entire population and the majority of the respondents are matured which means they can give a matured view.

4.1.3 Educational level of the respondents

Table 4.3 shows educational level of the respondents

Table 4.3: Educational level of the respondents

Educational Status		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Degree	29	65.9	65.9	65.9
	Master	11	25.0	25.0	90.9
	Professionals	4	9.1	9.1	100.0
	Total	44	100.0	100.0	

Source: Primary data, 2015

From table 4.3 shows that, 65.9% of the respondents were first degree holders, 25% was 13% was masters and 9.1% professionals. This implies that the respondents are educated which means could read, understand and interpret questionnaires reliably. The data collected was believed to be reliable and was thus processed to present findings.

4.1.4 Experience level of the Respondents

Table 4.4 shows experience of the respondents

Table 4.4: Experience level of the respondents

Experience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 -3 years	5	11.4	11.4	11.4
	3 -4 years	15	34.1	34.1	45.5
	5 years and above	24	54.5	54.5	100.0
	Total	44	100.0	100.0	

Source: Primary data, 2015

From table 4.4 shows that, 54.5% of the respondents had served in Bank of Kigali for a period of 5 years and above, 34.1% between 3 – 4 years and 11.4% for a period between 2-3 years. This implies that almost all respondents had taken reasonably enough time in service and thus the data they provided was believed to be reliable.

4.2 Electronic Banking Tools used by Bank of Kigali

4.2.1 Application of E banking by Bank of Kigali

Table 4.5 shows respondents views on different ways Bank of Kigali applies e banking

Table 4.5Application of E banking by Bank of Kigali

E Banking application		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mobile banking	12	27.3	27.3	27.3
	Internet banking	9	20.5	20.5	47.7
	Telephone banking	11	25.0	25.0	72.7
	Electronic banking	12	27.3	27.3	100.0
	Total	44	100.0	100.0	

Source: Primary data, 2015

Table 4.5 shows application of E banking in bank of Kigali, 27.3% of the respondents says the bank applied E banking through mobile banking, 27.3% electronic card banking, 25% telephone banking and 20.5% internet banking. This implies that bank of Kigali applies electronic banking in different ways ranging from mobile, internet telephone and electronic cards. This is a good sign of service delivery to the customers and improves bank performance forthwith especially if well utilized.

4.2.2 Types of E banking in bank of Kigali

The table 4.6 shows respondents views on the types of E -banking in Bank of Kigali

Table 4.6: Types of E banking in Bank of Kigali

Types of E -banking in bank of Kigali	Response									
	Strongly agree		Agree		Disagree		Strongly Disagre		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
ATM	20	45.5	24	54.5	-	-	-	-	44	100
Pay direct	23	52.3	21	47.7	-	-	-	-	44	100
Visa or debit card	19	43.2	25	56.8	-	-	-	-	44	100
Telephone banking	28	63.6	16	36.4	-	-	-	-	44	100
Electronic check payments	16	36.4	28	63.6	-	-	-	-	44	100

Source: Primary data, 2015

The table 4.6 shows the perceptions of respondents on types of E -banking in bank of Kigali and there responses were as follows.

Presentation on ATM shows that all the respondents (100%) agreed that ATM is used by clients of bank of Kigali. This means that ATM is one of the E banking services commonly used by clients of Bank of Kigali as it is unanimously accepted by the respondents. ATMs are electronic terminals that let you bank almost any time. To withdraw cash, make deposits, or transfer funds between accounts, you generally insert an ATM card and enter your PIN. Therefore it provides convenience in banking.

The Pay direct is another type of E banking used by clients of bank of Kigali and as seen in the presentation in table 4.6, where all the respondents accepted. Direct Deposit lets you authorize specific deposits, (like paychecks and Social Security check and other benefits) to your account on a regular basis. You also may pre-authorize direct withdrawals so that recurring bills (like insurance premiums, mortgages, utility bills, for Consumers) are paid automatically.

The Phone banking was represented by 100%, meaning that respondents agreed that phone banking solutions are used by bank of Kigali clients. Pay-by-Phone Systems let you call your financial institution with instructions to pay certain bills or to transfer funds between accounts. You must have an agreement with the institution to make such transfers (Simpson 2002).

All the respondents (100%) accepted that Bank of Kigali uses Visa or debit card is used for deposit and withdrawals from the bank. Debit Card Purchase or Payment Transaction let you make purchases or payments with a debit card, which also may be your ATM card. This could occur at a store or business, online, or by phone. The process is similar to using a credit card, with some important exceptions (Fox and Beier, 2006). While the process is fast and easy, a debit card purchase or payment transfer's money – fairly quickly – from your bank account to the company's account. So it's important that you have funds in your account to cover your purchase. This means you need to keep accurate records of the dates and amounts of your debit card purchases, payments, and ATM withdrawals. Also be sure you know the store or business before you provide your debit card information to avoid the possible loss of funds through fraud.

Lastly, the respondents also stated that electronic check payments are used by Bank of Kigali a client who implies for example it is used in bill payment and e shopping from super market. Electronic Check Conversion converts a paper check into an electronic payment or when a company receives your check in the mail. When you give your check to a cashier, the check is run through an electronic system that captures your banking information and the amount of the check. You're asked to sign a receipt and you get a copy for your records (Fox and Beier, 2006).. When your check is handed back to you, it should be voided or marked by the client so that it can't be used again. The merchant electronically sends information from the check (but not the check itself) to your bank or other financial institution, and the funds are transferred into the clients account.

In general it can be concluded that bank of Kigali have varieties of e banking services for their clients in order to provide effective and efficient service delivery.

4.2.3 Roles of E banking in bank of Kigali

The table 4.7 shows respondents views on the roles of E -banking in bank of Kigali

Table 4.7: Roles of E banking in bank of Kigali

Roles of E -banking in bank of Kigali	**Response**									
	Strongly agree		**Agree**		**Disagree**		**Strongly Disagree**		**Total**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Depositing	22	50.0	22	50.0	-	-	-	-	44	100
Withdrawals	44	100	-	-	-	-	-	-	44	100
Making payments	20	45.5	24	54.5	-	-	-	-	44	100
Checking account balance	24	54.5	20	45.5	-	-	-	-	44	100

Source: Primary data, 2015

The table 4.7 shows the perceptions of respondents on roles of E -banking in bank of Kigali and there responses were as follows.

Presentation shows all the respondents (100%) agreed that electronic banking is used for depositing of cash and check in the bank. This implies than the clients use electronic banking for payment of cash AMT machine, telephone banking, pay direct and visa or debit card transfer.

The respondents further stated that they also use electronic banking for withdrawal of money from accounts since it is more convenient because a client can transact a business where ever he or she is most especially with mobile banking services where mobile telephone is used.

E banking also help bank clients to authorize payments directly from the bank for example purchase form supermarket, payment of electricity and water bills. This makes it convenient for the bank, account owners and the supplier of goods.

Checking balance another transaction performed by electronic banking where by clients can use ATM, mobile banking and internet banking to check for their balance direct from the bank and this can allow clients to make a decision on how much to deposit or withdraw.

Therefore it can be concluded that e banking promotes effectiveness and efficiency in service delivery since clients can be able to withdraw and deposit money, authorizes payment and check account balance at ease.

4.3 Performance of Bank of Kigali

4.3.1 Ascertaining performance of bank of Kigali for the last 5 years

Table 4.8 shows how Bank of Kigali has been performing for the last five years

Table 4.8: Performance of bank of Kigali

Response		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	26	59.1	59.1	59.1
	Very Good	18	40.9	40.9	100.0
	Total	44	100.0	100.0	

Source: Primary data, 2015

All the respondents (100%) stated that performance of bank of Kigali for the last five years was good. This implies that the bank has been performing well for the last five years.

4.3.2 Findings on banks market share among other commercial banks

All the respondents agreed that BK owns more than 20% of share of commercial Banking industries in Rwanda. Secondary data shows that BK is the market leader controlling 32.8% of total industry asset, 28.2% of loans, 30.2% of deposit and 42.8% of total industry equity (BNR, 2012).

4.3.3 Findings on banks ranking according to National Bank of Rwanda.

The table shows banks ranking according to National Bank of Rwanda

Table 4.9: Banks ranking according to National Bank of Rwanda

Requirements	**Ranking**
Total asset	1st
Net loans offered	1st
Customers deposit	1st
Equity	1st
Overall ranking in the industry	1st
Total	**44**

Source: Primary data, 2015

From table 4.9 shows that, all the respondents (100) agreed% banks of Kigali ranking according to National Bank of Rwanda among other banks especially in the following areas; Total assets, net Loans offered, customers deposits, equity and overall Ranking in Industry is number one. This implies that in banks ranking according to National Bank of Rwanda, bank of Kigali is the best.

4.3.4 Bank of Kigali Market share compared to other banks in the last five years (2008-2012)

Table shows bank of Kigali market share for the last five years from 2008 to 2013 in order to ascertain bank of Kigali economic performance in terms of **total assets, loans, deposits** and **equity** (figures in Billions)

Table 4.10: Bank of Kigali Market share comparison for the year 2008

BANKS	**TOTAL ASSETS**	**LOANS**	**DEPOSITS**	**EQUITY**
BK	**121 871**	**72 094**	**93 838**	**12 897**

Source: BNR, 2008

As shown in the table 4.5, BK is the one leading in total asset, loans, deposit and equity compared to other licensed commercial Banks in Rwanda in 2008.

Table 4.11: Bank of Kigali Market share comparison for the year 2009

BANKS	TOTAL ASSETS	LOANS	DEPOSITS	EQUITY
BK	152.0	77.0	109.0	21.0
UBPR	110.0	69.0	86.0	16.0
BCR	88.0	34.0	65.0	8.0
ECOBANK	62.0	29.0	45.0	9.0
ACCESS	53.0	26.0	44.0	5.0
FINA	48.0	25.0	35.0	6.0
COGEBANQUE	46.0	24.0	32.0	8.0
KCB	16.0	4.0	8.0	5.0

Source: BNR, 2009

Table 4.12 shows that BK is leading in market shares during the year 2009 as far as total asset, total loan, total deposit and total equity is concerned as seen above. The analysis shows that BK is leading and followed by BPR with a margin of total assets 42 billion, total loans 8 billion, total deposit 23billion and total equity is 5 billion. This implies that BK performance inform total assets, total loans, total deposit and total equity for the year 2009 was above all other commercial banks in Rwanda hence very good performance.

Table 4.13: Bank of Kigali Market share comparison for the year 2010

BANKS	TOTAL ASSETS	LOANS	DEPOSITS	EQUITY
BK	198.0	101.0	136.0	32.0
UBPR	138.0	78.0	103.0	19.0
ECOBANK	89.0	33.0	68.0	9.0
BCR	85.0	28.0	64.0	11.0
FINA	53.0	25.0	39.0	6.0
COGEBANQUE	57.0	25.0	39.0	9,0
KCB	54.0	13.0	32.0	6.0
ACCESS	48.0	18.0	41.0	6.0

Source: BNR, 2010

Like in table 4.12, table 4.13 still shows that BK is the leading in market shares for the year 2010 in all aspects as indicated in the above table i.e. total assets 198.0 billion; total loans 101.0 billion, total deposits 136.0 billion and equity of 32.0 billion. The analysis shows that in 2009 BK compared to the next in the queue which by UBPR, the margin of total assets was 60 billion, total loans 23 billion, total deposit 33billion and total equity is 13 billion. This implies that BK performance inform total assets, total loans, total deposit and total equity for the year 2010 has improved compared to the previous years and above all other commercial banks in Rwanda hence very good performance as per respondents response.

Table 4.14: **Bank of Kigali Market share comparison for the year 2011**

BANK	TOTAL ASSETS: 287.9	LOANS: 123.1	DEPOSITS: 181.0	EQUITY: 61.5,
BK	30.9	31.4	29.4	31.6
UBPR	18.8	23.2	18.8	19.1
ECOBANK	12.3	9.2	11.4	8.6
BCR	11.9	9.3	12.6	11
COGEBANQUE	7.8	8.2	7.6	8.4
FINA	7.2	8.3	7.7	6.2
ACCESS	6.2	4.5	7	6.1
KCB	6.0	5.9	5.6	9.0

Source: BNR, 2011

Banks in Rwanda are graded according to their market share, total assets, deposits, loans and profitability as the table shows. As shown by the table 5, BK is the one leading in total asset, loans, deposit and equity compared to other licensed commercial banks in Rwanda in 2011.

Table 4.15: **Bank of Kigali Market share comparison for the year 2012**

Bank	**Total Loans**	**Total Deposits**	**Total Assets**
BK	101,402	135,678	197,748
BPR	79,002	104,580	138,161
ECOBANK	35,071	73,549	92,564
BCR	28,397	64,377	85,379
COGEBANK	25,553	44,536	57,894
FINA	25,266	41,103	54,183
ACCESS	17,512	39,464	53,828
KCB	13,397	38,585	47,948

Source: (BK, 2012)

The size of the bank and its market share provides it with specific opportunities that enable it to harness economies of scale and to efficiently meet its obligations to its customers with BK leading with 101,402billion in total loans 135,678 billion of total deposits and 197,748 billion of assets and followed by other banks as shown in the table above. Commercial banks gain economic profitability and competitive advantage as a result of the following factors. The table below shows changes in total assets, net loans, deposits, Share holder's equity, net income and market share between 2008 and 2012.

4.3.5 Consolidated Progressive Performance of BK from 2008 to 2012

Table shows BK consolidated Progressive Performance in terms of its total assets, deposits, equity, loans, and net profit for the period 2008 to 2012.

Table 4.16: Consolidated Progressive Performance of BK from 2008 to 2012

Items	Year: 2008	2009	2010	2011	2012
Assets	216.0	265.0	333.0	476.0	512.0
Deposits	129.0	135.0	170.0	204.0	294.
Loans	168.0	192.0	228.0	293.0	331.0
Equity	28.0	32.0	54.0	102.0	100.0
Profit	10.0	9.0	10.0	14.0	19.0

Sources: BK (2008-2012)

As shown in table 4.10, BK consolidated Progressive Performance in terms of its total assets, deposits, equity, loans, and net profit for the period 2008 to 2012 has been steadily progressing. For example from 2008 to 2009 assets increased by 9 billion, 2009 to 2010 it increased by 68 billion, 2010 to 2011 it increased by 143 billion and 2011 to 2012 it increased by 36 billion. This implies that total asset increased steadily from 2008 to 2010 but however there was a sharp increase in 2011 which was believed to be due to sale of shares and loans obtained by the bank. The increased further normalized in 2012.

Analysis of the consolidated total deposit shows that there is an increased in the total deposit from 2008 to 2009 by 6 billion, from 2009 to 2010 by 35 billion, 2010 to 2011 by 34 billion and 2011 to 2012 by 90 billion. This implies that they have steady increase in total deposit and through the years which is believed to be due to extensive marketing which led to opening of more branches and good customer relation services as well.

Total consolidated loans for the respective year's shows that from 2008 to 2009 increment were by 24 billion, from 2009 to 2010 by 36 billion, from 2010 to 2011 by 65billion and from 2011 to 2012 by 38 billion. This implies that the was steady increase in total loan from 2008 to 2010 but however in 2011 experienced sharp increase which is believed to be due to shares sold and loans acquired by the bank.

Total equity increased from 2008 to 2009 by 4 billion, 2009 to 2010 by 22 billion, 2010 to 2011 by 48 billion and 2011 to 2012 it decreased by 2 billion. This implies equity increased in from 2008 to 2011 but had a decline of 2 billion in 2012, which is believed to be due to shares being sold to share holders and loans.

Therefore it can be summarized that generally the performance of BK was good for the respective years discussed above.

4.3.6 Instrument used to measure the working efficiency of the Bank of Kigali

Table below shows the instruments used to measure the working efficiency of the Bank of Kigali

Table 4.17: Instruments used to measure the working efficiency of the Bank of Kigali.

Indicators	**2008**	**2009**	**2010**	**2011**	**2012**
Gross Loan Portfolio	56.6	78.8	80.9	105.5	115.9
Customer Deposits Growth	101.9	93.8	109.5	135.7	176.1
Net loans/Customer Deposits,%	54.8%	47.8%	76.8%	70.4%	63.2%
Number of loan Accounts	1,619	1,823	1,567	2,757	3,556
Number of Deposits Accounts	4,813	5,236	4,968	5,873	9,197
Profitability (Net interest Margin, %)	9.5%	9.2%	8.7%	8.4%	8.3%
Profitability (Cost /Income, %)	39.5%	39.8%	44.1%	47.5%	48.9%

Source: BK (2012)

As far as efficiency in bank of Kigali operations are concerned table 4.11 shows that there were increase in all the required indicators for example there was steady increase gross loan portfolio, customer deposit growth, number of deposit accounts and profitability (Cost/income%) from 2008 to 2012. There was fluctuations in Net loan/customer deposit from 2008 to 2012 which is believed to be due to global financial crisis in 2009 and sales of shares and external loans in 2011 and 2012, number of loan accounts increase steadily though there was little decline in 2010 which is believed to be due to loan management issues and lastly fluctuation in profitability (net interest margins) during the year especially from 2010 to 2012 is believed to be due the expansion program of opening new branches around the country.

4.3.7 Bank of Kigali Funding Structure

Table shows Bank of Kigali funding structure from 2008 to 2009

Table 4.18: BK funding structure

Funding structure	2008	2009	2010	2011	2012
Deposits	84%	78%	72%	69%	71%
Due to banks	3%	6%	10%	9%	7%
Shareholder's Equity	11%	13%	12%	16%	14%
Other	2%	3%	6%	6%	8%

Source: BK (2012)

The researcher found out that deposit is the primary source of funding with share of demand deposits exceeding 70% as of June 2012, followed by share holder's equity and due to the bank. In further analysis of secondary data the researcher found out that the bank also signed two long-term credit lines with the European Investment Bank and the French Development Agency worth 5 million euros for 7years and $20 million for 10 years respectively. The bank is currently negotiating another $12 million senior loan with another international development financial institution.

As can be seen from the figure 4.18 shows the trend of the BKs' performance has shown an erratic trend. In 2008 the average bank performance was 1.63, 18.20 and 6.15 as expressed by ROA, ROE and NIM respectively. In 2008 the above figures declined to 1.05, 7.18 and 5.34 respectively. One of the possible reasons for the decline in performance is the liquidation of a bank in the year. These figures, again increased in 2009, may be due to the significant reduction of non-performing loans from 5% to 3,4%. Performance declined in 2009 may be because of the effect of global economic crisis and its effect on the domestic one. Again performance improved in 2010 after the recovery. Nevertheless, on average the performance of commercial banks in the country has been increasing. Compared to the financial performances of banks in the country, the overall financial performance of commercial banks in the country is good. This shows that investments in commercial banking in Rwanda are profitable and it is an avenue to attract foreign direct investment (FDI) in the sector.

4.4 Contribution of E banking on Performance of Bank of Kigali

Table 4.19 shows respondents views on Contribution of E banking on Performance of Bank of Kigali.

Table 4.19: Contribution of E banking on Performance of Bank of Kigali

Performance measures of Bank of Kigali	Response									
	Strongly agree		**Agree**		**Disagree**		**Strongly Disagree**		**Total**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Increased Profit	36	81.8	8	18.2	-	-	-	-	44	100
Customers Satisfaction	32	72.7	12	27.3	-	-	-	-	44	100
Improved Management Quality	31	70.5	13	29.5	-	-	-	-	44	100
Increased banks Asset	32	72.7	12	27.3	-	-	-	-	44	100

Source: Primary Data, 2015

The table 4.19 shows the perceptions of respondents on the contribution of E banking on Performance of Bank of Kigali.

All the respondents (100%) agreed that the bank profit has been increasing for the last five years. This means that the bank profit has been increasing as seen by secondary data in table 4.17 indicating the bank profit increment from 2008 to 2012.

Customer's satisfaction presentation indicates that all the respondents agreed that customers were satisfied with the bank service and this can be reflected in the bank return on investment profit they have accrued over years as shown in table 4.17.

All the respondents agreed that the management quality of the bank good and this was reflected in financial report as shown in table 4.17.To asses a bank's management quality, it requires professional judgments of banks compliance to policies and procedures, aptitude for risk-taking, development of strategic plans

Lastly the response on bank asset indicated that bank asset increased and can be verified in the financial report in table 4.17.

4.4 Challenges of Electronic Banking in Bank Of Kigali

Table 4.20 shows challenges the bank face in having effective e banking system in place.

Table 4.20: Challenges of Electronic Banking in Bank of Kigali

Challenges		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Power problem	12	27.3	27.3	27.3
	Network reliability	15	34.1	34.1	61.4
	Security issues	8	18.2	18.2	79.5
	Inadequate skill	9	20.5	20.5	100.0
	Total	44	100.0	100.0	

Source: Primary Data, 2015

Challenges hindering the implementation of electronic banking system in bank of Kigali are ranging from network reliability meaning that there is a network problem as a result clients face challenge to use e banking facility. Internet coverage is also a problem because some locations and clients do not have internet facility. Some clients also have skills on how to operate the e banking equipments and this pose threat on performance of the bank. And lastly there is also security issues as the system can be accessed by hackers and this poses a threat to both customers and bank inform of losses and confidentiality of clients information.

4.5 Relationship between E banking and performance of bank of Kigali

Table 4.21 shows relationship between E banking and Performance of bank of Kigali

Table 4.21 Relationship between E banking and performance of bank of Kigali

Correlations of Independent and Dependent Variable		E banking	Performance of bank of Kigali
E banking	Pearson Correlation	1	.656**
	Sig. (2-tailed)		.000
	N	44	44
Performance of bank of Kigali	Pearson Correlation	.656**	1
	Sig. (2-tailed)	.000	
	N	44	44

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

The table 4.21 is giving the relationship between E banking and Performance of bank of Kigali in Rwanda whereby the respondents N is 44 and the significant level is 0.01, the results indicate that independent variable has positive high correlation to dependent variable equal to .656** and the p-value is .000 which is less than 0.01. When p-value is less than significant level, therefore researchers conclude that variables are correlated and null hypothesis is rejected and remains with alternative hypothesis. This means that there is a significant relationship between E banking and Performance of bank of Kigali in Rwanda. As conclusion E banking contributes to positive performance of banks as witnessed by Bank of Kigali.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

5.1.1 Electronic Banking Tools used by Bank of Kigali

Presentation on shows that the bank had different e banking types namely ATM which one of the E banking services commonly used by e banking by the clients of Bank of Kigali. Others are Pay direct which lets you authorize specific deposits, (like paychecks and Social Security check and other benefits) to your account on a regular basis. The Phone banking which let you call your financial institution with instructions to pay certain bills or to transfer funds between accounts but you must have an agreement with the institution to make such transfers (Simpson 2002). Debit Card Purchase or Payment Transaction let you make purchases or payments with a debit card, which also may be your ATM card. This could occur at a store or business, online, or by phone. The process is similar to using a credit card, with some important exceptions (Fox and Beier, 2006). While the process is fast and easy, a debit card purchase or payment transfer's money – fairly quickly – from your bank account to the company's account. So it's important that you have funds in your account to cover your purchase. Lastly electronic check payments and this converts a paper check into an electronic payment or when a company receives your check in the mail. When you give your check to a cashier, the check is run through an electronic system that captures your banking information and the amount of the check.

In general it can be concluded that bank of Kigali have varieties of e banking services for their clients in order to provide effective and efficient service delivery. This different electronic banking promotes effectiveness and efficiency in service delivery since clients can be able to withdraw and deposit money, authorizes payment and check account balance at ease.

5.1.2 Performance of Bank of Kigali

All the respondents (100%) stated that performance of bank of Kigali for the last five years was good. BK owns more than 20% of share of commercial Banking industries in Rwanda. Secondary data shows that BK is the market leader controlling 32.8% of total industry asset, 28.2% of loans, 30.2% of deposit and 42.8% of total industry equity (BNR, 2012). Because of the good performance it is ranked number one in Rwanda. As far as efficiency efficient performance in bank of Kigali is concerned table 4.17 shows that there were increase in all the required indicators for example there was steady increase gross loan portfolio, customer deposit growth, number of deposit accounts and profitability (Cost/income%) from 2008 to 2012. There was fluctuations in Net loan/customer deposit from 2008 to 2012 which is believed to be due to global financial crisis in 2009 and sales of shares and external loans in 2011 and 2012, number of loan accounts increase steadily though there was little decline in 2010 which is believed to be due to loan management issues and lastly fluctuation in profitability (net interest margins) during the year especially from 2010 to 2012 is believed to be due the expansion program of opening new branches around the country.

4.4 Contribution of E banking on Performance of Bank of Kigali

The respondents agreed electronic banking has promoted performance of bank of Kigali in that profit increase has been increasing for the last five years. Customer's satisfaction of the bank were satisfied, management quality improved and bank asset increased over the last five years as seen in bank report in table 4.17

5.1.3 Challenges of Electronic Banking in Bank of Kigali

Challenges hindering the implementation of electronic banking system in bank of Kigali are ranging from network reliability meaning that there is a network problem as a result clients face challenge to use e banking facility. Internet coverage is also a problem because some locations and clients do not have internet facility. Some clients also have skills on how to operate the e banking equipments and this pose threat on performance of the bank. And lastly there is also security issues as the system can be accessed by hackers and this poses a threat to both customers and bank inform of losses and confidentiality of clients information.

5.2 Conclusion

It should be noted that electronic banking plays a great role in financial performance of banks in Rwanda. Different electronic Banking System tools like ATM, Pay direct, mobile phone banking, debit/visa card payment and E electronic check payment has a great impact on bank performance because they increase profitability, return on invest return on equity and loans, improves bank management quality, increase bank asset and promotes bank growth and expansion. For the case of bank of Kigali, the great contributions has been shown in table 4.21 which provides the relationship between E banking and Performance of bank of Kigali in Rwanda whereby the respondents N is 44 and the significant level is 0.01, the results indicate that independent variable has positive high correlation to dependent variable equal to $.656^{**}$ and the p-value is .000 which is less than 0.01. When p-value is less than significant level, therefore researchers conclude that variables are correlated and null hypothesis is rejected and remains with alternative hypothesis. This means that there is a significant relationship between E banking and Performance of bank of Kigali in Rwanda. As conclusion E banking contributes to positive performance of banks in spite of few challenges like network failures inadequate skills and security issues posses a great threat to the confidentiality and integrity of banks information.

5.3 Recommendation

i. ATM should be put in different locations easily accessible by customers, so that quick service and convenience is maintained hence improving bank operations. At the same time constantly serviced should be ensured in order to provide reliability of the services.

ii. The bank should subscribe to reliable internet providers for effective and efficient service delivery.

iii. The bank should employ skilled personnel with more experience on network management in order to ensure the reliability of network.

iv. The bank management should establish country wide training and training for clients on usage of various e business applications for efficient performance of the bank. For example training on ATM and VISA usage, internet banking, and mobile banking and so on.

v. The bank should keep on upgrading their e banking technology in order to have an up to date system for effective service delivery

vi. Constant power back up should be ensured on order to solve the problems of power interruptions and fluctuations.

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APPENDICES

Appendix 1: Letter of Undertaking

JOMO KINYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (JKUAT)

FACULTY OF MANAGEMENT

DEPARTMENT OF FINANCE

P.O BOX 3373, KIGALI- RWANDA

Dear respondent,

REF: RESEARCH INTRODUCTORY LETTER

I, am a master student at Jomo Kenyatta University of Agriculture and Technology (JKUAT) in the department mentioned above, I am carrying out a study on **"**the contribution of E-banking towards banking on performance of banking Institutions in Rwanda

With reference to this project, some questions have been designed for the collection of data that will lead to the successful completion of my study. The information will strictly be for academic purposes, views on various aspect of this study will be of great value and the information you furnish in response to this questionnaire will be kept with utmost confidentiality.

Please, I kindly request you to fill these questionnaires.

Thank you for your cooperation

Appendix 1: Questionnaire

Instructions

The questionnaire is divided two: Bio data of respondents and Specific objectives

Please tick the response that you think is most appropriate to each question and indicates your response in the space provided.

Tick whichever is applicable to you:

a. BIO DATA

1. Are you Male or Female?

   a. Male [ ]

   b. Female [ ]

2. What is your age? (Tick appropriately)

   a. 21- 30 [ ]

   b. 31- 40 [ ]

   c. 41- 50 [ ]

   d. 51 and above [ ]

3. Educational qualification:

   a. Secondary [ ]

   b. Undergraduate [ ]

   c. Post graduate [ ]

   d. Others specify [ ]

4. How long have you been working with Bank of Kigali?

   a. 1 - 2 years [ ]

   b. 2 – 3 years [ ]

   c. 3 – 4 years [ ]

   d. 5 years and above [ ]

SECTION I: ELECTRONIC BANKING TOOLS USED BY BANK OF KIGALI

Definition of the Scale for the assessing the application of electronic mobile banking in Bank of Kigali (1 = strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree

Application of electronic banking	**1**	**2**	**3**	**4**	**5**
5. Mobile banking					
6. Internet banking					
7. Telephone banking					
8. Electronic card					

9. What are types of electronic banking in Bank of Kigali you are aware off?

a. ATM [ ]
b. Pay Direct [ ]
c. Telephone banking [ ]
d. Visa Solution [ ]
e. Electronic check payments [ ]
f. Others specify……………………………………….

7. Does electronic banking promotes banking performance?

a. Strongly agree [ ]
b. Agree [ ]
c. Neither agree nor disagree [ ]
d. Disagree [ ]
e. Strongly disagree [ ]

8. The role does it play in promoting banking performance?

a. Depositing [ ]
b. Check account balances [ ]
c. Withdrawals [ ]
d. Making payments [ ]
e. Others specify……………………………………………….

9. How effective are the above roles in promoting banking efficiency?

Roles of electronic banking	**Strongly agree**	**Agree**	**Disagree**	**Strongly disagree**
Depositing				
Checking accounts				
Withdrawals				
Making payments				
Others				

SECTIONII: FINANCIAL PERFORMANCE OF THE BANK OF KIGALI

10. How was the performance of the bank for the last from 2009 to 2011

c. Excellent [ ]

d. Very good [ ]

e. Good [ ]

f. Fair [ ]

g. Bad [ ]

11. Do you know about CAMELS methodology of analyzing bank performance?

YES [ ] NO [ ]

12. If Yes, Does the Bank use CAMELS analysis? YES [ ] NO [ ]

13. What is the Capital Adequacy Ratio (CAR) of your Bank from 2009 to 2011?

(i) Below 10% [ ]

(ii) 10% [ ]

(iii)Above 10% (Specify) …………..

14. It is argued that the poor quality of a Bank's Assets is one of the reasons for bank credit risk and failures. What is the Asset Quality Ratio (AQR) of your Bank according to the following criteria (tick appropriately) for the following Years.

2009				
Type of Asset Quality Ratio	**≤ 7%**	**7%**	**8-15%**	**≥15%**
(i) Non Performing Loans to Total Loans Ratio				
(ii) Non Performing Loans to Total Equity Ratio				
(iii)Allowance for Loan Loss Ratio				
(iv)Provision for Loan Loss Ratio				
2010				
Type of Asset Quality Ratio	**≤ 7%**	**7%**	**8-15%**	**≥15%**
(i) Non Performing Loans to Total Loans Ratio				
(ii) Non Performing Loans to Total Equity Ratio				
(iii)Allowance for Loan Loss Ratio				
(iv)Provision for Loan Loss Ratio				
2011				
Type of Asset Quality Ratio	**≤ 7%**	**7%**	**8-15%**	**≥15%**
(i) Non Performing Loans to Total Loans Ratio				
(ii) Non Performing Loans to Total Equity Ratio				
(iii)Allowance for Loan Loss Ratio				
(iv)Provision for Loan Loss Ratio				

15. The Quality of Management is a critical factor in determining the health of a Bank.
    (i) Is the Bank government owned? YES [ ] NO [ ]
    (ii) How long has the Bank been in existence? 1-5 year [ ] 5-10 year [ ] ≥ 10 Years
16. Indicate the trends in quality of Management of the bank as reflected in growth rate according to the following aspects of the bank over the years 2009 -2011

Dimensions of Management Quality Ratios	**2009**	**2010**	**2011**
(i) Total Asset Growth Rate (Annual Average i %)			
(ii) Loan Growth Rate (Annual Average in %)			
(iii)Earnings Growth Rate (Annual Average in %			

17. Earnings or profitability of a Bank is critical for long term sustainability of the bank. Provide the earnings Ability Ratios of BK for the period 2009 – 2011 using the following Ratios:

Types of Earning Ratios	**2009**	**2010**	**2011**
(i) Net Interest Income Margin (NIM)			
(ii) Cost to Income Ratio			
(iii)Return on Assets (ROA)			
(iv)Return on Equity (ROE)			

18. The current cash holding and assets that can be quickly converted into cash within the bank is:- (Please tick one appropriate answer);

    (i) Less than adequate [ ]
    (ii) Adequate [ ]
    (iii)More than adequate [ ]

19. Indicate the liquidity levels of the BK using the following liquidity ratios for the years 2009-2011

Types of Earning Ratios	**2009**	**2010**	**2011**
(i) Customers Deposits to Total assets			
(ii) Total Loan to Customers Deposits (LTD)			

20. The current level of cash holding within the bank plus the cash deposits with the central bank

(i) Less than adequate [ ]

(ii) Adequate [ ]

(iii)More than adequate [ ]

21. How was the performance of the bank before and after electronic banking

a. Excellent [ ]

b. Very good [ ]

c. Good [ ]

d. Fair [ ]

e. Bad [ ]

22. Do you think electronic bank has promoted performance of the bank in the following ways

Definition of the Scale for the assessing how electronic bank has promoted performance of the Bank of Kigali (1 = strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree

Performance measures	**1**	**2**	**3**	**4**	**5**
23. Increased Profit					
24. Reduced Cost					
25. Customers Satisfaction					
26. Improved Management Quality					
27. Increased banks Asset					

SECTION III: CHALLENGES FACED BY BANKS WHILE USING ELECTRONIC BANKING

28. What are the factors affecting the effectiveness of electronic banking?

    a. Availability of internet
    b. Reliability of network
    c. Availability and reliability of ATM
    d. Security problems
    e. Power failure
    f. Lack of knowhow by customers
    g. Others, specify

29. What do you think could be solutions to the above problems?

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Appendix 2: Work Plan

ACTIVITY	**PERIOD**
Research proposal writing and submission	December 2014 – March 2015.
Data collection	April 2015.
Data analysis /report writing	May - June, 2015.
Submission of the dissertation	July, 2015.

Appendix 4: Budget Schedule for Research Activities

ACTIVITY	AMOUNT IN RWF
Secretarial Work	80,000
Interview meetings	50,000
Transportations	50,000
Miscellaneous	50,000
TOTAL	**230,000**