RETAIL TECHNOLOGY AND OPERATIONAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

I declare that this Research Project is my original work and has not been presented in any other institution of higher learning.

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This research project is being submitted for examination with my approval as the Supervisor of the University.

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DEDICATION

I dedicate this project to my family. I thank God, who has enabled me and given me my family that has been a spine to my education and have encouraged me in all my life's milestones such as this project. I'll always value and esteem you highly.

ACKNOWLEDGMENT

My gratitude goes firstly to the almighty GOD who has been with me and blessed me with people that have given me support and encouragement. It would not have been possible to come this far without His help.

I thank my supervisor Dr. Peterson Magutu, who has been patient with me, guiding me in excellence to ensure that my project is nothing less of world class standards. May God bless and increase you for your willingness to always expand the minds of those under you.

Lastly, I thank all my friends whom we have shared this journey together, for their motivation and constant challenge.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

The aim of the study was to establish if the use of retail technology in commercial banks in Kenya had an impact on the bank's operational performance. The specific objectives were to determine the retail technology commonly used in the commercial banks in Kenya, and determine if there was a relationship between retail technology use and operational performance in commercial banks in Kenya. This study used a descriptive design. Descriptive research design is a scientific method that involves the observation and description of a subjects behavior without imputing any form of influence to it. The population of interest to the study was all commercial banks operating in Kenya. There are currently 42 commercial banks operating in Kenya. Data was collected from all the banks in Kenya, the study being a census survey. The census method was thus used. Primary data collection was done through the administration of a semi-structured questionnaire to the operations manager of each bank. The use of a questionnaire ensured collection of data within a short time. The data was processed through coding then descriptive analysis of the codes done. Quantitative data was processed by tabulation and the descriptive analysis done. Multiple regression analysis was used. The study found that retail technology was applied in the banks. The study also established that the bank uses mobile banking as the retail technology in its operation. The study further established that the bank uses mobile banking to a great extent as compared to other retail banking practices. The study established that to a great extent that a customer friendly environment while waiting for service, such as music and running advertisements of other available products while waiting for service, was very good at the banks. It also established that retail technology influences the operational performance of commercial banks to a great extent. At a 5% level of significance and 95% level of confidence Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking were all significant retail technology practices to increased operational performance of commercial banks in Kenya. This study concluded that to a great extent that all the customers' transactions were processed efficiently without waiting. This was the practice that had been applied in the retail technologies to a great extent. The study also concluded that to a great extent that all the transactions are processed efficiently without waiting is an important retail technology practice in the commercial banks. The study recommended that Commercial banks adopt more retail technology practices that were not specifically mentioned in this study alongside the use of the current ones discussed for the results suggests that the influence performance to a great extent.

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

The management of business processes is critical to the performance and customer satisfaction levels of organizations. Businesses therefore venture to improve their processes with this in mind. By working to enhance its systems, an organization can increase its profit margins, lower cost and produce high quality outputs. Business process improvements methods such as; core process redesign, business process change, business process redesign, business process change, business process reengineering and business restructuring, all help achieve organizational goals efficiently by refocusing resources where needed (Forster, 2006). Cost reductions are achieved through the elimination of unnecessary 'non-value adding' activities, while core activities are continuously improved to achieve efficiency and effectiveness (Moghdeb, Indulska & Green, 2007).

For profitability and success, an organization must consider its customers and competitors, who constitute the market place. It must then evaluate its internal competencies/ strengths, and then come up with its competitive priorities. The priorities enable the organization formulate its operational strategies, which will ensure that the competitive edge is achieved and a share of the market is captured (Bressler, 2012).

A business must adapt to its changing environment swiftly, otherwise it will be rendered irrelevant and lose out on its market share Kuzmišin, (2009). According to Akhawan, (2010), the only organizations that can survive and make profit are those that can forecast the future and make appropriate changes. Competition is influenced by frameworks that could be formal, such as legal regulatory bodies or informal, such

as associations. The virtues of competition are such that they put pressure on any business by setting higher standard demands from consumers for any business wishing to capture a share of the market (Stucke, 2013). The use of Retail technology enables a firm to achieve relevance and competitive leverage in the market (Chzee, 2014).

1.1.1.Retail Technology

Retail technology are digital technologies embedded in business operations, as a means of increasing competitiveness, cutting costs and offering customer satisfaction through a pleasant customer experience (David, 2013).

According to Chzee, (2014), the improvement of the service quality of an institution can enhance its competitiveness. Until recently, not much attention has been given to quality improvement in service organisations. Application of quality management principles to service institutions has been very difficult and retail technology is a means to achieving practical application.

1.1.2. Operational Performance

Operational performance makes reference to aspects of the outcomes of an organization's processes that are measurable. These aspects include cycle time, reliability, production, and inventory turns (Voss, Ahlstrom & Blackmon, 1997). Operational performance is used to assess the success of an organization. The operational performance systems used must be relevant and appropriate to the strategies and competitive environment of the organization (Kennerley & Neely, 2003)

Operational performance gets its importance from its involvement in reoccurring activities so as to develop organizational goals assess the progress towards the goals

and where necessary, make adjustments towards achieving those goals more efficiently and effectively Carter, (1997). Business performance measures such as market share and customer satisfaction are affected (Voss, Ahlstrom & Blackmon, 1997). The balanced score card is used as a tool to measure operational performance (Wahjudi, Singgih & Suwignjo, 2011).

1.1.3. Commercial Banks in Kenya

A commercial bank is a financial institution that provides services for businesses, individuals and organizations. Services include savings, current and deposit accounts as well as giving out of loans to businesses. A commercial bank takes deposits and issues loans. This contrasts with an investment bank whose main aim is securities underwriting, asset management securities trading and mortgage advisory (Central Bank of Kenya, 2016).

Commercial banks make profit by taking small, short-term and relatively liquid deposits and then transforming them into larger and longer maturity loans. This process of asset transformation generates net income for the commercial bank. Many commercial banks do investment banking business although the latter is not considered a main business area (Ongore & Kuse, 2013).

In Kenya, there are 42 licensed commercial banks and 1 mortgage finance company. Of the 43 institutions, 39 commercial banks and the mortgage finance institution are privately owned while the Kenyan government holds controlling stakes in the remaining 3 commercial banks (Central Bank of Kenya, 2016).

1.2. Research Problem

The repeated global inflation and financial crisis, coupled by a rise in competition are forcing the proper and efficient use of the resources available to an organization. The innovation in technology is increasing and has become a key in achieving competitiveness and productivity. The success of these technologies however, is dependent on the way they are integrated within the organization (Yves & Jocelyne, 2007). The unique capital structure of commercial banking has an effect on various banking aspects; the banks' comparative advantage in providing financial products and services; ability to diversify credit and liquidity risks as well as how they are regulated, including the need to obtain a charter to operate and explicit and implicit federal guarantees of bank liabilities to reduce the bank runs' probabilities. These aspects of banking affect the choice of risk made by the bank versus its expected return, which in turn affects bank performance (Hughes & Mester, 2013).

Kenya's financial sector is dominated by commercial banks. The banking industry is the heart of every thriving economy and if it fails, so does the economy of the given country. There are powerful forces shaping the industry. Customer expectations, technology innovations and capabilities, regulatory bodies, demographics and economics are all creating an imperative to change (Alhaji & Rosmaini, 2012). The implication of a failure in the banking industry also means that it will hinder the economic wellbeing of the nation as it has an adverse negative effect on the markets perception on the entire banking industry and investment in the nation (Ongore & Kuse, 2013). There is no record of ISO certification for commercial banks in Kenya. Precipitated by the current close-downs of banks, Imperial bank following a case of fraud (2015), Dubai bank (2015) and Chase bank (2016) now all under receivership after being reported to have liquidity issues, the banking industry has not only become

volatile due to the global financial crisis but also untrusted by potential clients in the country; with hundreds of people withdrawing all their monies from the accounts due to valid fear or propagated rumors of eminent bank closures. To curb such closures and remain in business, banks must win back the trust of the market by proving their efficiency and longevity in business through proper operations and winning strategies. This study aims to assess whether commercial banks in Kenya that have adopted retail technology, have experienced improvement in their operational performance.

Banks do not operate alone within a limited context/ scope; they also operate within a global context. There are financial standard operating procedures that must be at minimum adhered to by each bank globally. This is for the purposes of regulation. The legal status of a bank determines how it operates and who regulates it. A bank regulator regulates all registered banks of business it runs regulates it. This implies that a legal entity could have several regulators dependant on the type of business it conducts. Kenya uses an institutional regulatory framework. A single regulator oversees all financial services. In Kenya the Central Bank of Kenya (CBK) regulates the was established by an act of parliament in 1966 to licence, regulate and supervise banking operations. Listed banks are also regulated by the Capital Markets Authority (cMa). The CBK regulation is undertaken through implementation of policies and standards that are in line with international best practice for bank supervision and regulation (KPMG report, 2012).

Past studies done with relation to commercial banks in Kenya, Miencha & Selvam, Al-Shobaki, Fouad & Al-Bashir, (2010), Kennerley & Neely, (2003), Mwaniki & Okibo (2014), Cherotich, K. Sang, W. Shisia, A. & Mutung'u, C., (2015) assess the general performance, marketing aspects or certain pillars of Total Quality

Management with reference to financial performance of the commercial banks. This study aims at assessing the impact that Retail technology has on operational performance.

The study also seeks to answer the following research questions, what retail technology is commonly used by the Commercial Banks in Kenya? And, is there a relationship between retail technology use and Operational Performance in Commercial Banks in Kenya?

1.3. Research Objectives

i. To determine the retail technology commonly used in Commercial Banks in Kenya.

ii. To determine the relationship between retail technology and operational performance of Commercial Banks in Kenya.

1.4. Value of the Study

This study will have a three-fold impact. Firstly, it will be of importance to the Commercial Banks in Kenya as it will demonstrate how the use of retail technology will impact their operational performance. It will enable them to focus their efforts to what works, gleaning on the expertise of others and enhance their performance.

Another group to benefit will be the university of Nairobi students as the literature used will provide a point of reference and perhaps offer more areas to be studied, by awakening interest in the minds of the readers.

Most importantly the users of commercial banks will benefit greatly from this study as it will point out ways to their service providers (the commercial banks) how to

enhance their operations with regards to retail technology, thus offering greater satisfaction to their customers.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This section outlines previous literature in the area of retail technology, and how it relates to operational performance. It indicates the changes and growth in retail technology in the banking industry and also evaluates possible implications as seen in previous studies.

2.2. Retail Technology

Retail technology are digital technologies embedded in business operations, as a means of increasing competitiveness, cutting costs and offering customer satisfaction through a pleasant customer experience (David, 2013).

In a bid to please organizational stakeholders as well as increase profit margins, gain monopoly and enable sustainability in an increasingly competitive global environment, businesses have resorted in innovative ways and methods, for survival Schniederjans & Schniederjans, (2015). One of such methods is Quality Management. Quality management refers to the aspect of overall management function which determines and implements the quality policy. The quality policy refers to the overall intention and direction of an organization with reference to quality as formally expressed by the top level managers ISO, (9000:2005). The adoption of a method of practice is not enough by itself. To gain competitive edge, an organisation must combine both internal and external strengths. External strengths are bought to make up for any deficit of resources, whether financial, skills or technology including software.

Retail technology is used to support the business processes. Technology can be utilized to develop and manage systems that get information and feedback from customers so as to facilitate and enhance the customer focus goal of an organization, develop efficient information systems to facilitate knowledge and process management, decision making tools as well as supplier quality checks and databanks for mutually beneficial supplier relationships (Chzee, 2014).

The use of technology takes place in two areas; Information Technology and Business Processes. IT could involve external providers who manage specific applications, such as network administration, software development or upgrades and server management. The bank operations are divided into front office and back office operations. The front office directly generates income and handles the clients directly. It includes sales, trading, investment banking, wealth management, as well as private equity. The back office offers support and administration. It includes IT, accounting and compliance, human resources, and operations. They handle functions which focus on processing and support (Allen & Wharton, 2003). IT are innovations in the areas of information processing, telecommunications, and their related technologies. It involves the use of hardware equipment as well as software needed to carry out certain tasks. Financial Technologies are technologies that apply the use of statistical and economic models, so as to develop as well as value the new securities, make portfolio decisions and estimate the returns. These technologies rely a lot on use of IT to collect data, process that data and then finally disseminate the data, in addition to statistical and economic models to evaluate the data (Allen & Wharton, 2003). The types of retail technologies used in banks include;

2.2.1. Internet, Mobile and ATM Banking

This is a recent addition to banking conveniences that most banks have embraced. There are different levels of internet banking provided together with various combinations of it and physical banking and ATM networks. Some banks worldwide have offered transactional internet sites while others simply offer informational sites alone. The costs of maintaining these sites might prompt most small banks to outsource site maintenance (Allen & Wharton, 2003). A mobile transaction should be able to operate at any point in the country provided there is a mobile network available. The customer does not need to meet with their service provider, giving them flexibility and speed. ATM's are automated teller machines, which allow customers to withdraw and perform other transactions without having to wait in the long queues at the banking halls. (Thomas, Peterson, Stephen & Richard, 2010).

2.2.2. Electronic Payments Technologies

This involves the transfer of funds electronically with relatively little paperwork. Use of credit cards and visa/debit cards to make purchases and payments at retail outlets fall under this category. This has replaced cash and cheque payments. The switch is largely fueled by the advances in IT which reduces cost and increases convenience (Allen & Wharton, 2003).

2.2.3. Information Exchanges

These are intermediaries via which banks and creditors share data relevant to loan applicants' credit worthiness. The exchanges pick data from public records, financial institutions, trade creditors, and any other available source. They then compile and summarize the data, giving credit scores to lending institutions. The exchanges include bank associations, third party bureau or public credit registers organized by

the Central bank. The exchanges lower the loan default rates (Allen & Wharton, 2003). Data analysed and information enables the making of effective decisions. An organization should be ready to keenly think through all facts its surrounded with. By use of technology, data can be collected, analyzed and viable information generated, based on the analysis. This enables the managers of the company to make informed decisions and thus higher chances of business success (Chzee, 2014).

2.3. Operational Performance

The use of operational performance is not only to serve as basis for organisational improvement and criteria for detecting enterprise problems, but also as a policy determinant for the government in mapping out important plans (Chien Ta Ho, 2005).

Performance management has in recent years become more popular, as organisations seek optimisation of their human resources in the face of pressures rising from competition Suliman, (2001). Wheelwright, (1998) proposed a wide variety of operational performance measures for organizations. These include cost effectiveness, quality, productivity, and flexibility and timeliness. Performance testing is testing carried out to assess execution of an application against specific benchmarks for user experience (Vickery et al., 1997).

The Business Finance, best practices for finance Executives, (2012) records that following the 2008 financial crisis, banks took steps to enhance their performance measurement capabilities, due to changed economic and market conditions as well as new management needs. New channels like mobile phones became more important. Banks aim at managing their costs in a better way, deepening customer relationships and enhancing of pricing decisions and product mix. Based on their unique needs and strategies, banks have their own performance measurement. Individual banks have

their own performance measurement needs, such as integrating acquisitions into existing profitability measurement, budgeting and forecasting tools and systems (Business Finance, 2012).

2.4. Retail technology and Operational Performance

Use of retail technology can be used to attain the competitive objectives of customer focus, knowledge and process management, factual approach to decision making and supplier quality management (Chzee, 2014).Due to the unique capital structure of commercial banking, that is, funding production with demandable debt that participates in the economy's payment system, various aspects of banking are affected. A banks comparative advantage in providing financial products and services to informationally opaque customers, as well as the ability to diversify credit and liquidity, risks, and their regulation is shaped. These characteristics of banking affects the banks choice of risk versus expected return, which in turn, affects bank performance (Hughes & Mester, 2013). A banks performance can be determined by bank specific (internal) and macroeconomic (external) factors. Internal factors are within the banks control. By enhancing its efficiencies through technology, it can enhance its performance (Ongore & Kuse, 2013).

The capital structure of the bank renders it its uniqueness in production, in contrast to the production of other types of lenders (Calomiris & Khan, 1991). The banks' ability to perform efficiently can be seen as its adoption of appropriate investment strategies, obtaining accurate information regarding their customers' financial prospects, and to write and enforce effective contracts. This ability depends in part on property rights and legal, regulatory and contracting environments in which they operate (Hughes & Mester, 2013). The bank management must therefore be able to keep in tandem with

the current trends of their environment as well as anticipate / predict possible future trends. By involving Retail technology, the implementation of such strategies and information gathering as a customer focus practice, leverages the banks to retain efficiency and innovation as they forge forwards towards tackling future challenges (Alhaji & Rosmaini, 2012).

2.5. Summary and Conceptual Framework

The purpose of this research study is to establish the connection between the use of retail technology and operational performance of Commercial Banks in Kenya. A lot has been developed and discussed in the Quality Management field. However, there are no discussions on the relationship between the retail technology and Operational performance. As banks aim to be more profitable, efficient and trustworthy to their clients, and especially due to the recent bank placement under receivership, any practices that could enhance trust in its operations and give competitive leverage, go a long way to meet this objective. Theory shows that the use of Retail technology use, has a positive influence on a firms operational performance (Alhaji & Rosmaini, 2012).

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┌─────────────────────────────┐
│ Internet, Mobile and ATM    │
│ Banking                     │──────────────┐
└─────────────────────────────┘              │
                                             │
                                             ▼
┌─────────────────────────────┐       ┌──────────────────┐
│ Electronic Payments         │       │                  │
│ Technology                  │──────▶│  Operational     │
└─────────────────────────────┘       │  Performance     │
                                       │                  │
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┌─────────────────────────────┐              ▲
│ Information exchanges        │──────────────┘
│                             │
└─────────────────────────────┘
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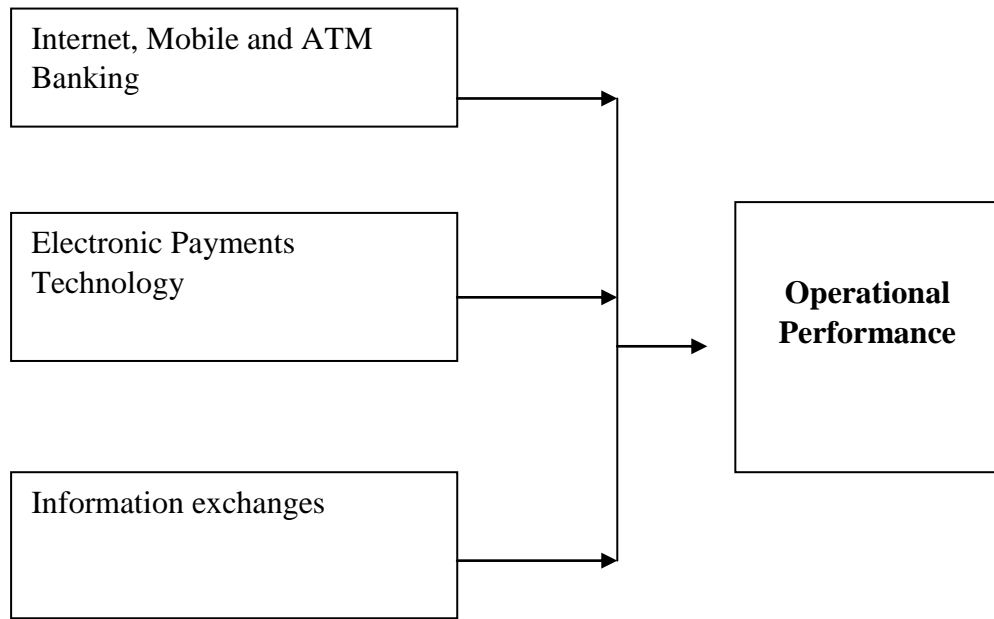
Independent Variable   **Dependent Variable**

Figure 2.1. Conceptual Framework

Source: Allen & Wharton, (2003)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section outlines the methodology that was used to conduct the study. It constitutes the research design, population, sample and sampling procedure, data collection method, data analysis and presentation.

3.2 Research Design

The study adopted a descriptive design. A descriptive research design is a scientific method which involves the observation and description of behavioural patterns of a subject without influencing it in any way (Bryman, 2001). It is designed so as to get more detail about variables in a particular field of study, with an intention of giving a picture of a situation as it naturally happens Burns & Grove, (2007). The descriptive research design was adopted as the study aimed at describing a single variable (retail technology) in a population.

3.3. Population

Population studies were conducted because they were much more representative due to the equal chance of inclusion of everyone in the final sample Mugenda & Mugenda, (1999). All commercial banks operating in Kenya were a population of interest. There 42 commercial banks operating in Kenya. The study being a census survey implies that the data was collected from all the banks in Kenya. This therefore meant that the census method was used.

3.4 Data Collection

Primary data was collected through administering a semi-structured questionnaire to the Operations manager of each bank. The use of a questionnaire ensured collection of

data within a short time. The questionnaire was administered by drop and pick method with follow ups by telephone.

3.5. Data Analysis

Data was processed through coding then descriptive analysis of the codes done. Quantitative data was processed by tabulation and the descriptive analysis done. This involved uni-variate and multivariate analysis. The uni-variate analysis involved calculation of several measures mostly concerning one variable, for instance, central tendency measures (mean, mode, median) and dispersion measures (range and standard deviation). The multivariate analysis involved simultaneous analysis of more than two variables in a muilt-way classification, for instance regression analysis Kothari, (2004). Multiple regression analysis was used. The data was presented using tables and charts to make it reader friendly. Statistical package of social scientist (SPSS) was used as an analysis tool for this study.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

The following chapter gives a discussion of the findings of the study. The research objectives were to determine what retail technologies are commonly used in Commercial banks in Kenya and to determine the relationship between retail technology and operational performance of commercial banks in Kenya. Frequency tables and figures have been used to present the data. Data composed was collated and reports produced in form of tables, figures and qualitative analysis.

4.2 Response Rate

Table 4.1. Response Rate

	Numbers issued	Numbers Returned	Response Rate
Questionnaire	42	38	88.4%

Source: Author (2016)

There were 42 questionnaires issued. Of the 42, 38 questionnaires were filled and returned, giving a response rate of 90.5%. The high response was attributed to the efforts of the researcher who frequently contacted the respondents. Requesting them to completer and return the questionnaire.

4.3 General Information

4.3.1. Type of Commercial Bank

The respondents were requested to indicate the commercial bank they bank with. This was important as it helped the researcher to identify the retail technology practice

utilized in that particular bank. The respondents indicated the bank they banked with from which each was working as the operational manager.

4.4. Retail Technology Used

4.4.1. Application of Retail Technology in Bank

The respondents were requested to indicate whether retail technology is applied at their bank. From the findings all the respondents indicated that retail technology was applied in their bank.

4.4.2. Types of Retail Technology Used

The respondents were asked to indicate the retail technologies that are used by their bank. The findings were as shown in the table below

Table 4.2. Types of Retail Technology Used

Retail technology	Frequency
Mobile Banking	70%
Internet Banking	65%
ATM Banking	60%
Electronic Payments	55%
Information Exchanges	50%

Source: Author (2016)

From the above tabulated findings, 70% of the respondents indicated that the bank uses mobile banking, 65% indicated internet banking, 60% indicated ATM banking, 55% indicated electronic payments while 50% indicated information exchanges. This depicts that mobile banking is the commonly used retail technology in the commercial banks in Kenya.

4.5. Retail Technology and Operational Performance

This section presents findings on how retail technology influences the operational performance of the banks. The findings are shown in subsequent sections.

4.5.1. Extent of Use of Retail Technology

The respondents of the banks were requested to show their extent of use of the retail technology in the commercial bank. The given responses were then placed on a five Likert scale ranging from 1 (No Extent) to 5 (Very Great Extent). The findings were as shown below.

Table 4.3 Extent of use of retail technology

Retail Technology	Mean	Std Dev.
Mobile Banking	3.99	0.3563
Internet banking	3.88	0.4236
ATM Banking	3.60	0.4120
Electronic payments	3.55	0.3432
Information exchanges	3.52	0.3986

Source: Author (2016)

Looking at the findings above, the respondents indicated to a great extent that the bank uses mobile banking (mean=3.99), followed by internet banking (mean=3.88), ATM banking (mean=3.60), electronic payments (mean=3.55), and information exchanges (mean=3.52). This depicts that the bank uses mobile banking to a great extent as compared to other retail technologies.

4.5.2. Extent of Implementation of Practices in Retail Technology

The various banks respondents were requested to show the extent to which various practices have been implemented in the bank's retail technology. The findings are as shown below

Table 4.4. Extent of Implementation of Practices in Retail Technology

Practices	Mean	Std Dev.
All your transactions processed efficiently without waiting	4.36	0.2243
A written confirmation that your transaction has taken place and is completed	4.25	0.2126
All the services operate 24 hours everyday	4.12	0.2112
All transactions performed immediately	3.97	0.3456
All the ATMS be conveniently located	3.80	0.2019
All your transactions processed accurately	3.75	0.1897
All your banking needs in the menu option	3.64	0.2905
Your banking personalized (e.g the customer service call the customer by their name)	3.60	0.2333
Accurate records from your bank (e.g statements)	3.49	0.3021
A customer friendly environment while waiting for service, such as advertising of other available products and music	3.25	0.1786
Your bank to provide its customers with secure services	3.20	0.2341
A user friendly system to make ATM use simple	3.01	0.2345
Ease of use	2.99	0.1980
Acknowledging the customer by name on the screen during transaction	2.85	0.2167
Being connected immediately to the service when you call	2.69	0.2189
Voice/online directions for new users	2.66	0.2190
A special service to the disabled available	2.55	0.1113

Source: Author (2016)

From the findings above the respondents agreed that all their transactions were processed efficiently without waiting (mean=4.36), followed by a written confirmation that their transaction has taken place and is completed (mean=4.25), all the services operate 24 hours every day (mean=4.12), all transactions performed immediately (mean=3.97), all the ATMS be conveniently located (mean=3.80), all their transactions processed accurately (mean=3.75), all their banking needs in the menu option (mean=3.64), and that their banking personalized (e.g. the customer service call the customer by their name) (mean=3.60). The respondents further agreed to a moderate extent that accurate records from your bank has applied in retail technology (e.g statements) (mean=3.49), a customer friendly environment while waiting for service, such as advertising of other available products and music (mean=3.25), the bank to provide its customers with secure services (mean=3.20), a user friendly system to make ATM use simple (mean=3.01), Ease of use (mean=2.99), acknowledging the customer by name on the screen during transaction (mean=2.85), being connected immediately to the service when you call (mean=2.69), voice/online directions for new users (mean=2.66), and a special service to the disabled available (mean=2.55). This depicts that to a great extent, that all the customers' transactions were processed efficiently without waiting. This was the practice that had been applied in the retail technology to a great extent.

4.5.3. Importance of the Retail Technology Practices

The various respondents were requested to show level of importance of the given factors to the operations of the bank. The findings were shown in the table below

Table 4.5. Importance of the Retail Technology Factors

Retail Technology Factors	Mean	Std Dev.
All your transactions processed efficiently without waiting	3.90	0.1901
All transactions performed immediately	3.76	0.1342
All your transactions processed accurately	3.69	0.2890
Accurate records from your bank (e.g statements)?	3.58	0.1765
A written confirmation that your transaction has taken place and is completed	3.50	0.1004
Your banking personalized (e.g the customer service call the customer by their name)	3.48	0.2681
All the services operate 24 hours everyday	3.30	0.2456
All the ATMS be conveniently located	3.29	0.2999
Acknowledging the customer by name on the screen during transaction	2.89	0.1800
A customer friendly environment while waiting for service, such as advertising of other available products and music	2.70	0.2003
A user friendly system to make ATM use simple	2.66	0.2234
Voice/online directions for new users	2.60	0.1784
Being connected immediately to the service when you call	2.58	0.3125
A special service to the disabled available	2.56	0.2310
Your bank to provide its customers with secure services	2.53	0.3015
Ease of use	2.51	0.1425
All your banking needs in the menu option	2.50	0.2430

Source: Author (2016)

Deducing from the above results, the various respondents indicated to a great extent that all the transactions are processed efficiently without waiting (mean=3.90), all transactions performed immediately (mean=3.76), all the transactions are processed accurately (mean=3.69), accurate records from the bank (e.g. statements) are important (mean=3.58), and a written confirmation that the transaction has taken place

and is completed is important (mean=3.50). The respondents further agreed to a moderate extent that the banking personalized (e.g. the customer service call the customer by their name) was important (mean=3.48), all the services operate 24 hours every day (mean=3.30), all the ATMS be conveniently located (mean=3.29), acknowledging the customer by name on the screen during transaction (mean=2.89), a customer friendly environment while waiting for service, such as advertising of other available products and music (mean=2.70), a user friendly system to make ATM use simple (mean=2.66), voice/online directions for new users (mean=2.60), being connected immediately to the service when you call (mean=2.58), a special service to the disabled available (mean=2.56), the bank to provide its customers with secure services (mean=2.53), ease of use (mean=2.51), and that all the banking needs in the menu option (mean=2.50). This depicts that to a great extent that all the transactions are processed efficiently without waiting is an important retail technology practice in the commercial banks.

4.5.4. Performance Rating of the Practices

The respondents were requested to indicate the performance rating of the various practices concerning retail technology. The findings were as shown in the table below

Table 4.6. Performance Rating of the Practices

| Retail Technology	Mean	Std Dev.
A customer friendly environment while waiting for service, such as advertising of other available products and music	4.02	0.3024
Your bank to provide its customers with secure services	3.98	0.1973
All the services operate 24 hours everyday	3.88	0.1236
All your transactions processed efficiently without waiting	3.81	0.3456
All your transactions processed accurately	3.79	0.2178
All transactions performed immediately	3.76	0.2215
A written confirmation that your transaction has taken place and is completed	3.65	0.3245
Accurate records from your bank (e.g. statements)?	3.59	0.1867
All the ATMS be conveniently located	3.54	0.1321
A user friendly system to make ATM use simple	3.51	0.3244
Acknowledging the customer by name on the screen during transaction	3.40	0.1571
Voice/online directions for new users	3.35	0.2001
Your banking personalized (e.g the customer service call the customer by their name)	3.28	0.2365
A special service to the disabled available	3.25	0.2389
Being connected immediately to the service when you call	3.02	0.1575
Ease of use	2.90	0.0218
All your banking needs in the menu option	2.78	0.1023

Source: Author (2016)

From the findings the respondents indicated to a great extent that a customer friendly environment while waiting for service, such as advertising of other available products and music was very good (mean=4.02), followed by the bank to provide its customers with secure services (mean=3.98), all the services operate 24 hours every day

(mean=3.88), all the transactions processed efficiently without waiting (mean=3.81), all the transactions processed accurately (mean=3.79), all transactions performed immediately (mean=3.76), a written confirmation that the transaction has taken place and is completed (mean=3.65), accurate records from your bank (e.g. statements) (mean=3.59), all the ATMS be conveniently located (mean=3.54), and that a user friendly system to make ATM use simple was very good (mean=3.51). The respondents further indicated to a moderate extent that acknowledging the customer by name on the screen during transaction was good (mean=3.40), followed by voice/online directions for new users (mean=3.35), the banking personalized (e.g. the customer service call the customer by their name) (mean=3.28), a special service to the disabled available (mean=3.25), being connected immediately to the service when you call (mean=3.02), ease of use (mean=2.90), and that all the banking needs in the menu option were good (mean=2.78). This depicts that to a great extent that a customer friendly environment while waiting for service, such as advertising of other available products and music was very good. It was rated highly by the respondents as compared to other practices as the best practice among the commercial banks retail technology practices.

4.6. Extent of Influence of Retail Technology on Operational Performance

The respondents were requested to indicate the extent to which retail technology influence the operational performance of commercial banks. The findings were as shown in the figure below

Figure 4.2. Extent of Influence of Retail Technology on Operational Performance
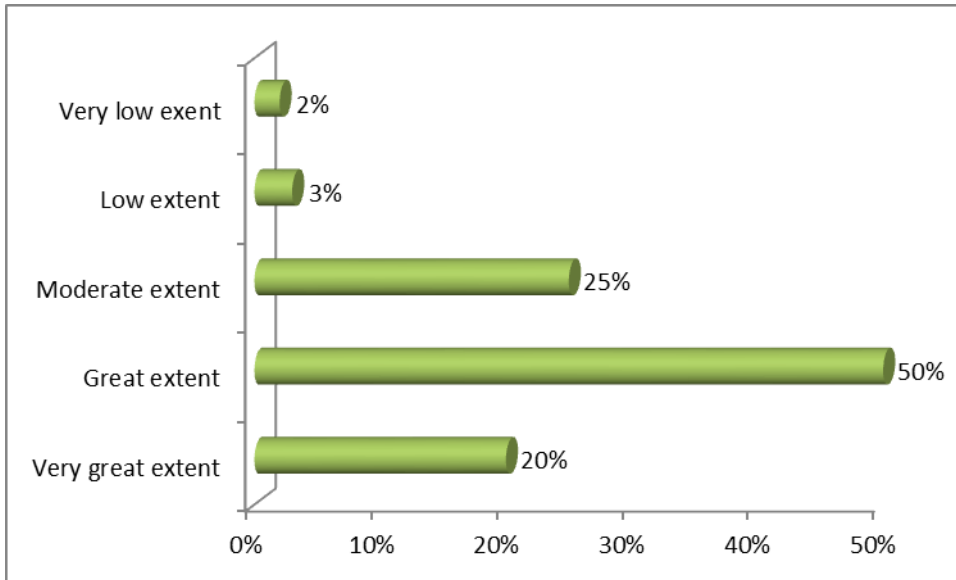
Source: Author (2016)

From the findings in the figure above majority (50%) of the respondents indicated to a great extent that retail technology influence the operational performance of commercial banks, 25% indicated moderate extent, 20% indicated very great extent, 3% indicated low extent, while 2% indicated very low extent. This depicts that retail technology influence the operational performance of commercial banks to great extent. The implication is that most of the banking services have been made easier and faster by the use of technology.

4.7. Operation Performance of Commercial Banks for the Last 5 Years

The respondents were requested to indicate the amount in Ksh for commercial banks operational performance measure for the past 5 consecutive years. The findings are shown in the table below

Table 4.7. Operation Performance of Commercial Banks for the Last 5 Years

	Unit of Measure	2011	2012	2013	2014	2015
Operation costs	millions	123	128	132	136	138
Profit	millions	4540	4620	4650	4710	4760
Market share	percentage	3.4	5.7	7.2	8.5	9.6
Total interest income	millions	2340	2380	2410	2465	2498
Net income	millions	3167	3186	3211	3245	3280
Total loans	millions	108	115	118	122	125
Defaulters loan losses	millions	78	75	72	70	67

Source: Field Data (2016)

From table 4.6 above depicts the Operation Performance of Commercial Banks for the Last 5 Years as mentioned by the respondents. It is clear that the Operational Performance of Commercial Banks for the past five years has been on the rise more as depicted by increase in Profit, Market share, Total interest income, Net income, as well as the decrease in loan defaulting. This depicts that Operational Performance of Commercial Banks for the Last 5 Years has increased positively due to the increased use of retail technology practices.

4.8 Inferential statistics

In determining the retail technology effect to operational performance of commercial banks in Kenya, the study carried out multiple regression analysis to determine the nature of relationship between the variables. This section presents a discussion of the results of the multiple regression analysis. The study carried out multiple regression analysis to determine the retail technology's influence on operational performance of commercial banks in Kenya. It applied the statistical package for social sciences

(SPSS) to code, enter and compute the measurements of the multiple regressions for the study. The results are shown in the following tables;

Table 4.8. Model summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.898[a]	.8064	.792	0.0104

Predictors: (Constant), Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking

 Dependent Variable: Operational Performance

The five variables studies which are independent variables, which explain 80.64% of variance in operational performance, as represented by the R^2. This indicates that the other factors which haven't been analysed in this study, contribute 19.36% of variance in the dependent variable. This depicts that holding other factors constant, retail technology practices influence operational performance of commercial banks in Kenya to a great extent (80. 64%). Further research should therefore be conducted to find out what other factors are influencing the operational performance of commercial banks in Kenya.

Table 4.9. ANOVA (Analysis of Variance)

Model		Sum of the Squares	df	Mean Square	F	Sig.
1	Regression	110.24	5	22.048	9.475	.0031[a]
	Residual	86.10	37	2.327		
	Total	**196.34**	**42**			

a. Predictors: (Constant), Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking

b. Dependent Variable: Operational Performance

The significance value is 0.0031 which is less than 0.05 thus the model is statistically significance in predicting how the retail technology practices (Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking) affect operational performance of commercial banks in Kenya. The F critical at 5% level of significance was 2.327. Since F calculated is greater than the F critical (value = 9.475), this shows that the overall model was significant.

Table 4.10. Coefficient of Determination

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	
(Constant)	3.276	0.826		3.61	.000
Internet Banking	0.702	0.031	0.218	1.81	.000
Mobile Banking	0.631	0.864	0.359	8.41	.000
Electronic Payments	0.585	0.682	0.142	4.56	.000
Information Exchange	0.496	0.682	0.142	4.56	.000
ATM Banking	0.325	0.721	0.256	6.12	.000

Source: Author (2016)

From the regression findings, the substitution of the equation

$(Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e)$ becomes:

$Y = 3.276 + 0.702 X_1 + 0.631 X_2 + 0.585 X_3 + 0.496 X_4 + 0.325 X_5 + e$

According to the equation, taking all the factors (Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking) constant at zero, the operational performance will be 3.276. The data findings also show that a unit increase in internet banking will lead to a 0.702 increase in operational performance; a unit increase in Mobile Banking will lead to a 0.631 increase in operational performance; a unit increase in Electronic Payments will lead to a 0.585 increase in operational performance; a unit increase in Information Exchange will lead to a 0.496 increase in operational performance; while a unit increase in ATM Banking will lead to 0.325 increase in operational performance. This infers that internet banking contributed the most to the operational performance of commercial banks in Kenya followed by mobile banking. At 5% level of significance and 95% level of confidence, Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking were all significant retail technologies and increased operational performance of commercial banks in Kenya.

4.9. Discussion of Findings

The study found that retail technology was applied in the banks. The study also established that the bank uses mobile banking as the popular retail technology in its operation. The study further established that the bank uses mobile banking to a great extent as compared to other retail technologies. This agrees with a study by Allen & Wharton, (2003) who said that banks have adopted mobile banking to lessen their operations and to enhance their services. The mobile banking facilitates transactions through the use of mobile devices. A mobile transaction should be able to operate at any point in the country provided there is a mobile network available. The customer does not need to meet with their service provider, giving them flexibility and speed.

The study found that to a great extent that all the customers' transactions were processed efficiently without waiting. This was the practices that had been applied in the retail technologies to a great extent. The study also found that to a great extent that all the transactions are processed efficiently without waiting is an important retail technology practice in the commercial banks. The findings agree with a study by Thomas, Peterson, Stephen & Richard, (2010) who stated that the customer does not need to meet with their service provider, giving them flexibility and speed. ATM's are automated teller machines, which allow customers to withdraw and perform other transactions without having to wait in the long queues at the banking halls.

The study established that to a great extent that a customer friendly environment while waiting for service, such as advertising of other available products and music was very good. The study also established that retail technology influences the operational performance of commercial banks to great extent. This agrees with a study by Chzee, (2014), who argued that use of retail technology can be used to attain the competitive objectives of customer focus, knowledge and process management, factual approach to decision making and supplier quality management. Finally the study established that operation performance of commercial Banks for the Last 5 Years has increased positively due to the increased use of retail technology.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The summary, conclusions and recommendations of the study are presented in this section. This study focused on retail technology and operational performance of commercial banks in Kenya.

5.2 Summary of findings

The study found that retail technology was applied in the banks. The study also established that the bank uses mobile banking as a retail technology in its operations, and that mobile banking is used to a great extent as compared to other retail technologies.

The study found that to a great extent, all the customers' transactions were processed efficiently without waiting. This was the practice that had been applied in the retail technologies to a great extent. The study also found that to a great extent that all the transactions are processed efficiently without waiting is an important retail technology practice in the commercial banks.

The study established that to a great extent that a customer friendly environment while waiting for service, such as advertising of other available products and music was very good. The study also established that retail technology influences the operational performance of commercial banks to great extent. Further the study established that operational performance of commercial Banks for the Last 5 Years has increased positively due to the increased use of retail technology.

Finally the study found that internet banking contributed the most to the operational performance of commercial banks in Kenya followed by mobile banking. At 5% level of significance and 95% level of confidence, Internet Banking, Mobile Banking, Electronic Payments, Information Exchange, and ATM Banking were all significant retail technologies to increased operational performance of commercial banks in Kenya.

5.3. Conclusion

The study concluded that retail technology was applied in the banks. The study also concluded that the bank uses mobile banking as a retail technology in its operation. The study further concluded that the bank uses mobile banking to a great extent as compared to other retail technologies.

The study concluded that to a great extent that all the customers' transactions were processed efficiently without waiting. This was the practice that had been applied in the retail technologies to a great extent. The study also concluded that to a great extent that all the transactions are processed efficiently without waiting is an important retail technology practice in the commercial banks.

The study concluded that to a great extent that a customer friendly environment while waiting for service, such as advertising of other available products and music was very good. The study also concluded that retail technology influences the operational performance of commercial banks to great extent.

5.4. Recommendations

The study made the following recommendations:

Commercial banks adopt more retail technology practices that were not specifically mentioned in this study alongside the use of the current ones discussed for the results suggests that the influence performance to a great extent.

Retail technology managers and other management staff responsible for the day to day operations in the commercial banks should be made aware of retail technology in use and ways of realizing their outcomes at the right time. This would mean that they be trained on what they are and how they will be implemented.

The management especially the boards/committees of the banks check on ways of reducing or mitigation any form of risk that may hinder the retail technology managers and related staff in realizing the results of retail technology practices for it would be zero work if there are more risks than benefits after all.

5.5 Limitation of the Study

This research was limited to retail technology and operational performance of commercial banks in Kenya. Thus the findings on the retail technology and operational performance of commercial banks in Kenya are limited only to commercial banks and as such they cannot be generalized as remedies to other organizations. There was a restriction in obtaining the data until the researcher proved it was for academic purposes only. Whilst the study would have given more insightful revelation based on the granularity of the study on the other variables, time and financial resources were constraints in undertaking the study. The study findings accuracy was limited to the extent to which the respondents were honest in responding to questions. Given the sensitivity nature of data collection, there may have been

likelihood of giving answers for questions that avoid crucial and confidential information.

5.6. Suggestion for further research

This study was mainly concerned with retail technology and operational performance of commercial banks in Kenya in search of supremacy over their competitors and the extent to which retail technology is applied. Further research should be done in order to ascertain the driving forces behind use and non-use of certain retail technologies by banks and their implications for the success of these organizations' performance in the Kenyan market.

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Vol.1

APPENDICES

APPENDIX I: QUESTIONNAIRE

This questionnaire aims at collecting information and data for academic use by the researcher. Your kind participation will go a long way in providing useful information required to complete this research. The information provided will be treated in confidence. You need not indicate your name. Please answer the questions precisely and objectively; the information will be treated confidentially. I understand that by completing and returning this questionnaire, I consent for the data I have provided to be included in the study.

SECTION A: GENERAL INFORMATION

1. What commercial bank do you bank with?

   ………………………………………………………….

SECTION B: RETAIL TECHNOLOGY USED

2. Do you have retail technology applied at your bank

   Yes   [ ]   No   [ ]

3. The following are some of the retail technologies. Please tick the ones that your bank uses.

Internet Banking	[ ]
Mobile Banking	[ ]
Electronic Payments	[ ]
Information Exchanges	[ ]
ATM Banking	[ ]

SECTION C: RETAIL TECHNOLOGY AND OPERATIONAL PERFORMANCE

4. To what extent has your commercial bank used the following retail technologies in its operations? Use the scale; 1= Very small extent; 2=Small extent; 3= To an Extent; 4= Great extent; 5= Very great extent

	1	2	3	4	5
a. Internet banking	[ ]	[ ]	[ ]	[ ]	[ ]
b. Mobile Banking	[ ]	[ ]	[ ]	[ ]	[ ]
c. Electronic payments	[ ]	[ ]	[ ]	[ ]	[ ]
d. Information exchanges	[ ]	[ ]	[ ]	[ ]	[ ]
e. ATM Banking	[ ]	[ ]	[ ]	[ ]	[ ]

5. To what extent has your commercial bank implemented the following practices in its retail technologies?

	1	2	3	4	5
Ease of use	[ ]	[ ]	[ ]	[ ]	[ ]
All the services operate 24hours everyday	[ ]	[ ]	[ ]	[ ]	[ ]
All your banking needs in the menu option	[ ]	[ ]	[ ]	[ ]	[ ]

All your transactions processed efficiently

without waiting?   [ ]   [ ]   [ ]   [ ]   [ ]

All transactions performed immediately   [ ]   [ ]   [ ]   [ ]   [ ]

All your transactions processed accurately   [ ]   [ ]   [ ]   [ ]   [ ]

A written confirmation that your transaction has taken

 place and is completed?   [ ]   [ ]   [ ]   [ ]   [ ]

Accurate records from your bank

(e.g statements)?   [ ]   [ ]   [ ]   [ ]   [ ]

Your banking personalized (e.g. the customer service calls

 the customer by their name)?   [ ]   [ ]   [ ]   [ ]   [ ]

All the ATMS be conveniently located?   [ ]   [ ]   [ ]   [ ]   [ ]

Your bank to provide its customers with

secure services?   [ ]   [ ]   [ ]   [ ]   [ ]

A special service to the disabled available? [ ]   [ ]   [ ]   [ ]   [ ]

Being connected immediately to the service

when you call?   [ ]   [ ]   [ ]   [ ]   [ ]

A user friendly system to make ATM use

simple?   [ ]   [ ]   [ ]   [ ]   [ ]

Acknowledging the customer by name on the screen

during transaction?　　　　　　　　　　[ ]　　[ ]　　[ ]　　[ ]　　[ ]

voice/online directions for new users? [ ]　　[ ]　　[ ]　　[ ]　　[ ]

A customer friendly environment while

waiting for service, such as advertising of

other available products and music? [ ]　　[ ]　　[ ]　　[ ]　　[ ]

6. According to you, what is the importance of the given factors on the

   scale of;

   Not Important (NI); Important (I); Very Important (VI)

	NI	I	VI
Ease of use	[ ]	[ ]	[ ]
All the services operate 24hours everyday?	[ ]	[ ]	[ ]
All your banking needs in the menu option?	[ ]	[ ]	[ ]
All your transactions processed efficiently without waiting?	[ ]	[ ]	[ ]
All your transactions performed immediately?	[ ]	[ ]	[ ]
All your transactions processed accurately?	[ ]	[ ]	[ ]
A written confirmation that your transaction has taken place and is completed?	[ ]	[ ]	[ ]
Accurate records from your bank (e.g. statements)?	[ ]	[ ]	[ ]

Your banking personalized (e.g. the customer service calls

the customer by their name)? [ ] [ ] [ ]

All the ATMS be conveniently located? [ ] [ ] [ ]

Your bank to provide its customers with secure services? [ ] [ ] [ ]

A special service to the disabled available? [ ] [ ] [ ]

Being connected immediately to the service when you call? [ ] [ ] [ ]

A user friendly system to make ATM use simple? [ ] [ ] [ ]

Acknowledging the customer by name on the screen

during transaction? [ ] [ ] [ ]

voice/online directions for new users? [ ] [ ] [ ]

A customer friendly environment while waiting for service,

 such as advertising of other available products and music? [ ] [ ] [ ]

7. What is your performance rating on;

    Not Good (NG); Good (G); Very Good (VG)

	NG	G	VG
Ease of use	[ ]	[ ]	[ ]
All the services operate 24hours every day	[ ]	[ ]	[ ]
All your banking needs in the menu option	[ ]	[ ]	[ ]
All your transactions processed efficiently without waiting?	[ ]	[ ]	[ ]

All your transactions performed immediately?   [ ]   [ ]   [ ]

All your transactions processed accurately?   [ ]   [ ]   [ ]

A written confirmation that your transaction has taken

 place and is completed?   [ ]   [ ]   [ ]

Accurate records from your bank (e.g statements)? [ ]   [ ]   [ ]

Your banking personalized (e.g the customer service calls

 the customer by their name)?   [ ]   [ ]   [ ]

All the ATMS be conveniently located?   [ ]   [ ]   [ ]

Your bank to provide its customers with secure services?[ ] [ ]   [ ]

A special service to the disabled available?   [ ]   [ ]   [ ]

Being connected immediately to the service when you call? [ ] [ ] [ ]

A user friendly system to make ATM use simple?   [ ]   [ ]   [ ]

Acknowledging the customer by name on the screen

during transaction?   [ ]   [ ]   [ ]

Voice/online directions for new users?   [ ]   [ ]   [ ]

A customer friendly environment while waiting for service,

 such as advertising of other available products and music? [ ] [ ] [ ]

8. To what extent does retail technology influence your operational performance

     Very great extent   [ ]

     Great extent   [ ]

     Moderate extent   [ ]

     Very low extent   [ ]

      Low extent   [ ]

9. Kindly indicate amount in the appropriate box on your commercial banks operation performance measure for the past 5 consecutive years;

	Unit of Measure	2011	2012	2013	2014	2015
	KES					
Operation costs						
Profit						
Market share						
Total interest income						
Net income						
Total loans						
Defaulters loan losses						
Other measure used by the bank (specify)						

THE END

THANK YOU FOR YOUR COOPERATION