

**THE EFFECT OF FINANCIAL INNOVATION ON THE FINANCIAL PERFORMANCE
OF COMMERCIAL BANKS IN KENYA**

BY

GRACE NYAWIRA KAGEMA


094717

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR BACHELOR OF COMMERCE SCHOOL OF BUSINESS,
STRATHMORE UNIVERSITY**

DECEMBER 2019

DECLARATION

This research project is my original work and has not been submitted for the award of a degree in any other university

Signed 

Date 06/12/2019

Grace Kagema Nyawira

Reg.No 094717

This research project has been submitted for examination with my approval as university supervisor

Signed 

Date 06/12/2019

Mr. Lincoln Ndwiga

Lecturer,

Department of Finance, Strathmore Business School

DEDICATION

I would like to dedicate this research project to my parents, my supervisor and friends for their encouragement and support throughout the entire period .I love you all.

ACKNOWLEDGEMENT

I would like to acknowledge the contributions of many different people, in their different ways, have made this possible. First, I would like to thank God for the gift of life, wisdom and perseverance that He bestowed upon me during this research project and throughout my life. Secondly, I offer my sincerest gratitude to my supervisor; Mr. Lincoln Ndwiga who has supported me throughout this research project with patience and knowledge and also providing active guidance throughout the study. Finally I wish to thank family, friends, and classmates for their remarkable devotion throughout the project .May God bless the work of their hands!

TABLE OF CONTENTS

Table of Contents

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
ABSTRACT	viii
ACRONYMS	ix
CHAPTER: ONE	1
INTRODUCTION	1
1.1: Background of the study	1
1.2: Evolution of banking in Kenya	2
1.3: Problem statement	3
1.4: Research Objective	5
1.6: Value of the Study	5
CHAPTER TWO	6
LITERATURE REVIEW	6
2.1 Introduction	6
2.2 Theoretical Review	6
2.2.1. Diffusion of innovation theory	6
2.2.2: Disruptive Innovation Theory	7
2.3 Financial Innovation and Financial Performance of Commercial banks	7
2.4 Empirical Review	8
CHAPTER THREE	13
RESEARCH METHODOLOGY	13

3.1: Introduction	13
3.2: Research Design	13
3.3: Population	13
3.4: Sample size	13
3.5: Data Collection	14
3.6: Data Validation and Reliability	14
3.7: Data Analysis.....	14
3.7.1: Regression model	14
3.7.2 Measurement of the Variables	15
Table 3.1: Measurement of the Variables.....	15
3.7.3 Test of significance.....	15
CHAPTER FOUR	16
RESEARCH, FINDINGS AND DISCUSSION.....	16
4.1 Introduction.....	16
4.2 Response rate	16
4.3 Background information.....	16
4.3.1 Years in operation.....	16
4.3.2 Capitalization.....	17
4.3.3 Financial innovation	18
4.4 The effect of financial innovations on profitability of Banks.....	18
4.5 The effect of financial innovations on liquidity	19
4.6 The effect of financial innovations on Return on assets and customer deposits	20
4.7 Correlation Analysis	22
4.8 Regression Analysis.....	22
4.8.1 Effect of financial innovations on the profitability of commercial banks in Kenya	22

4.8.2 Effect of financial innovations on the liquidity of commercial banks in Kenya	23
4.8.3 Effect of financial innovations on the return on totals assets commercial banks in Kenya.....	24
CHAPTER FIVE	26
SUMMARY, CONCLUSIONS AND RECCOMENDATIONS	26
5.0 Introduction.....	26
5.1 Summary	26
5.2 Conclusions.....	27
5.3 Recommendations.....	27
REFERENCES	28
APPENDICES	32
APPENDIX I: QUESTIONNAIRE.....	32
SECTION A: GENERAL INFORMATION.....	32
SECTION B: EFFECT OF FINANCIAL INNOVATIONS ON PROFITABILITY	32
SECTION B: EFFECT OF FINANCIAL INNOVATIONS ON LIQUIDITY	33
SECTION C: EFFECT OF FINANCIAL INNOVATIONS ON RETURN ON ASSETS AND CUSTOMER DEPOSITS	34
APPENDIX II: Secondary Data	35

ABSTRACT

For the last decade commercial banks in Kenya have evolved into financial innovations moving from the traditional banking in order to improve the services of their customers both local and international and also to increase their profitability. The main purpose of this study was to establish the effect of financial innovation on the performance of commercial banks in Kenya.

The research studied top 16 commercial banks in Kenya by analysis their financial statements for the period 2013 to 2017. It made use of secondary data which was sourced through data mining from central Bank of Kenya. The independent variables analyzed were; Mobile Banking, Internet Banking, Agency Banking, Liquidity and Capital Adequacy

The study revealed that; Mobile Banking, Internet Banking, Agency Banking, Liquidity and Capital Adequacy explained 98.6% of performance of commercial banks in Kenya. All the variables which presented financial innovations had a positive coefficient therefore revealing a positive relationship to performance of the commercial banks. From the research findings it was clear that financial innovations affect significantly and positively performance of commercial banks.

ACRONYMS

ATMs Automated Teller Machines

CBK Central Bank of Kenya

EFT Electronic Fund Transfers

GDP Gross Domestic Product

ICT Information and Communication Technology

IDT Innovation Diffusion Theory

MB Mobile Banking

ROA Return on Assets

RTGS Real Time Gross Settlement

USA United States of America

CHAPTER: ONE

INTRODUCTION

1.1: Background of the study

The Kenyan banking industry has experienced tremendous dynamism over the years; the transformation is due to increasing globalization and deregulation. Developments in innovation and ever-transforming commercial settings have led to this change. The Bank of England was the earliest bank to be started in the year 1694. Individuals who were lending money in turn to make a profit were behind the idea (Kariuki, 2005). In this finance industry, innovation is interpreted as the act of coming up with, equipment then marketing innovative equipment of finance, technology, various markets, and institutions. This simplified on how information was accessed, trading, and mode of payment (Solans, 2003).

Several factors can lead to financial innovation. Gorton and Metrick (2010) summarized the factors that influence to the growth of the current changes in the finance industry, which included; reduction in costs of bankruptcy, tax advantages, decrease in moral hazards, reduction in regulatory costs, transparency, and customization. They further stated that a highly stable setting could lead to practical innovation and finally enables a firm to position itself effectively to the background. As well as to attain a competitive gain, this translates to high performance.

Online banking, agency banking, and electronic banking are examples of financial innovations that have been embraced by many commercial banks. The use of Automated Teller Machines as a critical financial innovation is on the rise since its inception in the 1990s. Apart from EFTs, ATMs, RTGS, Payment of utility bills and online customer self-service are other financial innovation in Kenya. These financial innovations, together with Mobile money financial management systems such as Mpesa and Airtel money have revolutionized the banking sector in Kenya. They have enhanced efficiency in the industry, and there is an increase in the number of players in the industry (Ignazio, 2007).

Banks utilize financial innovation to position themselves in the financial market. This has helped healthy competition among banks as well as making them remain relevant in the market Batizlazo & woldesent (2006). Such deeds triggered the desire among academicians to carry out study about the relationship between financial innovation and banks performance. In the recent years, the commercial banks of Kenya have been embracing the digital culture and having some innovations. For example use of phone applications to deposit or withdraw cash. Equity bank has

an app called Eazzy Banking where one can deposit cash, withdraw, apply for loans and even check bank balances all without visiting the bank. Cooperative Bank has M-Coop cash app. This has also been improvised where customers can send money from their phones to their accounts. For example, depositing cash from M-pesa account to the bank account through M-pesa paybill. There are also bank agents that have been set up in many areas thus easily accessible where one can deposit or withdraw cash as long as they have their ATM card or account number for deposits. Some of the banks that have embraced this agency banking include KCB with KCB-Mtaani, Equity bank has Equity agent and the Cooperative Bank of Kenya has Co-op Kwa Jirani. ATMs have also upgraded where in Barclays bank one can deposit cash through the ATM. Internet banking has also been invented where customers can transact online at any time by logging in to your account.

1.2: Evolution of banking in Kenya

During the 18th century, evolution in the banking industry began with the money lenders from India operating quasi bank services. The first bank to be formed was Jetha Lila Bankers which originated from India; it was built in Zanzibar in the year 1880. National Bank of India chose their agent in Zanzibar in 1889 and was representing the house belonging to Smith Mackenzie. The agent-owned a branch in Mombasa in the year 1887 which was later controlled by the Imperial British East Africa in 1888. The national bank of India formed offices in Zanzibar in the year 1982. Then National Bank of India started a branch in Mombasa In July 1896, and Sheriff Jaffer provided housing for the same. In 1904 the first operational branch was started in Nairobi.

The first local commercial bank in Kenya was the Co-operative Bank of Kenya; which began as a co-operative society. Its main customers were small scale farmers. The Co-operative Bank of Kenya became operational in the year 1968. At the same time, the National Bank of Kenya was formed by the government by the government of Kenya. Kenya Commercial Bank was founded in 1971 after the merging Grindlays Bank and the National bank, and the Kenyan government-owned 60% of the shares. It then became the largest commercial banks in the country with a high number of deposits made and had the most branches. In Kenya, the central bank of Kenya regulates the banking industry. The banking act cap 488 controls and accredits these commercial banks. Small organizations which take deposits are governed by the microfinance act and the forex bureaus, ATMs increased by 1853, beginning the twentieth century. Debit card numbers

rose significantly phone banking transactions improved by over 250,000 per year in 2010 from 48,000 in 2007. Kenya's commercial banks' performance has grown tremendously between the years 2001 to 2010 with profit before tax reaching Shs. Seventy-four billion in 2010 up from Shs 2.7 billion in 2001.

Total income revenue of commercial banks has also grown tremendously over the years. (CBK, 2011). Currently, we are in the year 2019, and despite interest rates capping, commercial banks are still working tirelessly towards investment in technological innovations. Despite the closure of some of the commercial banks and some retail banks branches coupled with the sparse posting of profits, it is vague for one to argue that innovations have failed to influence the functioning of commercial banks towards prosperity positively. There is still a great need to explore the effect of advanced on work rate and output of commercial banks.

The rapid growth in information technology also renders previous literature obsolete in a short time and hence studies conducted ten years earlier can easily misinform as the technology then is not the same as technology today, and most of the innovations keep changing and impacts performance in new unique ways. It is also partially for this argument that this research will be undertaken to explain how the most recent technological advancements in the banking sector influence the performance of commercial banks in Kenya

1.3: Problem statement

Mabrouk & Mamoghli (2010), in their paper, explains that the effect of technology on performance is yet to be understood due to the following reasons; inadequate knowledge on innovation drivers and very few tests carried out on the outcomes of technology on the performance of financial banks. De Young, Lang & Nolle (2007) studied about the interconnection between innovation and performance they could not take into account the innovation presumptive from both internal and external banking sector, all of which as a matter of fact influences this relationship.

Lerner and Tufano (2011) explored the consequences of financial improvisations on performance and explicit in their conclusion that the already offered empirical literature and conceptual frameworks inform a lot regarding financial innovation however leaves substantial questions unanswered especially in areas of how financial innovations impact performance in terms of social welfare and further argue that the majority of prevailing researches are case-oriented.

Researchers Rafael & Francisco (2007) cross-examined the results of several local banking segments progresses, and technological advancements between 1986 and 2001 in European Pooja and Singh (2009) researched on the effect of online banking on Performance and Risk in India and Franscesa and Claeys (2010) in their study on innovation and the influence of banks in Europe implementing Internet banking came into a conclusion that economic changes had the minimum impact pertaining performance. Batiz-Lazo & Woldesenbet (2006) in their review of the dynamics of product and process innovation in United Kingdom banking and Mwanja and Muganda (2011) who explored the effects of technological innovations on the financial performance of commercial banks in Kenya concluded that there was a significant contribution of economic changes to the production of banks.

These studies reveal conclusions that are conflicting and forms the basis upon which conducting of this study was stimulated with the aim of investigating further into the topic in the Kenyan commercial banks' context to try to fill the research gaps created by a mixed conclusion. In his study about how innovations affect performance, research by Otoo noted that economic changes bring about shortcomings that may hinder the financial performance of the commercial banks of Kenya.

He further argued that some of these technological advancements have led to operational challenges like cybercrime, and other frauds correlated to the internet including identity thefts and therefore conclude that the losses caused by innovations both to banks and customers are more than gains. Waweru (2012), in his study, protruded that the economic changes expose banks to several risks like credit risk, liquidity risk, and interest rate risk and impacts negatively to their performance.

Githikwa (2009) concluded that implementing financial innovations brings flexibility to operations of the commercial bank, enhances the employment of qualified personnel, and improves quality products and services, thereby positively influencing better business performance. It is due to the varied conclusions by various researchers and research gaps identified above from multiple studies that this study will be conducted to investigate further into how innovations affect performance index of commercial banks in the Kenyan. The research should answer the question, how does financial change affect the financial performance of commercial banks in Kenya?

1.4: Research Objective

To determine the effect of financial innovations on the financial performance of the commercial banks of Kenya.

The specific objectives were

- To determine the effect that financial innovations have on the profitability of commercial banks in Kenya
- To determine the effect of financial innovations on the liquidity of commercial banks in Kenya
- To establish the effect of financial innovations on the return on totals assets of commercial banks in Kenya

1.6: Value of the Study

The research will help the Kenyan government in the realization of vision 2030 in leveraging technology to the growth of the financial sector across the country in access since technological changes bring about innovations. The government will focus on the technological advancements to support in the banking industry by either waiving tax, or other budgetary enticements on the innovation. The study will help the business advisor evaluate bank performance, forecasting for future events as well as the innovations that the banking sector should adopt.

The study will help to point out the importance of financial innovation on the performance, success, and growth of commercial banks. Through this study, commercial banks will have information on business innovation. This will help them identify their weakness and take the precaution of avoiding risk related to change. The findings of this research will be beneficial to customers as they will help them know if it is vital to embrace the innovations. It is vital to them as it increases the number of people using banking to save money if the impact of economic changes is positive. Because customers' work will be made more accessible. For example, they are using agency banking or internet banking.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter looks at theories and studies which relate to financial innovations and performance of business banks, it comes up with a theoretical framework and talks about the research cracks on economic improvements and financial performance of commercial banks.

2.2 Theoretical Review

Trochim (2006), Tormo (2006) and Aguilar (2009) describe a theoretical framework as a research guide and a determinant of the variables. Academic literature thus makes it clear to the researcher on what variables should be included in the research and what data analysis and research design should be used. This segment investigates the different theories and models that can clarify the impact of related financial innovations advancement.

2.2.1. Diffusion of innovation theory

Innovation Diffusion Theory explain the flow of innovations within an organization. Rogers (1983 & 2003) that advanced the theory of diffusion argues that adoption of an invention in a social system happens as process and does not co-occur as some population members adopt innovation quickly and ahead of others.

Rogers defined diffusion as the systemic procedure by which a change is transferred through certain media over a period among members of an organization (Rogers, 1995). An innovation is an idea or object that is perceived to be new (Rogers, 1995). Dillon and Morris (1996) and Rogers (1995) further states that the Diffusion of Innovation theory occurs in five steps, namely Innovation diffusion occurs in five steps. Step one: knowledge (first exposure by people to an innovation); Persuasion (formation of attitudes towards a change which can either be favorable or unfavorable); Decision (People decide either to accept or reject innovation); Implementation (People who accept starts to implement it) and Confirmation (Evaluates and decides either to continue or stop using the change).

Change is influenced by factors such as relative advantage, affinity, complexity, trial ability, and observability it is appropriate as it clarifies why banks adopted technical advancements, which mean they have a financial advantage than those who do not. According to Chile (2017) been applied successfully in different fields, including ICT, social works, agriculture, public health, and marketing.

2.2.2: Disruptive Innovation Theory

Christensen (1997) theory of Disruptive Innovation recommends the need for organizations to do away with conventional principles of good management as soon as they realize that an anticipated technology might disrupt the market in which they operate. Disruptive innovation according to the Organization for Economic Co-operation and Development (OECD) Oslo Manual (2005) is “an innovation that has a significant impact on a market and on the economic activity of firms in that market.” (p. 58). The manual explains until long after an innovation is introduced, it is usually unclear to tell whether it is disruptive or not. Christensen (1997) argues that the emergence of disruptive technologies have led to extinction of some firms.

This theory is very popular and as a result has been intensely discussed and criticized. Danneels (2004) believes that definition of disruptive diffusion innovation is vague and it is not easy to establish if an innovation is inherently disruptive or if its disruptiveness varies from one industry or market to another.

Schmidt and Druehl (2008) argues that an innovation that is “dramatically disrupts the current market is not necessarily a disruptive innovation” and Andrew and Baljir, (2015) further states that it is difficult to distinguish between disruptive and sustaining innovation and hence challenges scholars and managers.

This theory is still valid to this study as it gives insights on how firms seriously investing in R&D to be able to tackle emerging challenges such as heightened competition, rapid technological changes and changing consumer tastes and preferences.

2.3 Financial Innovation and Financial Performance of Commercial banks

Tufano (2002) and Lawrence (2010) explained that development of new processes of production or products that are better and which enables the firm to operate more efficiently, increase profits, reduce costs, maximize resource utilization and gain a competitive advantage. Innovation is very crucial to an organization because they enable an organization to cope with both internal and external changes that are presented by the environment (Kumar, 2011).

Innovation enables organization growth, prosperity, and transformation with environmental variations in which banking is not exempted. According to Gorton and Metric (2010), the significant factors that lead to a rise in innovation are reduced bankruptcy costs, advantages in taxes, less moral hazards, low cost of regulation, customization, and transparency. They further argue that highly stable environs lead to a fruitful innovation and eventually enable firm position

itself effectively to the environment as well as gaining competitive advantage, which leads to a performance which is high.

Performance in finance measures the outcome of an institution's guidelines and procedures in terms of monetary value. These outcomes are exhibited in the organizational returns on investments, (ROA), and value-added. To this conclusion, monetary performance may include such measures as benefits after assess, market share and client fulfillment. New opportunities are created when firms focus on given innovation which they can be easily integrated, thus gain advantages from it Roberts & Amit, (2003).

Activities like systems that manage customers, technologies in banking management, information systems, and other technologies among other sectors in banking systems have an influence on bank performance and profitability. Innovation such as ATM withdrawals and deposit telephone banking, internet banking, ATGRs, agency banking are the most recent innovation which we give our concern Electronic banking is a process of conveying web banking services utilizing online associations.

Account-holders are in a position to adjust, make installments, or ask for advance offices through electronic means. It is beneficial to the banks since e-banking may be a self-service stage (Beck et al. 2007).). According to Ignacio (2009), reaching clients and assembly their needs is a critical bank predicament, due to the budgetary administrations being looked for by distinctive segments of the economy are blended. In any case, with internet associations, implies most clients can see their accounts online.

2.4 Empirical Review

2.4.1 Financial innovation and Profitability

Concurring to Agboola (2006), the application of Data and Communication Innovation (ICT) in keeping money operations in Nigeria, the innovation concepts, procedures, approaches and usage techniques to keeping money administrations has gotten to be a subject of essential significance and concerns to all banks and in fact a prerequisite for nearby and worldwide competitiveness. ICT specifically influences how supervisors choose, how they arrange and what items and administrations are advertised within the managing an account industry. Amid his study he seen increment within the appropriation of ATMs, EFT, shrewd cards, electronic domestic and office managing an account and phone managing an account. He shows that selection of ICT progresses the banks' image and leads to a more extensive, speedier and more effective

advertise. According to Malhotra and Singh (2009) in their study on the effect of web banking on bank performance and risk found out that on normal web banks are bigger, more beneficial and are more operationally proficient. Moreover they found that web banks have higher resource quality and are superior overseen to lower the costs for building and gear which web banks in India depend significantly on deposits. They further found out that littler banks that embrace web banking have been adversely affected on benefit.

Githikwa (2009) studied the relationship between financial innovation and commercial banks profitability in Kenya. The findings indicated that commercial banks conceptualize financial innovation as a means of creating impact in the profit performance. In addition, the study discovered that financial innovation implementation requires huge resources and that it reduces operational and transaction costs and enable banks to satisfy their customer needs. He concluded that implementing financial innovations brings flexibility to operations of commercial bank, enhances employment of qualified personnel and improves quality products and services thereby positively influencing better financial performance.

Electronic banking could be prepare of conveying keeping money administrations through web associations. Customers are in a position to see their balance adjust, request installments or apply for loan via the internet. This can be useful to the banks since e-banking could be a self-service stage

2.4.2: Financial innovations and Liquidity

Liquidity refers to the degree to which an asset can be quickly converted in cash, commercial banks have their ability to fund increases in assets and meet obligations. Liquidity is one of the important financial stability indicators in the banking sector. According to Singh and Sharma (2016) investigated internal and external determinants that determined the Indian industrial banks liquidity. They disclosed that bank possession impacts liquidity of economic banks, they prompt that everyone banking factors excluding (cost of funding) and economics factors expect (unemployment) have a major impact on industrial banks. The banking factors embody bank-size, client deposit rate, plus quality and also the rate of capitalization in a very bank whereas the macro-economic factors embody the gross domestic product rate and rate of inflation, the end result indicated that among the determinants the dimensions, gain level, funding value and also the quality of assets negatively impact the liquidity risk of Indian industrial banks whereas the speed of client deposits and capitalization rate have a positive influence.

According to Miller (1992) and Finnerty (1992) in their research on financial innovations found that financial innovations occur when banks try to relocate risk, increase liquidity and identified competition and technology as the major drivers of financial innovations. A study conducted by Waweru (2012) on the effects of financial innovations on risk management of commercial banks in Kenya. He concluded that financial innovations have exposed commercial banks in Kenya to risks such as credit risk, liquidity risk, compliance risk and interest rate risk.

Nyangosi and Arora (2011) contend that financial institutions embraced diverse electronic dispersion channels to meet the requests of clients. In their study to look at the appropriation of data innovation in Kenyan banks centering on administrations given through web and portable keeping money, they found out that data innovation in managing an account commerce was essential to attain greatness objective. The consider assist revealed that ATM innovation is the foremost accessible innovation whereas SMS keeping money was too found valuable. They moreover found out that clients utilize bank websites to know the items, utilize web keeping money to check adjust, know after deal administrations and purchase items, and sign that web keeping money is picking up ubiquity and getting to be crucial in monetary exchange occasions.

2.4.3: Financial innovation and return on assets

According to Arnaboldi and Clays (2008) in comparison the performance of distinctive on-line keeping cash models over the amount 1995-2007 in Finland, Spain, Italian Republic and therefore the GDP, realized that net banks were activity superior in terms of traditional returns to assets (or value), and do not seem to run higher operational prices for the tiny wage they produce. They clarify the performance of banks using a bunch of chosen bank specific highlights, however fe as well as country specific political economy pointers and knowledge innovation connected proportions. They additional say that by focusing typically on bank deposits, that square measure additional productive. They encourage that on-line banking as a prepare advancement is mostly driven by variables outside to the industry that incorporate rate of households with get to net at domestic, an improved broadband infiltration rate, and better value on R&D business that square measure all parts in spades poignant net bank performance.

Internet adoption appears to impact positively bank performance, measured in terms of ROA and ROE. Hernando and Nieto (2006) inspected the effect on financial execution within the Spanish market when a value-based site was set up. They concluded that the adoption of the web as a delivery channel continuously decreases overhead costs. This fetched decrease boosting

performance of banks approximately one year and a half after the adoption in terms of ROA, and after three a long time in terms of ROE

Financial advancement is pointed at obtaining a lot of capital at the smallest amount value as conceivable and bigger a part of the support composition is high-cost reserves like deposits accounts or saving accounts. Because it were a touch add of reserves area unit inexpensive, like saving accounts. Later, banks should enhance well and every development should be communicated viably and appealingly to be their targeted market (Iftekhhar, Schmiedel and Tune, 2009). Purchasers should lean towards depositing money into a system within which they will get an excellent installment profit (Kemppainen, 2003 & 2008). Advancement progresses the developments of deposits from checking accounts to money advertise store accounts, increments utilize stores, and better traditional wage rates. Net banking adoption encompasses a positive impact on the amount of stores and advances per branch

2.5: Research gap

This review reveals mixed results on the link between financial innovations and financial performance. Pooja and Singh (2009) (Pooja & Balwinder, s, 2009) (Pooja & Balwinder, s, 2009) concluded that innovations in finance had the least impact on bank performance. Batiz-Lazo & Woldesenbet (2006) and Mwanja & Muganda (2011) found out that there was a vital contribution to financial innovations and the production of banks. Also, the review of the literature indicated that only a few financial changes had been considered. More so, there has not been a quite impressive range of researches and studies in Kenya. It is for this reason I am undertaking this research. This research aimed toward bringing into focus the results of financial innovations on the performance of commercial banks in the country. Further, this paper examined the impact of online banking on the financial performance of commercial banks in Kenya.

2.6: Conceptual Framework

Mobile banking is the utilization of the mobile phone to transact with the bank. Clients use their portable phones to make deposits, pay bills from their bank accounts. Many people have mobile phones and thus will create banking transactions at the comfort of their convenience. Therefore, mobile banking could increase the client base of a bank. Electronic funds transfer involves transacting money from one bank account to another remotely. Most commercial banks have

online platforms through that customers can request for funds transfer and create a request for funds payments.

Online banking is a system which enables individuals to perform banking activities utilizing the internet. Internet banking reduces the costs of running banks in the way that fewer activities are carried out in the banking halls. Internet banking could act as a substitute as branches and therefore reduces operational costs. Once operational costs are maintained at optimum, the performance of the commercial banks may improve. The importance of this research is to determine the relationship between internet banking, mobile banking, and electronic funds transfer on the financial performance of commercial banks in Kenya. The production of commercial banks may be measured by the return on assets and total income or profitability.

Independent variables

Dependent variables

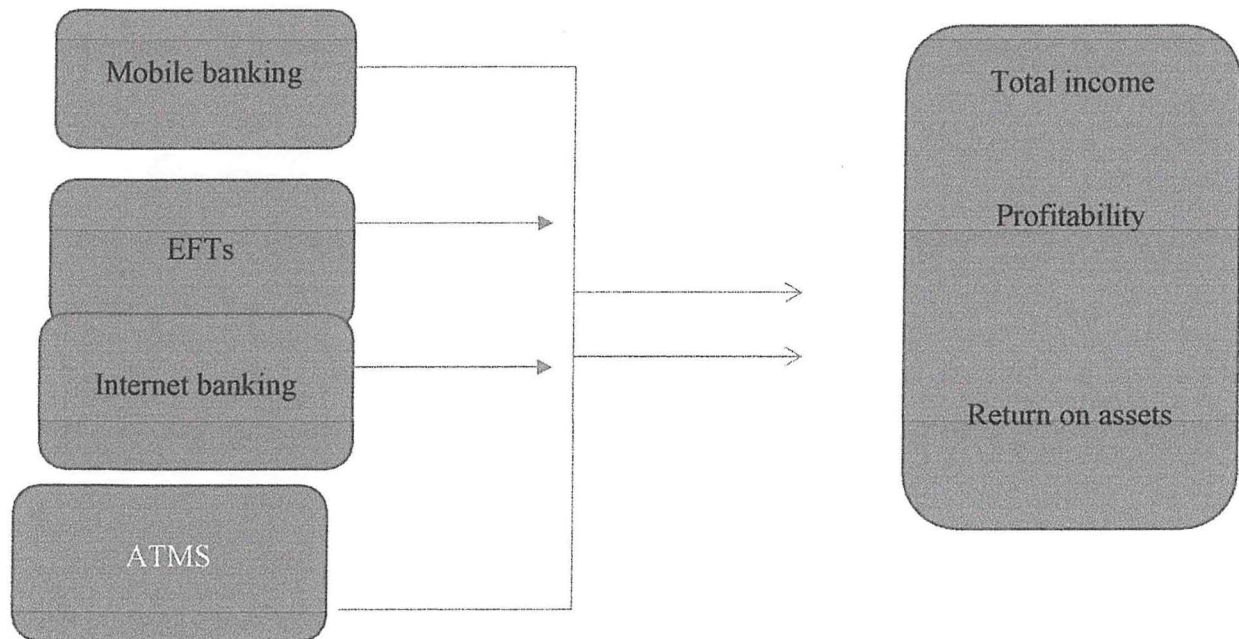


Figure 2.1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1: Introduction

This chapter describes the varied aspects of analysis methodology, which will be used. They embraced analysis style, population and sampling, data collection, and data analysis.

3.2: Research Design

Research design may be a framework that facilitates data collection and analysis in a method that the objectives of the study can be met. According to Cooper and Schindler (2013), the selection of review is set the kind of information and sort of data analysis that given research adopts. A research design is a plan that stipulates the principles of data collection, ensuring research questions are answered (Sekaran, 2012). The study took Descriptive design and cross-sectional design. Descriptive research seeks to establish the relationship between the independent and dependent variable. The study portrays the variables by the respondent, what and the way its related to particular problem hence can establish the relationship between financial innovations and financial performance of commercial banks in Kenya. It's a type of design that seeks to gather data without interfering with the natural setting. Descriptive research describes patterns within the past and creating assumptions about current and future outcomes. The cross-sectional design is employed to assemble information over some time, like days, weeks, years. It takes into consideration the issues of the time.

3.3: Population

A population may be cluster persons, objects or things from those samples are taken for measurements. Cooper and Schindler (2013) describes a target population as entire setoff elements and units that a given study seeks to create inferences on, the target population for this study will comprise of eleven listed commercial banks operating in Kenya as at 31st December 2017 because it will cover more than 75% of banks using internet banking, mobile banking, and agency banking.

3.4: Sample size

The sample units under study are 11 listed commercial banks. The sample was suitable due to their simplified access to information mainly from the registered and government-owned banks. They also form a big part of over 80% of the Kenyan banking industry

3.5: Data Collection

This research adopted primary and secondary data collection. Primary data will be obtained through a researcher administered a questionnaire to respondents willing to cooperate. The respondents to be targeted are 10 managers per bank and this implies that 110 managers will be requested to fill the questionnaire. Open-ended and closed-ended questions will be applied in grouping primary data. Secondary data will be collected from 2013 to 2017 so that may be analyzed to provide the outcome of financial innovations. The data will be collected from the Central Bank of Kenya and banks audited financial statements. This period will be suitable because it was when Kenya was experiencing dynamic changes in terms of technology and economic innovations.

3.6: Data Validation and Reliability

The data collection and instrument (questionnaire) will be tested for validity by subjecting it to the scrutiny of experience bank managers who will express their opinions as to whether the constructs we were using to measure the concepts are valid. The reliability of the instrument will be achieved after subjecting the questionnaire to a pilot study. Specifically, the questionnaire will be subjected to three customer care personnel.

3.7: Data Analysis

Data will be analyzed using statistical methods like; mean, mode, median, standard deviation, regression, and correlation was developed to measure the result of financial innovation on the performance of commercial banks. Regression analysis will be used to test the statistical significance of the varied independent variables on the dependent variables

3.7.1: Regression model

The regression model to be adopted in this study is as follows to establish the effect of the independent variables on the dependent variables.

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Y_i = Performance (Profitability, Liquidity, Return on assets and customer deposits)

X_i $i = (1, 2, 3, 4)$ = values of independent variables which include

X_1 = internet banking,

X_2 = mobile banking,

X_3 = ATMs,

X_4 = EFTs.

β_0 - Constant of the model

$\beta_1 - \beta_4$ = Regression coefficients

ε - Error term estimate

3.7.2 Measurement of the Variables

The dependent variable will be the financial performance of commercial banks while the independent variable will be financial innovation as indicated by the number of users of internet banking, mobile banking, and agency banking. The variables in the model will be measured, as shown in table 3.1.

Table 3.1: Measurement of the Variables

Variables	Measurement	Type of analysis	Level of analysis
Internet Banking	Number of transactions	Quantitative	Descriptive
Mobile banking	Number of transactions	Quantitative	Descriptive
ATM	Number of transactions	Quantitative	Descriptive
EFT	Number of transactions	Quantitative	Descriptive

3.7.3 Test of significance

The study will use both F test and T test. T test is type of inferential statistics used to determine where there is significant different between the means of two groups. With all inferential statistics it's assumed dependent valuable fits normal distribution. When we assume a normal distribution exist we can identify the probability of particular outcome. F test is any statistical text in which the text statistics has an F distribution under null hypothesis. It arises when the data models are fitted using list squares. The computation will be done using a P value of 5% and 95% confidential interval.

CHAPTER FOUR

RESEARCH, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter is composed of data which was collected from the field; the various analyses and the interpretation of the findings on effect of financial innovations on the financial performance of the commercial banks of Kenya, their interpretation and discussion which were then presented.

4.2 Response rate

The study targeted the financial managers and general managers of the sampled commercial managers in Kenya. Out of 110 questionnaires administered, 62 of them were duly filled and returned. The results analysis of the response rate is as shown in Table 4.1.

Table 4.1 Response rate

	N	Percent (%)
Questionnaires returned	62	55
Unreturned	48	45
Questionnaires administered	110	100

The response rate was at 63% which is within Mugenda and Mugenda (2003) approval for significant response rate for statistical analysis, was given at a least value of 50% which helps to reduce bias and improve the accuracy of the results.

4.3 Background information

The background information of the banks was collected through questionnaire in an effort to obtain the historical financial of the commercial banks in operation.

4.3.1 Years in operation

The number of years that the banks have been in operation and involved in financial innovation practices was accessed. Figure 4.1 gives the illustrations of the findings.

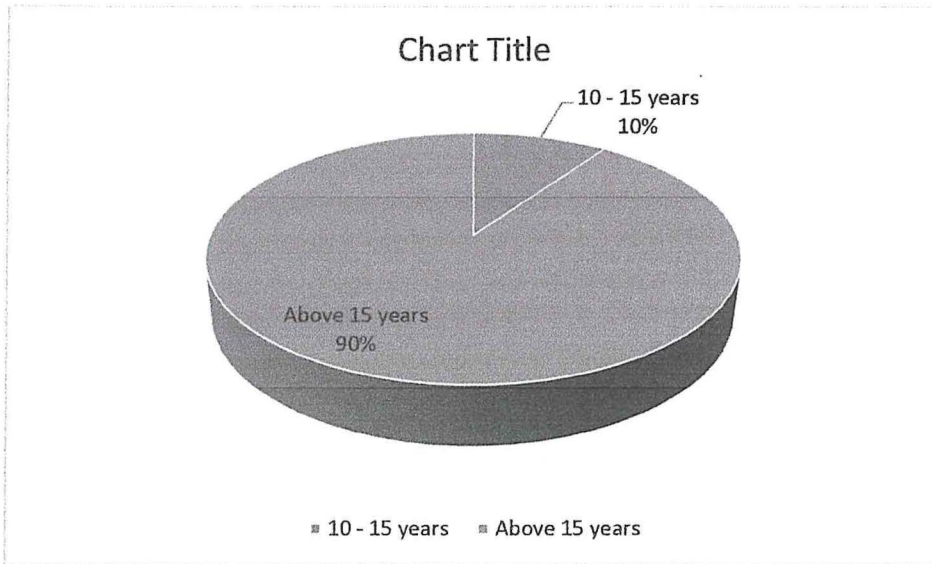


Figure 4.1 Years in operation in Kenya

From the findings, the research reveals that majority (90%) of the commercial banks in Kenya have been in operation in Kenya for more than 15 years. This shows that the banks are in knowledge of their area of service out of the time they have been in service

4.3.2 Capitalization

The size of capital of the banks was assessed and the findings analyzed and illustrated in the Figure 4.2 below.

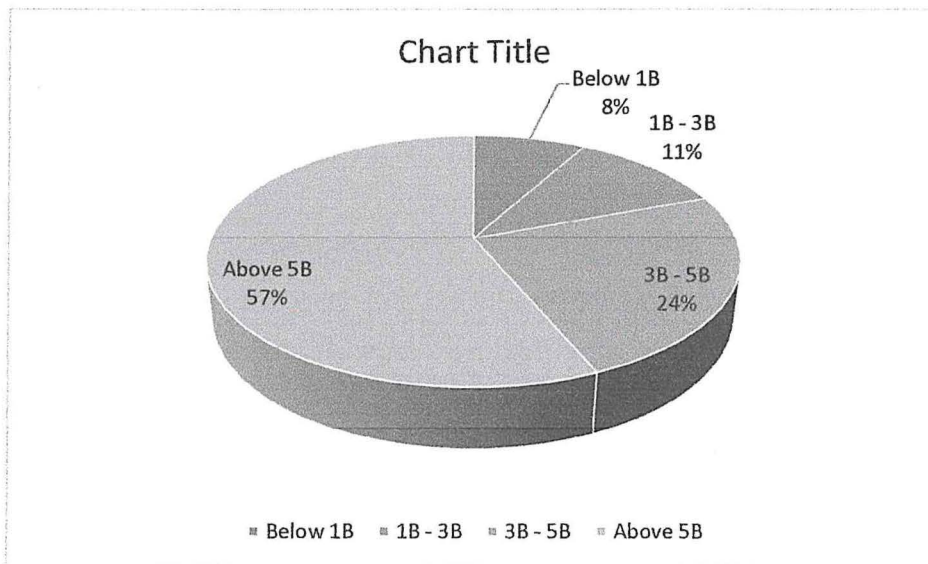


Figure 4.2 Capitalization

The findings illustrated in Figure 4.2 illustrates that the majority (57%) of the commercial banks in Kenya have capital assets worth more than 5 billion Kenyan shillings. 24% of the respondents said that the banks have capital worth ranging between 3 to % billion. 11% had capital worth 1 to 3 billion whereas 8% of the banks had capital less than 1 billion. This illustrates that the banks have enough minimal capital to run their operations comfortably.

4.3.3 Financial innovation

The study accessed the frequency of the individual banks in which they involve themselves into various financial innovation practices to increase their profitability. Figure 4.3 gives the outcomes.

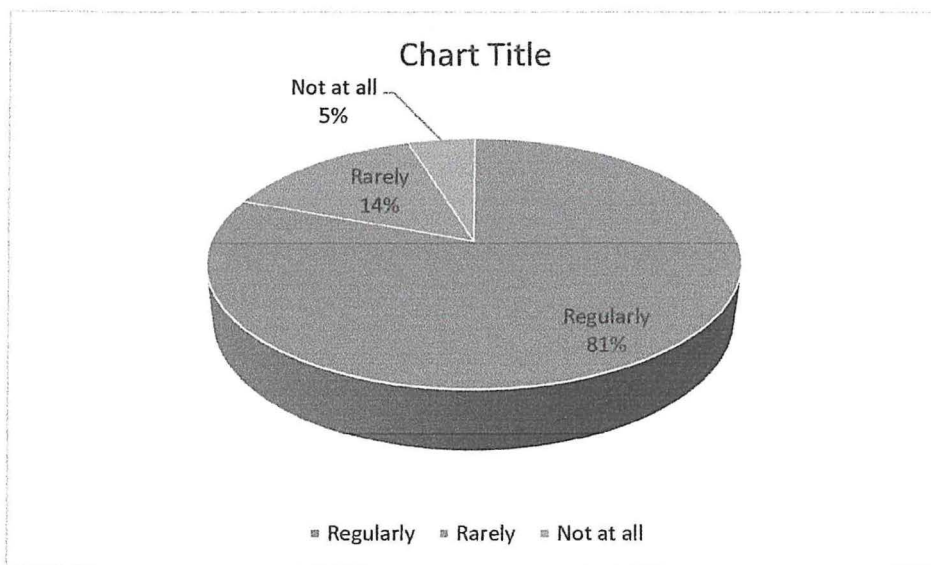


Figure 4.3 Financial innovation practices

The findings revealed that the majority of the banks (81%) engage in financial innovation practices while very minimal number of banks, less than 5%, doesn't engage in financial innovation practices.

4.4 The effect of financial innovations on profitability of Banks

The respondents gave their different views on the effect that the various financial innovation applicable in the banks have on the profitability of the banks. To achieve this, a five point Likert scale was used. The outcomes are as shown in Table 4.2.

Table 4.2 Effect of financial innovations on profitability of Banks

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std Dev.
Investments in financial innovations is mostly motivated by profits to the bank	1.60%	3.20%	8.10%	40.30%	46.80%	4.27	0.87
Income from financial innovations have high margin hence contributing positively to bank annual profitability	1.60%	6.50%	9.70%	32.30%	50.00%	4.23	0.98
the cost of financial innovation justify the benefit in terms of bank profitability	8.10%	4.80%	11.30%	41.90%	33.90%	3.89	1.17
Financial innovations have low maintenance cost leading to high levels of profitability over their economic lifetime	8.10%	6.50%	8.10%	41.90%	35.50%	3.9	1.2
Aggregate mean						4.072	1.055

From the findings in Table 4.2, most of the respondents (87%) agreed that investments in financial innovations is mostly motivated by the profits that the bank receive from the practices, 8% had a neutral opinion over the issues whereas 5% disagreed that with the statement. Majority of the respondents (82%) agreed, 10% were uncertain whereas 8% disagreed with the opinion that income from financial innovations have high margin which leads to positive amounts in bank annual profitability. 76% of the respondents agreed that the cost of financial innovation justify the benefit in terms of bank profitability, 11% had a neutral opinion whereas 13% disagreed with the statement. Majority (78%) of the responses were in agreement that financial innovations have low maintenance cost, leading to high levels of profitability over their economic lifetime and 8% had no opinion over the matter whereas 15% disagreed with the statement.

From the findings, it's evident that the profitability in the banks is affected positively through the adoption of financial innovation practices in a case where the practices are well planned for to avoid set in of losses.

4.5 The effect of financial innovations on liquidity

This study sought to investigate the effect of the financial innovations on the liquidity of the commercial banks. Table 4.3 give the illustrations of the findings.

Table 4.3 Effect of financial innovation on liquidity

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard Deviation
financial innovations help to achieve daily liquidity obligations	6.45%	6.45%	16.13%	35.48%	35.48%	3.9	1.2
Financial innovations aid to increase their cash holding to mitigate liquidity risk	3.23%	8.06%	11.29%	35.48%	41.94%	4	1.1
Financial innovations investment have a payback period of less than 3 years and hence good liquidity	6.45%	9.68%	9.68%	37.10%	37.10%	3.9	1.2
Financial innovation has appositive effect on increasing commission based on liquidity	6.45%	8.06%	14.52%	25.81%	45.16%	4	1.2
Aggregate mean						3.95	1.18

From the findings, the majority 71% agreed, 16% had a neutral opinion whereas 13% disagreed on the statement that financial innovations help to achieve daily liquidity obligations. On the opinion that financial innovations aid to increase their cash holding to mitigate liquidity risk, most (78%) of the respondents agreed, 11% had a neutral opinion whereas 11% disagreed to the statement. Most (74%) agreed that financial innovations investment have a payback period of less than 3 years and thus enhances liquidity stability in the banks, 10% had a neutral view whereas 16% disagreed with the statement. 71% of the respondents were for the opinion that financial innovation has a positive effect towards increasing commission based on liquidity, while 14% disagreed with the statement and 15% were not sure about the issue. The average mean and standard deviation was 3.95 and 1.18 respectively.

The outcomes revealed that the practices undertaken on financial innovation have a resultant positive effect on the liquidity level and hence the practices should be implemented in the individual banks.

4.6 The effect of financial innovations on Return on assets and customer deposits

The study examined whether the financial innovations in the commercial banks have an effect on the returns on assets and number of customer deposits to the banks. The illustrations of the findings are shown in Table 4.4.

Table 4.4 Impact of financial innovations on Return on assets and customer deposits

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std Dev
Financial innovation influence the reduction of operational cots hence better return on assets of the bank	6.45%	4.84%	14.52%	40.32%	33.87%	3.9	1.1
Financial innovations such as EFTs, mobile banking have attracted more retail deposits for the banks	9.68%	6.45%	20.97%	30.65%	32.26%	3.7	1.3
Some financial innovations have enhanced customer access their deposits with ease for withdrawal	1.61%	8.06%	14.52%	32.26%	43.55%	4.1	1
Financial innovations investments have a payback period of less than 3 years and hence good return on assets	4.84%	8.06%	17.74%	35.48%	33.51%	3.9	1.2
Financial innovations has expanded the income generating potential of the bank	4.84%	6.45%	11.29%	35.48%	41.94%	4	1.1
Aggregate mean						3.92	1.14

From the outcomes, majority 74% agreed, 15% were undecided whereas 11% disagreed to the opinion that financial innovation leads to reduction of operational cots hence better return on assets ratio of the bank. Further, majority (63%) agreed that financial innovations such as EFTs, mobile banking have attracted more retail deposits for the banks and 20% had a neutral opinion whereas 16% disagreed with the statement.

Most respondents (76%) were for the opinion that some financial innovations have enhanced customer access their deposits with ease for withdrawal and 15% were not sure while 9% disagreed with the statement. On the opinion that financial innovations investments have a payback period of less than 3 years and hence good return on assets, 69% agreed, 18% were undecided whereas 13% disagreed with the statement. Majority (77%) further agreed with the opinion that financial innovations has expanded the income generating potential of the bank, 11% had a neutral opinion whereas 11% disagreed with the statement. The aggregate mean and standard deviation was at 3.92 and 1.14 respectively.

The findings indicate that practicing financial innovations practices contribute to the increase in ratio of return on assets.

4.7 Correlation Analysis

The association closeness of the variables under the study was assessed through Pearson Correlation coefficient. The correlation coefficient can only fall between +1 and -1 where the lower the coefficient the lower the association. Zero indicate there is no association between the variables and a positive coefficients shows that there is a direct proportional relationship between the variables whereas a negative coefficient indicates there is an inverse proportional relationship of variables. The correlation analysis of variables is shown in Table 4.5.

Table 4.5 Correlation analysis

	Profitability, liquidity and ROA	Internet banking	mobile banking	EFT transactions	ATM transactions
Profitability, liquidity and ROA	1				
Internet banking	0.7120	1			
mobile banking	0.7172*	0.3653*	1		
EFT transactions	0.7467*	0.2870*	0.9618*	1	
ATM transactions	0.7724*	0.4208*	0.9774*	0.9805*	1

From the table above, the correlations of 0.712, 0.7172, 0.7467 and 0.7724 indicate a strong correlation of internet banking, mobile banking, electronic funds transfers and ATM transactions on profitability, liquidity and Return on Assets (ROA).

4.8 Regression Analysis

In an effort to determine the extent of association further between internet banking, mobile banking, electronic funds transfers and ATM transactions on profitability, liquidity and Return on Assets (ROA), the researcher did a linear regression analysis.

4.8.1 Effect of financial innovations on the profitability of commercial banks in Kenya

The regression analysis was done on internet banking, mobile banking, electronic funds transfers and ATM transactions on profitability of commercial banks in Kenya. The following Figure 4.4 illustrates the results

Source	SS	df	MS	
Model	3546.35288	4	886.588221	Number of obs = 55
Residual	443.520381	50	8.87040761	F(4, 50) = 99.95
Total	3989.87327	54	73.886542	Prob > F = 0.0000
				R-squared = 0.8888
				Adj R-squared = 0.8799
				Root MSE = 2.9783

Figure 4.4 Model summary of profitability

The findings indicated an R squared value of 0.8888 which shows that the profitability of the banks is influenced by internet banking, mobile banking, electronic funds transfers and ATM transactions by 88.88%. The remaining 12% could be explained by some other factors. The chi-square value is 0.000, which is less than 0.05 meaning that the independent variable is significant and can be used to predict the dependent variable.

Table 4.6 Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.013	0.212		4.399	0
	Internet banking	0.72	0.112	0.69	3.523	0.000
	Mobile banking	0.204	0.063	0.089	4.012	0.031
	EFT transactions	0.157	0.069	0.051	4.592	0.001
	ATM transactions	0.291	0.092	0.095	3.474	0.016

a Dependent Variable: profitability

Thus, the model of the objective is:

$$\text{Profitability} = 2.013 + 0.72X_1 + 0.204X_2 + 0.157X_3 + 0.291X_4$$

Where X_1 is the internet banking, X_2 is mobile banking, X_3 is EFT transactions and X_4 is the ATM transactions.

4.8.2 Effect of financial innovations on the liquidity of commercial banks in Kenya

The regression analysis was done on internet banking, mobile banking, electronic funds transfers and ATM transactions on liquidity of the banks. Outcomes are as shown in Figure 4.5

Source	SS	df	MS	
Model	1290.70322	4	322.675804	Number of obs = 55
Residual	6420.10656	50	128.402131	F(4, 50) = 2.51
Total	7710.80977	54	142.792774	Prob > F = 0.0532
				R-squared = 0.1674
				Adj R-squared = 0.1008
				Root MSE = 11.331

Figure 4.5 Model summary of liquidity

The findings revealed that the chi-square value is 0.05 which indicates that the findings are significant and have an R squared value of 0.1674 which shows that the independent variable are accounting for 16.74% of the liquidity ratio of the banks.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.113	0.195		3.998	0
	Internet banking	0.321	0.098	0.292	2.123	0.023
	Mobile banking	0.217	0.069	0.087	3.867	0.015
	EFT transactions	0.198	0.071	0.049	4.523	0.002
	ATM transactions	0.409	0.089	0.079	3.214	0.013

a Dependent Variable: liquidity

$$\text{Liquidity (Y)} = 1.258 + 0.29X_1 + 0.164X_2 + 0.203X_3 + 0.398X_4$$

Where X_1 is the internet banking, X_2 is mobile banking, X_3 is EFT transactions and X_4 is the ATM transactions.

4.8.3 Effect of financial innovations on the return on totals assets commercial banks in Kenya

The regression analysis was done on internet banking, mobile banking, electronic funds transfers and ATM transactions on return on assets and customer deposits. The following Figure 4.6 illustrates the results.

Source	SS	df	MS	
Model	18.6175042	4	4.65437604	Number of obs = 55
Residual	30.6930668	50	.613861335	F(4, 50) = 7.58
Total	49.3105709	54	.913158721	Prob > F = 0.0001

R-squared = 0.3776
Adj R-squared = 0.3278
Root MSE = .78349

Figure 4.6 Model summary of ROA

The findings indicate the relationship is significant with the chi-square value of 0.0001. The R squared value is 0.3776 which implies that the ratio of Return on Assets of the banks is influenced by internet banking, mobile banking, electronic funds transfers and ATM transactions by 37.76%. The remaining variation 62% is accounted for by other factors.

Table 4.6 Coefficients of regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.258	0.312		4.068	0
	Internet banking	0.29	0.105	0.343	3.148	0.000
	Mobile banking	0.164	0.071	0.094	3.968	0.035
	EFT transactions	0.203	0.065	0.061	4.646	0.000
	ATM transactions	0.398	0.097	0.085	3.109	0.011

a Dependent Variable: Return on assets

According to the coefficients of regression in Table 4.6, internet banking with a coefficient of 0.29 (p-value = 0.000); mobile banking with a coefficient of 0.164 (p-value = 0.035); EFT transactions with a coefficient of 0.203 (p-value = 0.000) and ATM transactions with a coefficient of 0.398 (p-value = 0.011) were found to be significant and relating positively on performance of commercial banks in Kenya. The summary of the model is shown in the equation.

$$ROA (Y) = 1.258 + 0.29X_1 + 0.164X_2 + 0.203X_3 + 0.398X_4$$

Where X_1 is the internet banking, X_2 is mobile banking, X_3 is EFT transactions and X_4 is the ATM transactions.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECCOMENDATIONS

5.0 Introduction

Chapter five presents the summary of the findings, conclusions, recommendations of the study and the suggestions for further studies.

5.1 Summary

The study revealed that mobile banking, ATM cards and internet banking have a significant effect on the return on assets, liquidity and profitability. For the performance of banks to be improved which is majorly measured by metrics of profitability, liquidity and ROA, the banks should involve in practices in the financial field to boost their incomes. In their operations, the innovations are useful in that they ease their operations and efficiency. The reliability of their systems is enhanced by use of technological innovations.

The first objective was to determine the effect that financial innovations have on the profitability of banks. It was revealed that financial innovations have high margin which leads to positive amounts in bank annual profitability. Further, these innovations have low maintenance cost which leads to high levels of profitability over their economic lifetime. The profitability in the banks is affected positively through the adoption of financial innovation practices in a case where the practices are well planned for to avoid set in of losses.

The second objective was to examine the effect of financial innovations on the liquidity of commercial banks in Kenya. It was revealed that financial innovations help to achieve daily liquidity obligations in the banks. Moreover, these innovations aid to increase their cash holding to mitigate liquidity risk and have a payback period of less than 3 years and thus enhances liquidity stability in the banks. There was a positive influence of financial innovation on liquidity. The investigation on effect that financial innovations have on the return on assets (ROA) of banks. It was found that financial innovations such as EFTs, mobile banking have attracted more retail deposits for the banks. Further, these innovations have enhanced customer access their deposits with ease for withdrawal and have expanded the income generating potential of the bank.

5.2 Conclusions

The study also showed that the banks were inspired to follow various financial innovations by the different priorities and interests. The study concludes that banks are using internet banking to improve accuracy and profitability and increase banking system speed and reliability. The system is streamlined and less vulnerable to human errors. With regard to the goal of establishing the effect of electronic money transfers on commercial banks ' profitability, liquidity and return on assets in Kenya, it was established the innovations have improved significantly on bank incomes. The statistical significance level of the independent variables was below 0.05.

5.3 Recommendations

The study recommends that the administration of banks that have not developed electronic banking and do so to enhance the electronic way of doing things in their procedures. Further, from the outcomes of the study that the profitability, liquidity and return on assets of banks by using financial innovation practices had very positive effects, the management of banks should therefore adopt financial innovation practices, such as ATM cards, the internet and mobile banking in their services inclusively.

REFERENCES

- Allen, F., & Gale, D. (2004). Financial Innovation and Risk sharing.
- Andy, F. (2009). *Discovering Statistics using SPSS*. Sage Publications.
- Arnaboldi, F., & Claeys, P. (2008). Financial innovation in internet banking. *A comparative analysis*.
- CBK. (2010). Central Bank of Kenya Directory of Commercial Banks and Mortgage Finance Companies. p. 1.
- CBK. (2016/2017). Central Bank of Kenya. *Annual Reports and Financial Statements*.
- Chang, B., & Dutta, S. (2014). *Internet banking and online banking .E-government services maturity and development cultural, organisation and technology perspective*.
- Chhen, Z. (2013). Financial Innovation and Arbitrage pricing in frictional economies. *Journal of economic Theory*, 123-200.
- Claeys, P. (2008). Financial innovation in internet banking. *A comparative analysis*.
- Clarence, B. (2010). *A sociological Analysis of Youth inactivity in Ghana*. Ghana: Dalhousie University.
- Delgado, J., Hernando, L., & Nieto, M. (2006). Do European primarily internet banks show scale and experience efficiencies. *European financial management*.
- DeYoung, R., Lang, W. W., & Nolle, D. (2007). How the internet affects output performance at community banks. In *Journal of Banking and finance* (pp. 1033-1060).
- DeYoung, R. (2005). *Journal of business. The performance of internet -based models: Evidence from the banking industry*, 78(3) , 893-947.
- Francesca, A., & Claeys, P. (2010). *Innovation and Performance of European Banks adopting Internet*, 04/10.
- Githikwa, P. (2011). *The relationship between financial innovation and profitability of commercial banks in Kenya*.
- Gorton, G., & Metrick, A. (2010). *Securitized banking and the run on repo*.
- Hernando, J., & Nieto, M. (2006). *Is the internet delivery channel changing banks performance?*
- Iftekhar, H., Schmiedel, H., & Song, L. (2009). Retail banking and payment.
- Jurgen, S. (2008). Bis review. *Growth and productivity of the financial sector-challenges for monetary policy*, 137.

- Lawrence, J. (2010). Technological Change Financial innovation and financial regulation in the US, the challenges for public policy . *Journal of Financial Economics*, 79, 223-255.
- Mabrouk, A., & Mamoghli , C. (2010). Dynamic of Financial innovation and Performance of banking firms. *Context of emerging banking indusrty*, 5.
- Malhotra, P., & Singh, B. (2009). The impact of internet banking on bank performance and risk. *The Indian experience.Eurasian*, 43-62.
- Misati, R., Njoroge , I., kamau, A., & Ouma, s. (2010). *Financial innovation and monetary transmission in kenya*.
- Mugenda, O., & Mugenda, A. (2003). Research methods: Quantitative and Qualitative methods. *Revised in Nairobi*.
- Mwangi, M. (2007). Factors influencing Financial innovation in Kenya Securities Market. *A study of firms listed at the NSE*.
- Mwania, M., & Muganda ,N. (2011). An investigation on the relationship between information technology conceptualization and bank performance.
- Nader, A. (2011). The effect of banking expansion on profit efficiency of Saudi bank. *International Conference on Business and Economic Research*, 269.
- Otero-Neira, C., Lindaman, M. T., & Fernandez, M. J. (2009). *Innovation and performance in SME*.
- Pooja, m., & Balwinder,s. (2009). Theimpact of internet banking on banking performance and risk. *Eurasin journal of Business and Economics*.
- Rogers, E. (1983). In *Diffusion of Theory* (Vol. III, p. 216). NewYork: The Free Press.
- Shirlery, J. H., & Sushanta, K. A. (2010). The impact of information technology on the banking industry. In *Theory and empirics*.
- The effect of banking expansion on profit efficiency of Saudi banks. (2011). *2nd International Conference on Business and Economic Research*.
- Tufano, P. (2003). Economics of finance. (George constantinidis, Milton Harris, & s. Rene , Eds.) *Corporate Finance, 1a*, 307-336.
- Waweru, W. (2012). The effect of financial innovation on risk management of commercial banks in Kenya. University of Nairobi: Unpublished Master of Business Administration Project.
- William, D. (2003). *Measuring government in the early twentieth century*. Public Administartion Review.

Zahra, S., & Das, R. (1993). Innovation strategy and financial performance in manufacturing firms. In *Theory and empirics*.

Ole Sangale Rd, Madaraka Estate
P. O Box 59857 - 00200, Nairobi, Kenya.
Cell: +254 (0) 703 034 414/6/7.
Twitter: @SBSKenya
LinkedIn/ Facebook: Strathmore Business School

Email: info@sbs.ac.ke or visit www.sbs.strathmore.edu



Strathmore
UNIVERSITY
BUSINESS SCHOOL

4 November 2019

To whom it may concern,

Academic Reference for Kagema Grace Nyawira Student Number 094717

Strathmore University offers the Bachelor of Commerce (BCom) degree program. In their 4th year of study, degree students are required to work on a Management Research Project. The project involves reading literature that relates to the research topic; data collection and analysis and finally preparing a written document of the research findings and recommendations.

Grace is requesting to gather information to be used in her research. She is accountable for all information extracted from you and will ensure that it will be used for research purpose only and will be kept confidential.

The research is entitled **“THE EFFECT OF FINANCIAL INNOVATIONS ON FINANCIAL PERFORMANCE OF COMMERCIAL IN KENYA.”**

We are looking forward for your co-operation and assistance to the above named student.

Yours faithfully,

Jeremiah Mong'ayo,
Administrator, Undergraduate Programmes
Strathmore University Business School
Email: jmongavo@strathmore.edu

Strathmore University Business School is a proud member of:

Association of African
Business Schools



AACSB

APPENDICES

APPENDIX I: QUESTIONNAIRE

The Purpose of this questionnaire is to determine 'the effect of financial innovations on the performance of commercial banks' .It is intended for academic purposes and all information provided will be handled with utmost confidentiality.

SECTION A: GENERAL INFORMATION

1. How long has the bank been in operation in Kenya? (Tick appropriate)

- a) 1-5years ()
- b) 5-10years ()
- c) 10-15 years ()
- d) Above 15 years ()

2. Size of the bank (Capitalization)

- a) Below 1B ()
- b) 1B-3B ()
- c) 3B-5B ()
- d) Above 5B ()

3. How often does your bank undertake financial innovation?

- a) Regularly ()
- b) Rarely ()
- c) Not all ()

SECTION B: EFFECT OF FINANCIAL INNOVATIONS ON PROFITABILITY

In a scale from 1 to 5 (1) Strongly disagree (2) Disagree (3) Neither Agree or Disagree (4) Agree (5) Strongly agree, indicate by using tick the extent to which financial innovations affect profitability

Statement	1	2	3	4	5
a) Investments in financial innovations is mostly motivated by profits to the bank					
b) Income from financial innovations have high margin hence contributing positively to bank annual profitability					
c) Does the cost of financial innovation justify the benefit in terms of bank profitability					
d) Financial innovations have low maintenance cost leading to high levels of profitability over their economic lifetime					

In your opinion how does financial innovations effect on profitability of commercial banks.....

.....

.....

SECTION B: EFFECT OF FINANCIAL INNOVATIONS ON LIQUIDITY

In a scale from 1 to 5 (1) Strongly disagree (2) Disagree (3) Neither Agree or Disagree (4) Agree (5) Strongly agree, indicate by using tick the extent to which financial innovations affect liquidity

Statement	1	2	3	4	5
a) Does financial innovations help to achieve daily liquidity obligations					
b) Do Financial innovations aid to increase their cash holding to mitigate liquidity risk					
c) Financial innovations investment have a payback period of less than 3 years and hence good liquidity					
d) Financial innovation has appositive effect on increasing commission based on liquidity					

In your opinion how does financial innovations effect on liquidity of commercial banks.....

.....

.....

SECTION C: EFFECT OF FINANCIAL INNOVATIONS ON RETURN ON ASSETS AND CUSTOMER DEPOSITS

In a scale from 1 to 5 (1) Strongly disagree (2) Disagree (3) Neither Agree or Disagree (4) Agree (5) Strongly agree, indicate by using tick the extent to which financial innovations affect Return on assets and customer deposits

Statement	1	2	3	4	5
a) Financial innovation influence the reduction of operational cots hence better return on assets of the bank					
b) Financial innovations such as EFTs, mobile banking have attracted more retail deposits for the banks					
c) Some financial innovations have enhanced customer access their deposits with ease for withdrawal					
d) Financial innovations investments have a payback period of less than 3 years and hence good return on assets					
e) Financial innovations has expanded the income generating potential of the bank					

In your opinion how does financial innovations effect on return on assets and customer deposits of commercial banks.....

Thanks

APPENDIX II: Secondary Data

The following sheet was used to collect secondary data

bank	Profitability in billions	Liqui dity	ROA ratio	Internet Banking transactions	Mobile Banking transactions	EFT transactio ns	ATM transactio ns
2013							
2014							
2015							
2016							
2017							



Digital Receipt

This receipt acknowledges that **Turnitin** received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author: **Student User**
Assignment title: **Thesis Plagiarism Check Post- Defe...**
Submission title: **Effects of financial innovation on the...**
File name: **Effects_of_financial_innovation_on_...**
File size: **101.52K**
Page count: **28**
Word count: **7,957**
Character count: **44,247**
Submission date: **08-Dec-2019 08:41PM (UTC+0300)**
Submission ID: **1229770082**

1.1: Background of the study

The Kenyan banking industry has experienced tremendous dynamism over the years; the transformation is due to increasing globalization and deregulation. Developments in innovation and ever-transforming commercial settings have led to this change. The Bank of England was the earliest bank to be started in the year 1694. Individuals who were lending money in turn to make a profit were behind the idea (Kariuki, 2005). In this finance industry, innovation is interpreted as the act of coming up with, equipping then marketing innovative equipment of finance, technology, various markets, and institutions. This simplified on how information was accessed, trading, and mode of payment (Solans, 2003).

Several factors can lead to financial innovation. Gorton and Metrick (2010) summarized the factors that influence to the growth of the current changes in the finance industry, which included, reduction in costs of bankruptcy, tax advantages, decrease in moral hazards, reduction in regulatory costs, transparency, and customization. They further stated that a highly stable setting could lead to practical innovation and finally enables a firm to position itself effectively to the background. As well as to attain a competitive gain, this translates to high performance. Online banking, agency banking, and electronic banking are examples of financial innovations that have been embraced by many commercial banks. The use of Automated Teller Machines as a critical financial innovation is on the rise since its inception in the 1990s. Apart from EFTs, ATMs, RTGS, Payment of utility bills and online customer self-service are other financial innovation in Kenya. These financial innovations, together with Mobile money financial management systems such as Mpesa and Airtel money have revolutionized the banking sector in Kenya. They have enhanced efficiency in the industry, and there is an increase in the number of players in the industry (Ignazio, 2007).

Banks utilize financial innovation to position themselves in the financial market. This has helped healthy competition among banks as well as making them remain relevant in the market Batiz-lazo & woldesent (2006). Such deeds triggered the desire among academicians to carry out study about the relationship between financial innovation and banks performance. In the recent years, the commercial banks of Kenya have been embracing the digital culture and having some innovations. For example use of phone applications to deposit or withdraw cash. Equity bank has an app called Eazzy Banking where one can deposit cash, withdraw, apply for loans and even check bank balances all without visiting the bank. Cooperative Bank has M-Coop cash app. This