

**MOBILE BANKING SERVICES EFFECT ON FINANCIAL PERFORMANCE ON
COMMERCIAL BANKS IN KENYA**

BY

MAURINE MUGANE

REG. NO.: D53/OL/CTY/26965/2015

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS OF
BUSINESS ADMINISTRATION (STRATEGIC MANAGEMENT), KENYATTA
UNIVERSITY**

MAY, 2020

DECLARATION

I hereby declare that this research project is my original work and has not been submitted to any institution or university for any award

Signature..... Date.....

Maurine Mugane

D53/OL/CTY/26965/2015

This research project has been carried out under my supervision as the university supervisor.

Signature..... Date.....

Dr. Reuben Njuguna

Lecturer, Department of Business Administration

School of Business

Kenyatta University

DEDICATION

I dedicate this work to my parents Stanley and Madres Mugane and my siblings Elizabeth and Caroline for the support and encouragement they accorded during this time, without you I will not have gone this far.

ACKNOWLEDGMENT

I thank the Almighty God for giving life and the capability in seeking knowledge and wisdom through studies. Without His grace I would not have gone this far and the undeserving grace that he has bestowed on me.

To my loving parents Stanley and Madres Mugane and my siblings Elizabeth and Caroline, you are highly appreciated.

My sincere gratitude goes to my supervisor Dr Reuben Njuguna, who was very supportive from the start. Your professional advice, corrections, guidance and encouragement throughout the time of proposal writing is appreciated. Thank you and May God bless you abundantly.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	vi
LIST OF FIGURES	vii
OPERATIONAL DEFINITION OF TERMS	ix
LIST OF ABBREVIATION	ix
ABSTRACT	xi
CHAPTER ONE:INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Mobile Banking.....	1
1.1.2 Financial Performance	5
1.1.3 Commercial Banks in Kenya	5
1.2 Statement of the Problem	7
1.3 General Objective.....	8
1.4 Research Hypotheses.....	8
1.5 Significance of the Study.....	9
1.6 Scope of the Study.....	9
1.7 Limitations of the Study	10
2.3 Empirical Literature Review	14
2.4 Summary of Literature and Research Gaps.....	19
2.5 Conceptual Framework	22
CHAPTER THREE:RESEARCH METHODOLOGY	Error! Bookmark not defined.
3.1 Introduction.....	Error! Bookmark not defined.
3.2 Research Design.....	23
3.3 Target Population	23
3.4 Sampling Design and Sample Size.....	24
3.5 Instrumentation and Data Collection.....	24

3.6 Data Analysis and Data Presentation	25
3.7 Ethical Consideration	26
CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND DISCUSSION.....	27
4.1 Introduction.....	27
4.2 Response Rate.....	27
4.3 Personal Data.....	28
4.4 Descriptive Statistics.....	31
4.5 Inferential Statistics.....	44
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	50
5.1 Introduction.....	50
5.2 Summary.....	50
5.3 Conclusions.....	52
5.4 Recommendations for Study.....	53
5.5 Suggestions for Further Study.....	54
REFERENCES.....	55
APPENDICES	59
Appendix I: Letter to the Respondents	59
APPENDIX II: QUESTIONNAIRE.....	60
APPENDIX III: DOCUMENT REVIEW GUIDE.....	67

LIST OF TABLES

Table 2.1 Empirical Review.....	20
Table 4.1 Response Rate	27
Table 4.2 Age of the Respondents.....	29
Table 4.3 Level of Experience.....	31
Table 4.4 Short Message Service Banking influences on Financial Performance.....	33
Table 4.5 Extent to which Person to Person Payments influences on Financial Performance.....	36
Table 4.6 Extent to which Bill Payments Influence Financial Performance.....	39
Table 4.7 Extent to which Airtime Top Up Service Influences on Financial Performance.....	41
Table 4.8 Extent to which Mobile Banking Services Influences Financial Performance.....	44
Table 4.9 Correlation Analysis.....	45
Table 4.10 Model Summary.....	46
Table 4.11 ANOVA.....	46
Table 4.12 Regression model Coefficients	47

LIST OF FIGURES

Figure 2.1 Conceptual Framework	22
Figure 4.1 Gender of the Respondents.....	28
Figure 4.2 Highest Level of Academic Qualification.....	30
Figure 4.3 Short Message Service Banking Influences on Financial Performance.....	32
Figure 4.4 Person to Person Payments have an Influence an Financial Performance.....	35
Figure 4.5 Whether Bill Payments have an influence on Financial Performance.....	37
Figure 4.6 Whether Airtime Top Up Service has an Influence on Financial Performance.....	40
Figure 4.7 Financial Performance is influenced by Mobile Banking Services.....	43

LIST OF ABBREVIATIONS AND ACRONYMS

ATMs	Automated Teller Machines
CBK	Central Bank of Kenya
CGAP	Consultative Group to Assist the Poor
ICT	Information and Communication Technology
KCB	Kenya Commercial Bank
MFS	Mobile Financial Services
MMS	Mobile Money Services
ROA	Return on Asset
SMS	Short Message Services
TAT	Technology Acceptance Theory

OPERATIONAL DEFINITION OF TERMS

Electronic Bill Payments This refers to an online feature that allows a customer to carry out a money transfer transaction or online service. In this study this was measured in terms of convenient installments and type of data downloaded.

Financial Performance This is defined as the achievement of financial objectives of an organization. In this study this variable was measured in terms of profitability, growth rates and cash flows.

Fund Transfers This involves the transfer of money electronically from one account to another without involving any financial organization or their staff in the transaction

Mobile Banking This refers to conducting financial transaction remotely using a mobile device with downloads on a service or product. Mobile banking was looked at from aspects such as person to person payments, short message service banking, bill payments and airtime top up service.

Remote Check Deposits This is the ability by a customer of a bank to make check deposits from a remote location with physically delivering the same to the bank

ABSTRACT

Despite the continued adoption and implementation of mobile banking by various banking institutions in Kenya, evidence showing how mobile banking influences financial performance of these banks remains limited. The general objective of this study was to establish the impact of mobile banking services on the financial performance of commercial banks in Kenya. The specific objectives guiding this study included to assess the influence of short message service (SMS) banking on the financial performance of commercial banks in Kenya, to establish the effect of person to person payments on the financial performance of commercial banks in Kenya, to determine the effect of bill payments on the financial performance of commercial banks in Kenya and to find out the effect of airtime top up service on the financial performance of commercial banks in Kenya. The research design that the study adopted was a descriptive research design employing quantitative research strategies. In this study the target population under investigation was all the 40 commercial banks in Kenya and two participants from each bank giving 80 participants from all the 40 commercial banks in Kenya where a census inquiry method was the best method used. Primary data for this study was collected through the use of a questionnaire that was given senior managers from all the departments of these organizations. Both quantitative and qualitative data was generated in this study. Qualitative data was analysed using content analysis whereby content of responses was looked at and responses were grouped together in relation to common patterns or themes for coherent categorization. Descriptive statistics included measures of central tendency and dispersion thus standard deviation and mean and use of absolute and relative percentage frequencies. Presentation of quantitative data was in form of graphs and tables and explanation given in prose. The study findings show that short message service had an above average positive correlation with financial performance of commercial banks and was statistically significant. Person to person had an average correlation with financial performance of commercial banks and was statistically significant. Bill payments had a strong positive correlation with financial performance of commercial banks and was statistically significant. Airtime top up service had a strong positive correlation with financial performance of commercial banks and was statistically significant. The study concludes that short message service banking has become an important part of banking, more and more people prefer to receive banking alerts through short message service which has not only improved service delivery but has had a positive impact on financial performance. Commercial banks have experiences large revenues from different activities with the banking system core among them the bill payments activities. The study recommends that it is important for commercial banks to focus more on short message service banking to lower operational costs thereby improving financial performance. Commercial banks need to consider using person to person payments to improve on their performance, they need to enhance their bill payments to get more clients paying bills using their systems so as to improve on their financial performance and that it is important for commercial banks to put more effort on airtime top up service so as to improve on their financial performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Across the globe technological advancement over the last decade has not only impacted on how firms carry out their businesses but also the way they operate (Al-Jabri, 2012). The banking industry has witnessed technological innovations which have brought the online banking and m-banking in the sector which has transformed the way financial institutions are conducting their operations. Customers have been provided many benefits arising via adoption of internet and m-banking by financial institutions which provide their banking services online and via mobile applications. The banking industry has continued to be revolutionized through innovations in the area of information and telecommunications technology. Institutions in the financial sector have experienced main deviations over past decade. The global banking industry has had a common feature which is the increasing turbulent and competitive environment which has forced commercial banks to be at the forefront in implementing innovations so that they can survive. By adopting new strategies assisted by technological advancements banks have put more emphasis on building customer satisfaction guided by superior products and services to reduce costs (Sohail & Shanmugham, 2003).

Whereas a millions people in emerging markets like in Africa are offered prospective solutions through mobile banking in the form of accessing cell phones they are yet to be included in the financial mainstream. According to CGAP (2006) this access of cell phones makes it possible for people to access financial services while reducing distance, time to access banking services. This also enables the banking organization to reduce overheads and the costs related to carrying out the transactions. As a result of m-banking financial, institutions have been able to extend their facilities to new customers therefore growing their base numbers (Lee, Lee & Kim, 2007).

Financial industry in Kenya has witnessed intense changes occasioned by numerous factors. These factors are policy and regulatory reforms, wider economy development, new technologies and increased competition. The amendment and passing into law the banking act of 2009 finance bill made it possible for financial institutions to use pharmaceutical companies among other business enterprises to be used as agents so that banks to improve on their financial performance.

The success marriage between two primarily technology platforms thus cell phones and banking enabled the introduction of mobile banking services. Through this, commercial banks entered into partnership with firms that provided mobile service operations and utility services with the objective of providing mobile banking services to clients. The unprecedented growth and development of these services over the last few years has boosted social and economic well-being of many nations.

The Kenyan market since its introduction of m-banking in 2007 has seen significant growth in numbers. Huge investments in the mobile banking sector have been deployed by commercial banks to improve of services ever since. Continuously, banking institutions, made strategic online platforms to improve on their performance in service delivery. Owing to this fact, there is need in carrying out an investigation on m-banking and financial performance. While Kenyan banking sector has witnessed adoption of online banking platforms there is nothing to show that this had translated into performance of the banks. Apart from this, many Kenyans still do not carry out their transactions online thus affecting business of financial institutions.

Profits of commercial banks are low despite the great outlook of Kenyan banks occasioned by increased operating expenses. This is in addition to transition of banking firms to innovative products and services. Commercial banks operating locally are experiencing great losses preventing them from realizing their set financial targets even with the increased financial innovations arising from increased competition from other similar products in the mobile service transfer services such as Airtel Money and Mpesa (Ngalyuka, 2013; Mimano, 2014). Equally, transaction errors in the use of banking services have reduced the commercial banks credibility and this has affected their profitability (Muiruri & Ngari, 2014).

Short message service is a component of most mobile device systems, internet and telephone for text messaging services. Short message service banking is an important mobile banking service that is adopted in the banking industry to improve on performance. Short message service an m-banking application offer customers banking services that are faster, transmitting data, addition to being customer friendly services. Most people opt to receive alerts from their banking institutions through text message. The message from the banking institutions to customers is on payment which is due, when payment of any nature has been made and when the customers`

account is nearly empty. SMS banking service was measured by the number of transactions and the number of periodic account balance. M-banking facilitates person to person transfers measured through the payment options available and risks involved through the use of online technology which include payments on items such as bills, purchase of airtime, remittances or disaster response, disbursements on items like operations of NGO, benefits by the government, education or health as well as payroll from bank account or credit card via mobile phone. M-payments/m-banking had proved to be a central innovation for the developing countries since it enables the financial institutions to get more users and lowers transfer of money from one region to another (Donner & Tellez, 2008).

Bill of payments allows customers of financial institutions to transfer money from their transaction to a vendor or creditor through a feature of mobile and telephone banking measured in terms of convenient installments and the type of data downloaded. There is a steady increase in the consumption of e-banking techniques such the ATM, EFT, online banking, mobile bill payments and credit card utilization in the Kenyan market. The use of mobile devices is as a result normal SME practices leading to financial benefits motivated from easy use in bill of payment applications. E-banking through services offered by the platform such purchasing of airtime has a significant and positive impact of the profits of financial institutions. Customers rely on mobile money other than using financial institutions in running their operation including the purchase of airtime top up services measured in terms of times of sambaza services and types of transactions to enable them access the network's service offering, voice, mobile data and SMS (Gefen, Karahanna & Straub, 2003).

1.1.1 Mobile Banking

The way people in the developing nations carry out money transfers has been transformed by mobile banking which is also poised to bring more innovations to the sector that can improve on the lives of citizens. Facilities by online banking include information on updates on the customer transactions, customer alerts and other important information. Customers will get messages on cell phones with information on the immediate transactions they have carried out in their bank accounts. These services enable the customers to make payments such as utility bill withdrawals,

purchase of airtime, deposits, transfers, request of bank statements as well as performing other important banking tasks that are done in real time over mobile phones (Mutua, 2013).

Anyasi and Otubu (2009) define m-banking as the term used in the performance of banking transactions using a device like a mobile. Herstatt, Tiwari and Buse (2006) defines mobile banking as any transaction that has been carried out involving transferring rights services and ownership that is initiated and/or completed through the cell phone. They further argue that mobile banking is the availment of services and products for conducting stock and transactions, access to information that is customized from the banking institution and administering accounts. Mobile banking is mostly done through the use of mobile internet and short message services but can also be made possible via the use of special programs downloaded to the mobile device by the client. Competing players like Safaricom Mpesa service and Zain (formerly Airtel) with Zap service steered the advent of online facilities in Kenya. Through the use of these services customers were able to deposit money into their wallets, were able to transfer the money to other users of these services such as business people of goods and services as well as relatives and friends which brought about suitability.

The financial institutions have implemented technological advancements to be compete this is as a result of numerous challenges in the external operating environment. Banks have acknowledged the benefits of differentiation among competitors if they have to be the leaders in the sector (Daniel 1999). Many rural poor were cut out of account opening process through the banks bureaucratic systems as they were not able to qualify to own accounts. As a result of competition the banking institutions were forced to simplify their processes and came up with innovative ways of doing that one of them being the innovative m-banking products including KCB Mobibank, Equity bank M-kesho, M-shwari by the Commercial bank of Africa and Family bank Pesa pap. There are benefits customers and banks provided for via use of online banking facilities. Adoption of m-banking removes limitation of geographical areas thus bringing convenience. M-banking also removes time challenges since banking services can be carried out all day and night providing security and management.

1.1.2 Financial Performance

According to Greenwood and Jovanovic (1990) financial performance is looked at from the use of assets in generating organizational revenue. Financial performance results of organization can be between comparable organizations or a comparison of the same among industries of sectors together. Jayawardhera and Foley (2000) are of the opinion that financial performance can be measured in aggregation. Line items they proposed for the measure include income or flow from operations, revenues and unit sales. Profitability is also the ultimate goal for firms. To measure the profits of a firm there are a range of ratios that can be used such as Net Interest Margin, Return on Equity and Return on Asset (Murthy & Sree, 2003). Return on Asset is the main ratio that banks can use to measure their profitability. This ratio measures organizations' revenues to its total assets for a specific period (Khrawish, 2011). This ratio measures how the organization leadership to generated revenue using organizations' assets.

Financial performance refers to the financial soundness where deposits are safe in a stable banking system. Some of the measures of financial performance are abbreviated as CAMELS (Capital adequacy, Asset quality, Management, Earning, Equity, Liquidity and Sensitivity analysis) which guides the banking sector to establish their financial soundness (Madhyam, 2010). The activities undertaken in mobile banking contribute to the financial soundness of the commercial banks in Kenya. Some external environmental factors can cause bank to fail such as deregulation, lack of information among customers and the similarity in services offered by many banks. Therefore the commercial banks have to be innovative and embrace technology to enable them offer diversified products attractive to the customers.

Financial performance is a measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales (Business Dictionary, 2011). Alam et al. (2011) in their study argued that firm performance has four main components of financial and market performance which has

items such as profitability, cycle involving cash to cash, position in the market and revenue. There is also customer-focused performance with components such as product or service performance and customer satisfaction. Human resource performance had items such as employee satisfaction and lastly organizational effectiveness with components such as level of innovation, time to market, supply chain flexibility and production.

1.1.3 Commercial Banks in Kenya

Currently, Kenya has 40 commercial banks in the financial sector. The sector has 1 mortgage finance company with 12 microfinance banks. The banking sector also has 8 representative offices of foreign banks, 14 money remittances providers, 3 Credit Reference Bureaus and 86 foreign exchange bureaus. Over the past years Kenya has seen the continued growth in the financial inclusion with the percentage of population that is within 3 kilometers of a financial access point rising from 59.0% in 2013 to over 77.0% in 2018. This has been as a result of digitization and the rising of Mobile Financial Service (MFS) as the most preferred method by larger majority to get monetary services in 2018.

Aduda and Kingoo (2012) pointed out that commercial bank is a financial institutions carrying out business activities such as accepting and safeguarding deposits, giving business loans and auto loans, mortgage lending, and basic investment products like savings accounts and certificates of deposit. The traditional commercial bank is a brick and mortar institution with tellers, safe deposit boxes, vaults and ATMs. However, some commercial banks do not have any physical branches and require consumers to complete all transactions by phone or Internet. In exchange, they generally pay higher interest rates on investments and deposits, and charge lower fees (Business Dictionary, 2011).

Majority of Kenyans use mobile phones for payment of bills and money transfers, making banks deposits and evening borrowing short loans (Aduda & Kingoo, 2012). The latest survey by the Kenya Bankers Association (KBA) shows six out of every ten Kenyans interviewed send and receive money through their mobile phones. Only three out of every ten Kenyans go to banking halls, while only eight per cent use the Automated Teller Machines. The rest prefers to use mobile banking or visit banks agents close to their surroundings. The lenders have increased the

usage of mobile banking platforms in their banking transactions with 60 per cent of Kenyans now using mobile phones for financial or banking transactions, (Standard Newspaper 22 Jan, 2014).

1.2 Statement of the Problem

In order to attain competitive advantages and to manage their operational costs, commercial institutions are adopting mobile money innovations and integrating it into their core operations. In the recent past there has been a fundamental assumption that technological innovations have resulted to operations improvement in commercial banks which has directly improved their financial performance (Mbiti & Weil, 2011). Though there could be a significance improvement, there is need for management in the banking sector to carry out strategic analysis that will bring in effective systems to be used with minimal uncertainty and can sustain their operations while minimizing the risks involved through technological innovations. Banks performance is directly dependent on efficiency and effectiveness of mobile banking, therefore, tight controls and standards must be put in place to prevent losses associated with efficiency of mobile banking. However, despite the continued adoption and implementation of mobile banking by various banking institutions in Kenya, evidence showing how mobile banking influences financial performance of these banks remains limited.

Different papers carried out in Kenya on e-banking and m-banking. For example Kigen (2010) carried out a paper on how m-banking impacts on transaction costs of microfinance institutions. He established that m-banking reduces transaction costs considerably a benefit not felt across all the banking institutions since they had a small customer base. The current paper will be dissimilar from the study of Kigen (2010) owing to fact that m-banking use has grown over time and that more financial institutions have employed m-banking innovations. Another paper was carried out by Kingoo (2011) seeking to establish how e-banking relates to financial performance of financial institutions paying his attention to the microfinance institutions operating in Nairobi. This study applied descriptive research design and used secondary data from the Central Bank of Kenya, mobile phone Companies and Kenya National Bureau of Statistics while the current study adopted a descriptive research design employing quantitative research strategies and collected data from both secondary and primary methods. Munaye (2009) carried out a study on the how to apply m-banking by Equity Bank as a strategic response to counter the challenges

faced in its external operating environment. While this study focused on one entity the current study focused on the whole industry. The study used a case study research design employing the interview guide as the data collection tool while the current study used a descriptive research design using a questionnaire as the data collection tool. From these results, it is clear that most of the papers have focused on how m-banking impacts on commercial banks financial performance. At the same time, the context within which these studies were carried is different from the current study owing to issues in the external operating environment and time variance. It was the aim of this study to bridge this research gap. To achieve this objective the current paper sought to answer the following question: What was the impact of mobile banking on the financial performance of commercial banks in Kenya?

1.3 Research Objectives

The general objective of this study was to establish the effect of mobile banking services on the financial performance of commercial banks in Kenya.

1.3.1 Specific Objectives

The specific objectives guiding this study included:

- i. To assess the effect of short message service (SMS) banking on the financial performance on commercial banks in Kenya.
- ii. To establish the effect of person to person payments on the financial performance on commercial banks in Kenya.
- iii. To determine the effect of bill payments on the financial performance on commercial banks in Kenya.
- iv. To find out the effect of airtime top up service on the financial performance on commercial banks in Kenya.

1.4 Research Questions

The following research questions guided this study:

- i. What is the influence of short message service (SMS) banking on the financial performance on commercial banks in Kenya?

- ii. What is the extent to which person to person payments influence on the financial performance on commercial banks in Kenya?
- iii. What is the influence of bill payments on the financial performance on commercial banks in Kenya?
- iv. To what extent does airtime top up service influence on the financial performance on commercial banks in Kenya?

1.5 Significance of the Study

The research findings would be of great importance to stakeholders in the financial sector. Bank leadership would use the study findings to inform them the extent to which their finances may be affected as a result of m-banking and how it impacts on organizational performance. From the study findings leadership of these institutions would formulate strategies to help them realize maximum returns occasioned from m-banking.

This study finding would be of importance to those in charge of policies in the banking sector departments in Central bank of Kenya (CBK) in relation to information that would guide them in formulating policies on the regulation of m-banking services in Kenya. This study finding would add another dimension on the impact of mobile banking services on the financial performance of commercial banks in Kenya which may help in the improvement of policy direction thus adding value on regulations to spur the countries` economic growth.

Academicians and researchers in the banking and finance would find this papers` beneficial in regard to knowledge base with which to build on in terms of the results on the impact of mobile banking services on the financial performance of commercial banks. The study findings would be used by researches as reference points highlighting on areas where future studies can be carried out.

1.6 Scope of the Study

This study concentrated on effect of m-banking services on the financial performance of commercial banks in Kenya. The study sought to establish the relationship between variables such as short message service (SMS) banking, person to person payments, bill payments and

airtime top up service and how they relate with financial performance of commercial banks in Kenya. This study sought to get information from 40 commercial banking institutions operating in Kenya. The study collected data in primary and secondary nature so as to give comprehensive information. At the same time this was done for purposes of getting as much information on the topic as possible.

1.7 Limitations of the Study

While carrying out this paper the researcher encountered a number of limitations. Participants were reluctant to reveal data on issues deemed strategic to their organizations` wellbeing. However, the challenges was overcome by assuring them that the paper was only for purposes of academics and guarantee them of the confidentiality of the data provided.

In the process of analyzing data collected, missing data was a common occurrence and has a significant effect on the conclusions that were drawn from the data. The researcher looked through the data to ensure its completeness.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents information on various sections of literature review. Among the sections the chapter covers include the theoretical review and empirical review covering the specific variables of the study. This chapter also looks at summary of literature and research gaps. In addition the chapter captures the conceptual framework.

2.2 Theoretical Orientation

The current study reviewed three theories namely technology acceptance, financial intermediation and modern economics theory.

2.2.1 Technology Acceptance Model

Technology Acceptance Theory (TAT) developed by Davis (1989) and Bagozzi, Davis and Warshaw (1992) about customers` adoption behavior usually assessed in relation to the use a specified system is predicted to give in terms of convenience usability of the system and the predicted impression of its usefulness. Previous authors researched on the fundamental construct of TAMs validity in forecasting the acceptance of individual`s and noted that TAMs fundamental construct does not wholly address the explicit effect of technology and the usability factors that actually influence the user`s acceptance (Moon & Kim, 2001).

Pikkarainen, Pikkarainen, Karjaluoto and Pahnla (2004) carried out a survey in Finland to establish the actual impact of perceived usefulness and concluded that it endeared use of technologies that are friendly and independent for use in offering services by banks in twenty first century. Gerrard and Cunningham (2003) noted that customers see the usefulness of services rendered by customers to of importance to them. These services range from paying utility bills, checking account balances, loan applications, money transfer abroad, and getting pertinent mutual funds information. This theory was relevant to this study since it highlighted why

commercial banks should adopt m-banking short message service (SMS) banking as a way to ensure convenience usability by customers to improve on their financial performance. The theory was also used to study how various mobile banking products affect financial performance of commercial banks.

2.2.2 Financial Intermediation Theory

The focus of the financial intermediation theory by White (1984) is on the process that financial institutions use to lend to deficit units what has been deposited from those units with surplus funds. According to Bisignano (1992) there are four criteria that can be used by financial intermediaries in regards to this process. First, the main categories of deposits or liabilities are specified for a fixed sum that has no relationship with the performance of the portfolio. Second, their assets have a much longer term as opposed to the deposits which are typically short-term in nature. Third, a high percentage of their liabilities are chequeable in that they can be withdrawn on demand. Fourthly, their assets and liabilities are largely not transferable to another party. He concludes that the most critical contribution of financial intermediaries is to ensure that there is a steady flow of funds from units with surplus to those with deficit.

Diamond and Dybvig (1983) conducted an analysis on the provision of liquidity which involves the transforming into liquid liabilities the illiquid assets by the banking sector organizations. Their model was of the argument that all investors in market place are likely to be locked into illiquid long term investments without an intermediary that would not yield high returns those who will consume them later since identical depositors or investors are uncertain and risk averse in relation to the timing of their future consumption needs. Creation of specialized financial commodities are seen by Scholtens and van Wensveen (2003) as the main role of financial intermediaries. They further argued that the creation can only be achieved if an intermediary is able to sell them at the prices that are higher enough to cover the costs associated with their production as well as opportunity costs and direct costs. Due to market imperfections there is the existence of financial intermediaries. Thus, in market situation that is perfect with no information and transaction costs there will be no financial intermediaries.

Information differences characterize the numerous markets that are in place between sellers and buyers. Information asymmetries are mostly pronounced in financial markets. In comparison lenders do not know their moral integrity, industriousness and collateral better than borrowers. Entrepreneurs on the other hand have inside information on their projects in which they seek financing (Leland & Pyle, 1977). Market moral hazard hampers the effective transfer of information between the participants in the market thus affects the financing of good quality projects. This theory was used in this study to enhance how banks behave as a result on adopting new technologies like m-banking bill of payments and it helped in analyzing the transactions behavior of commercial banks, and how it affects their financial performance.

2.2.3 Modern Economics Theory

According to the modern economics theory there have been various pathways that have been followed by millions to discover expectations, the rise of features of societies and communities like productivity gains, rate of inflation, prices, levels of national income, cultural values, social norms, stocks of various types of capital as well as decisions. Sohail and Shanmugham (2003) argued that are two important factors that make the economic theory difficult to understand. The first factor is that emergent features such as past decisions learning; practice, habit and future expectations influence the individual decisions they make at any given time. The second factor is on how well the existing economic theory and policy concern emergent features are handled thus only those fast-moving variables. More importantly therefore, those emergent properties that are slow in affecting culture, institutional arrangement and attitudes are poorly incorporated but are recognized.

Tiwari, Buse and Herstatt (2006) are of the opinion that economists are aware that any successful financial achievement returns from arising from fast and dynamics leads to a slow emergent that is nearly hidden. At the same time there are changes in slower and deeper structures that can at end trigger sudden surprise of crisis. However, modern economists in their attempt to understand how fast and slow- moving emergent features interact are frustrated by the complexities that arise. This theory was considered in this study because for commercial banks to improve on their financial performance they need to come up with new features and applications as they seek to improve on service delivery like airtime top up service.

2.3.4 Efficiency Structure Theory

According to the efficiency structure theory there is higher profitability is achieved through enhanced managerial scale efficiency which results in higher concentration. The commercial banks through this efficiency desire the achievement of their set financial performance. Nzongang and Atemnkeng (2006) argue that there is a different dimension in the study of bank performance resulting from balanced portfolio theory. According to this theory the overall bank`s policy decisions and the decisions made by the leadership results in its profits, return on shareholders and portfolio composition. Thus, the conclusion drawn from these theories is that there exists an influence of both external and internal factors on the banks financial performance. The study further established that the bank specific factors fall under the internal factors that affect its performance. Two hypotheses are included in the efficient structure theory thus X-efficiency and the scale efficiency hypotheses.

According to the X-efficiency hypothesis banking institutions that are better managed and practice control costs in addition to raising profits moves the banking institutions nearer to the best practice that is lower bound cost curve. On the other hand the scale efficiency hypothesis the argument is that banking institutions can achieve better scale in their operations therefore lowering their costs. As a result of lowered costs the banks are able to grow faster and achieve higher profits from the scale efficient. This theory enhanced this study in regards to the relationship that exist in m-banking, person to person payments and financial performance since commercial banks need to enhance managerial scale efficiency through adoption of new technologies which results in higher concentration of the achievement of set financial performance.

2.3 Empirical Literature Review

Empirical review was on fund transfers, electronic bill payments, remote check deposits and debit or credit card use and how they relate with financial performance.

A similar study was carried out on mobile banking services with financial performance on Commercial Banks in Kenya by Mugane and Njuguna (2019). According to the study findings short message service had an above average positive correlation with financial performance of commercial banks and was statistically significant. Person to person had an average correlation with financial performance of commercial banks and was statistically significant while bill payments had a strong positive correlation with financial performance of commercial banks and was statistically significant. Airtime top up service had a strong positive correlation with financial performance of commercial banks and was statistically significant. The study concluded that short message service banking has become an important part of banking, more and more people prefer to receive banking alerts through short message service which has not only improved service delivery but has had a positive impact on financial performance. Commercial banks have experienced large revenues from different activities with the banking system core among them the bill payments activities.

2.3.1 Short Message Service Banking and Financial Performance

A study on SMS effect on financial performance was carried out by Bamoriya and Singh (2012) who established from the study that text messages are becoming an important part of banking for many people. In the study they found out that most people opt to receive alerts from their banking institutions through text message. The message from the banking institutions to customers is on payment which is due, when payment of any nature has been made and when the customers` account is nearly empty. The study established that two-way text messaging was also becoming an option in the banking institutions since it was not possible for a customer to use SMS to contact the banks on questions that need answers for example verification of purchases as well as making transactions.

A study by Hicks and Niehans (1998) the effects of SMS on financial performance established that the cash transfers between accounts, buying airtime or paying bills via a mobile device and are frequently performed via SMS. The study found out that through the use of SMS the banking institutions are able to reach the multitudes and to create stickiness among existing customers, due the capacity to provide services anytime and anywhere and there was also a high rate of penetration and a lot of potential to grow.

A study by Vincent et al., (2016) established that the use SMS banking service can give good type of services starting from account data that should do with alerting the customers on the updates and transactions on their account through their mobile phones. People receive short messages on their phones informing them of their immediate transactions in their bank accounts. In addition, they assist in payments (utility bills), deposits, withdrawals, transfers, purchase airtime, request bank statements and perform thirteen different crucial banking tasks, pushed real time over their mobile phones.

Coelho (2003) carried out a study on why mobile services are important to the banking industry established that the main focus for mobile network provider and the key strategies for growth in the financial sector are use and adoption of m-banking which has potential to provide numerous facilities. The results indicate m-banking applications offer customers banking services that are faster, transmitting data, SMS services in addition to important and customer friendly services. This study did not specifically cover the impact of m-banking services on the return on investment of financial institutions which was the area focused in the current study.

2.3.2 Person to Person Payments and Financial Performance

Muisyo, Alala and Musiega (2014) also evaluated the effect of mobile money services on banking institutions in Kenya. The study focused on commercial banks operating in Kakamega County. The study reveals that the introduction of a myriad of mobile money services (MMS) by various mobile money service providers to customers has become common in the recent years as a way of gaining competitive advantage through diversification, maintaining customer loyalty and increasing market share in order to grow their profitability and improve their financial position. The roll out of these services in developing countries has generated a lot of interest among various players in the financial sector of the economy. Such services include person to person (P2P) mobile money transfer (MMT), pay bill services, loan to customers and access to a wide range of banking services e.g. a/c balances, mini statements, transfer of money from one`s mobile line a/c to one`s own bank a/c.

Another study in 2012 by Tchouassi was carried out on lessons in developing countries in East Africa to establish whether cell phones have worked to provide more financial services those

who are not banked. The study was interested in discussing cell phones use to provision of banking services to those who are deprived and helpless and the populations who are not banked. The study found that SSA nation's households are deprived; poor that are faced with financial expenses that are high and lacked access to bank accounts therefore mobile banking services facilitated person to person payment. While the paper looked at the impact of cell phones on banking services there are still research gaps that the current study sought to fill in relation to m-banking services and performance of financial institutions.

2.3.3 Bill Payments and Financial Performance

Kathuo, Rotich and Anyango (2015) also evaluated the effect of mobile banking on the financial institutions of in banking institutions Kenya. The study established that the number of mobile banking transactions has tremendously increased in the last five years since the introduction of M-banking. The study thus concludes that, banks that have adopted M-banking services have to a large extent increased their customer outreach, and hence have improved their financial performance. The findings revealed that many mobile banking products are being offered by banks such as Fund Transfer between Accounts/ E-funds transfer, Bill Payment, order for cheque books and bank statements and therefore concluded that the financial performance of the banks that provide these mobile banking products has improved because they ensure efficiency of the banking services.

Scott (2006) did a paper examining bill payment service impact on m-banking industry with people and whether it had an effect on their productivity. The study was carried out among thirty-four institutions from a group of enterprises in France. This paper used a tool for the organizations targeted. The study results show that payment services were decent since it ensured that fraud and misuse of funds was not rife whereas merchandise unit of measurement was paid. The study established that the banks were peaceful being among the stakeholders thus everybody in the arena played his role without any conflict among themselves.

In relation to bill payments Islam (2013) did a paper seeking to establish the impact of m-banking as an emerging issue in Bangladesh. In terms of methodology the paper used descriptive design whereby collection of data was primary sources thus personal interview method. The

gathered facts of the survey were examined in several analytical tools and methods. The study found out that mobile banking delivers services that are outside the known branches through branchless banking by adopting ICT in addition to using retail agents that are non-financial who operate for 365 days. The study established a positive impact on m-banking payments, withdrawals and deposits. According to the study results mobile banking is reliable, reduced costs, speedy and carrying out operations which reduce errors from the interaction of staff in the old banking systems. However, there was a research gap this paper sought to fill since this study was conducted on mobile banking as an emerging issue in Bangladesh whereas the current study focused on mobile banking services and financial firm performance.

A study on the m-banking by third world nations Kenya as was carried out by Wambari (2009). The study was interested in establishing the benefits of m-banking to small businesses operations and in establishing what limitations these businesses faced with tool of m-banking while highlighting there pros and cons of the tool there in. From the study findings it was established use of mobile devices is as a result normal SME practices leading to financial benefits motivated from easy use in bill of payment applications.

2.3.4 Airtime Top Up Service and Financial Performance

According to Visionteck (2013) the electronic voucher distribution through the POS terminal is a simplified way to dispense prepaid mobile top-ups deployed at retailer business centers. It is designed in a manner to neglect the problems associated with distribution of the physical scratch cards. The use of the POS terminal has simplified the process of distributing airtime at the least price possible while increasing accessibility to the customers. The POS terminal operates on real time software solution, which provides the retailer access to recharge their accounts, with given amounts at anytime anywhere. Through this process top-up distributors has access to control the top-up denominations while giving you the platform and benefit of an electronic distribution system to retailers. This mode of dispensing top-up for mobile phones provides a superior commission structure, giving the retail business a commission; distributors are also get a commission with the denominations one prefers. All this can be managed from a centralized MIS platform.

Tchouassi (2012) did a paper on the benefits of mobile phone on those not banked in developing countries in East Africa. The paper found out that m-banking facilitates person to person transfers which include payments on items such as bills, purchase of airtime, remittances or disaster response, disbursements on items like operations of NGO, benefits by the government, education or health as well as payroll.

A study by Lang, Nolle and De Young in 2007 did a study establishing the effect of airtime top up service as one of the e-banking services on the wellbeing of financial institutions was carried on US community financial markets whereby comparison of performance by mortar banking institutions with virtual click and mortar banks. The conclusion drawn from the study was electronic banking improves profits that e- the commercial institutions therefore growing revenue streams. Further, electronic banking driving forces or factors include maximizing operating profits such as services offered to customers like airtime purchases and minimizing the operation costs. There is still a gap that exists which the current study will seek to fill thus impact of electronic banking on financial performance of banking institutions in US which is a developed nation while the current study focuses mobile banking services and firm performance in financial sector in developing countries.

Another study was carried out by Ogare (2013) examining whether airtime top up service as an electronic banking service has a relationship with financial firms performance. In his paper he looked at credit and debit cards issues by the banks to customers, the number of ATMS, the usage levels of mobile banking, electronic funds transfer and point of sales terminals as components of e-banking. The study established that e-banking through services offered by the platform such purchasing of airtime has a significant and positive impact of the profits of financial institutions.

2.4 Summary of Literature and Research Gaps

The review carried out on the existing empirical literature the effect of mobile banking services on the financial performance of commercial banks indicates there is a mixture of results from both developing and developed countries. Most of the empirical studies carried out have focused more on other variables not covered in this study such as information and communication technologies, transfer of funds from one account to another, balance inquiry, statement request,

increased access to information and service charges. Others were payment of utility bills, bank innovations, mobile loans uptake and mobile funds transfers. The same studies have also focused on other institutions other than commercial banks which was the main area in this study. This study therefore sought to fill the knowledge gap that exist in regards the effect of mobile banking services on the financial performance of commercial banks in Kenya. The following table illustrates the research gaps that the current study sought to fill.

Table 2.1 Empirical Review

Author(s) and Context	Objectives	Key findings	Research Gaps	How the current study will fill the gaps
Bamoriya and Singh (2012) Indian Context	To examine SMS effect on financial performance	This study established that most people opt to receive alerts from their banking institutions through text message. The message from the banking institutions to customers is on payment which is due, when payment of any nature has been made and when the customers` account is nearly empty.	This study did not give findings on qualitative data obtained from the study. The study was also not carried out in Kenya leave alone commercial banks in Kenya	The current study used content analysis to analyse qualitative data to enhance data collected on this study topic
Muisyo, Alala and Musiega (2014) commercial	To determine the effect of mobile money services on	The study reveals that the introduction of a myriad of mobile money like person to	This study sought information from commercial banks operating in	The current study sought information all commercial

banks operating in Kakamega County	banking institutions in Kenya.	person by various mobile money service providers to customers has become common in the recent years as a way of gaining competitive advantage through diversification, maintaining customer loyalty and increasing market share in order to grow their profitability and improve their financial position	Kakamega County. The methodologies used in the current study also differ.	banks in Kenya in order to compare the results.
Kathuo, Rotich and Anyango (2015) financial institutions in Kenya.	To establish the effect of mobile banking on the financial institutions in Kenya.	The study established that the number of mobile banking transactions has tremendously increased in the last five years since the introduction of M-banking.	This study focused on financial institutions in Kenya thus the current study context was different	This study was carried out among financial institutions whereas the current study focused on commercial banks
Lang, Nolle and De Young in (2007) US community financial markets	To establish the effect of airtime top up service as one of the e-banking services on the wellbeing of financial	The study established that electronic banking improves profits that e-the commercial institutions therefore growing revenue streams.	This study did not use primary data to collect data therefore the current study was enhanced through different	The current study focused more on primary data supplemented by secondary data.

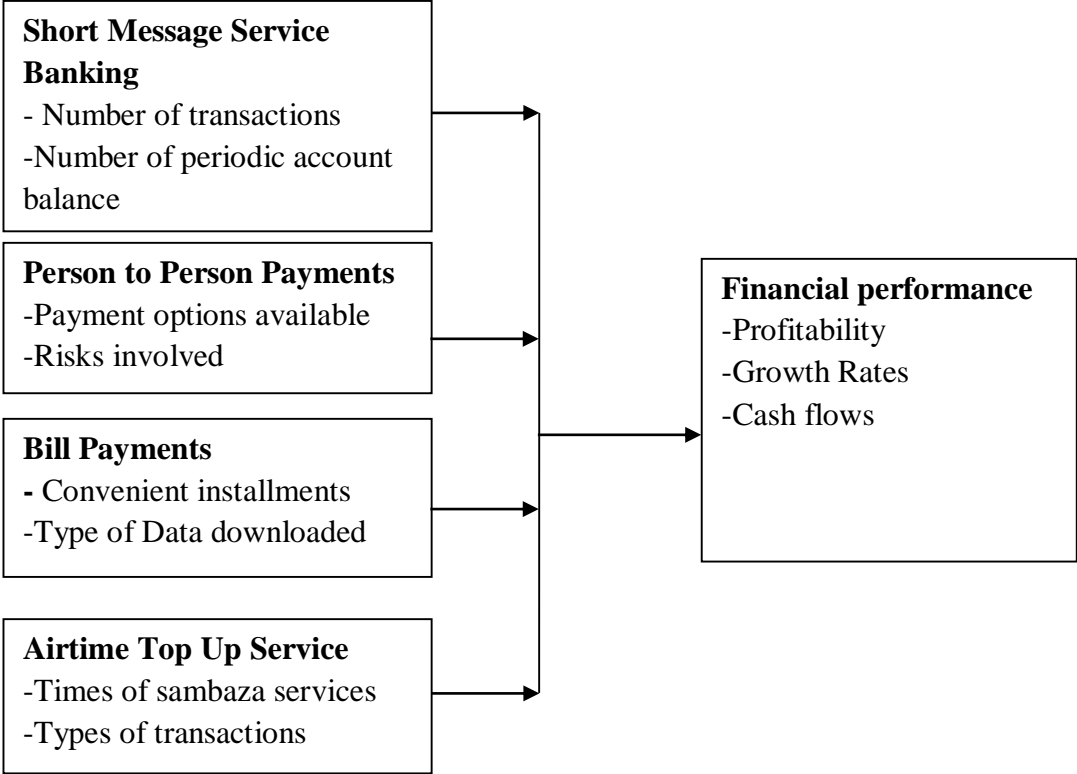
	institutions		methodologies for example the use of primary data	
--	--------------	--	---	--

2.5 Conceptual Framework

The dependent variable in this study was financial performance whereas the study independent variables were: short message service banking, person to person payments, bill payments and airtime top up service.

Independent Variables

Dependent Variable



Source: Author (2020)

Figure 2.2 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section captured research design information and the study population. This chapter also discussed the sample frame and sampling procedures used. This chapter also looked at research

instrumentation as well as data collection methods adopted. Lastly, the chapter covered data analysis techniques and research ethical guidelines.

3.2 Research Design

The study adopted a descriptive research design employing quantitative research strategies. According to Kothari (2006) a descriptive research design is preferred because it describes the respondents in a truthful manner while information is collected in an environment that is not changing. Further this design was justified in that it presents the researcher with the opportunity to use data that is quantitative in nature to reconstruct the what is of the topic under review. Descriptive survey design was also considered the best method by Mugenda and Mugenda (2003) among social scientists interested in collecting data in its original form for purposes of describing the large population.

3.3 Target Population

Ngechu (2004) defines a study population as a precise or set of persons, elements, events, households and things to be investigated. The study targeted 40 financial institutions as shown from CBK (2018) records. However, two people were selected from each of the 40 commercial banks giving 80 to participate in this study. These participants were considered in this study because their characteristics boosted data which was collected arising from the fact that category of individuals had qualities of a sample that is good thus have the data required in the investigation, easy accessibility, representation and diversity.

3.4 Sampling Design and Sample Size

Schindler and Cooper (2003) define sampling as the process used in social statistics by researchers to choose from a large population a predetermined people as respondents. Since the population for the study was 80 participants taken from 40 commercial banks in Kenya census inquiry method was the best method used. As a result each and every individual targeted in the study population took part. The advantage of this method was that estimation is not subject to errors of sampling and that responses rates achieved are satisfactory.

3.5 Instrumentation and Data Collection

Data to be collected for the study comprised secondary and primary methods. The questionnaire was used by the researcher to collect primary data from managers of the institutions. The questionnaire was the preferred tool since it gives the researcher the chance to collect data from many people easily; it is economical and relatively easy to use. At the same time it offers quantifiable answers on the research questions. On the other hand, data from secondary sources was from the organizations under review past statements using the document review guide. This study questionnaire that was used had questions that are both open and close-ended in nature guided by research objectives. The study questionnaire was in two parts hence part A and B. Part A captured research questions on demographics of the participants whereas section B focused on questions on m-banking and financial performance of commercial banks. Within section B the questionnaire had questions on financial performance, fund transfers, electronic bill payments, remote check deposits and debit or credit card use.

The sections covering quantitative data used a nominal and Likert scale type of data collection format in determining the variables. The study used the 5 point Likert scale sample questions to provide answers in this study from statement like questions. As observed by Kothari (2004) questionnaires were preferred since they are cheap on energy and time required to collect data. Equally, they yield, data that was quantitative in nature that was collected and analyzed easily.

3.5.1 Validity of Research Instrument

Cooper and Schindler (2008) define validity as the meaningfulness, accuracy a study instrument. It is how accurate the tool will be able to measure what it seeks to. In this study validity was measured in relation to the information provided and how truthfulness the sources

of information were. To enhance validity the information source was trustworthy. At the same time the research instrument was pretested using a pilot study to ascertain the degree to which the questions were clear so that problems were identified and rectified. The researcher selected 10 participants conveniently to take part the pilot and were exempted from the main study. The use of pilot test enables the researcher to spot errors in the instrument and work them before taking to the study respondents so as to enhance the validity of the instrument.

3.5.2 Reliability of Research Instrument

According to Phelan (2005) the reliability is defined as the degree to which the research tool used produces results that are consistent and stable. It is an assessment of the reproducibility and consistency of an instrument. According to Sekaran and Bougie (2009), a Cronbach's alpha equal to or more than 0.7 is adequate to confirm that the variables and the overall instrument are reliable. Therefore, the study considered coefficient alpha that is equal to or greater than 0.7 to indicate that the research instrument was reliable.

3.6 Data Analysis and Data Presentation

After data was collected the questionnaires was edited for consistency and completeness before embarking on processing the responses. Qualitative and quantitative data was generated in this paper. In terms of data that was quantitative the researcher entered and coded the same into SPSS Version 22 to facilitate the analysis of descriptive statistics. Content analysis was used to analyse qualitative data whereby content of responses were prepared and organized, the data was then reviewed and explored before they were grouped together in relation to common patterns or themes for coherent categorization. The combined themes were presented in a cohesive manner.

In regard to the descriptive statistics that the study employed included measures of central tendency and dispersion thus standard deviation and mean and percentage frequencies. Presentation in form of tables and graphs was used for quantitative data and explanation given in prose. Specifically, this study used Pearson's correlation and regression models in establishing how independent variables and dependent variable relate. The correlation was based on two-tailed tests in order to allow for the possibility that the influence of independent variables on the dependent variable assumed a positive or a negative direction. The researcher used 95% confidence level to test the hypothesis. The *t*-test was used to assess whether the independent

variables were statistically different from each other. ANOVA was used to test significance of the variables and the model. Anova used F-statistics and p-value to test the fitness of the model to the data.

The study used the regression model shown below to determine the relationship between the variables.

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

Where Y: Financial performance

X₁: Short Message Service Banking

X₂: Person to Person Payments

X₃: Bill Payments

X₄: Airtime Top Up Service

3.7 Ethical Consideration

Before the researcher conducts data collection she strove to adhere to ethical guidelines of research. A clearance letter was obtained from the Kenyatta University research committee and license from NACOSTI. All sources used in this study were acknowledged so as to avoid plagiarism. On the other hand data collected and analyzed was presented accurately.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter provides research findings and discussion about the results obtained from the field in relation establishing the impact of mobile banking services on the financial performance of commercial banks in Kenya. This chapter gives a presentation of the study findings on response rate, personal data and analysis on the study objectives using descriptive and inferential statistics.

4.2 Response Rate

The researcher targeted 80 respondents from 40 banking institutions who were given questionnaires. However, 60 of the targeted participants filled the questionnaires and returned them for purposes of analysis representing 75% response rate. This response rate according to Mugenda and Mugenda (2008) is representative of the whole population and sufficient for further analysis since any response rate above 70% is excellent, 60% is good whereas 50% is adequate for analysis to be carried out.

Table 4.1 Response Rate

Targeted Population	Questionnaires administered	Questionnaires filled and returned	Percentage
Bank employees	80	60	75
	0	20	25
Total	80	80	100

Source: Survey Data (2019)

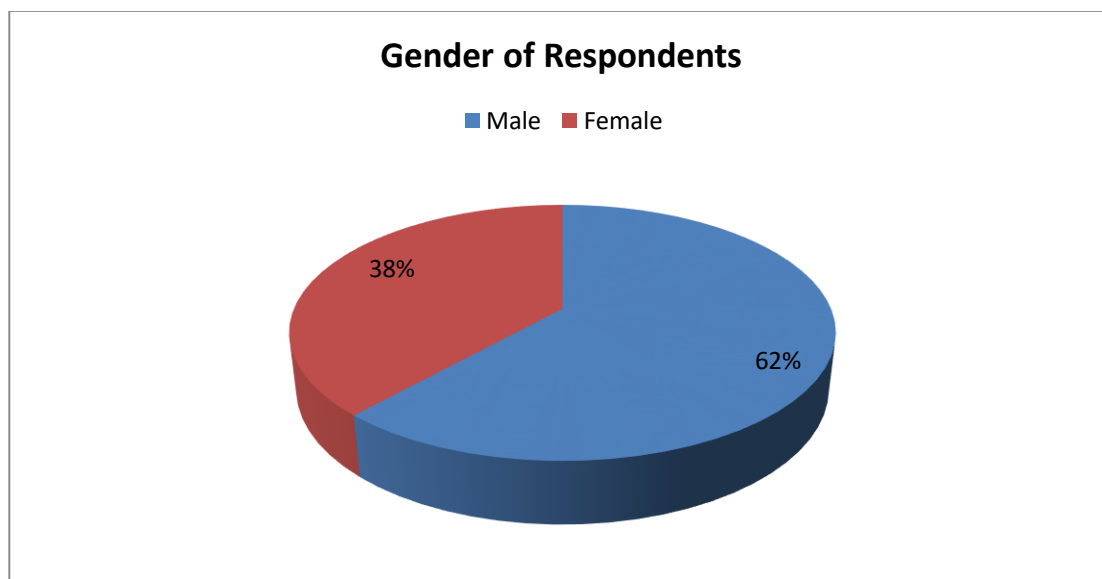
The study results in Table 4.1 shows that most of the respondents took part in the study representing 75% of the total population.

4.3 Demographic Data

The personal characteristics that were tested by the researcher were that of gender, age, highest level of educational qualifications and duration worked for the organization. This section was considered in this study so as to establish the relationship between personal data and how they influence financial performance of commercial banks.

4.3.1 Gender of the Respondents

Owing to gender mainstreaming among private and public organizations, an inquiry was made into the gender of the respondents. The findings are shown in in Figure 4.1.



Source: Survey Data (2019)

Figure 4.1 Gender of the Respondents

As shown from the study results in Figure 4.1, it is indicated that majority of the participants were male at 62% while 38% were female. It is clear that majority of the respondents were male implying that in commercial banks in Kenya have not responded to gender balancing pressure.

4.3.2 Distribution of Respondents Age

The study sought to establish from the participants their age groups owing to the fact that they have differing opinions on various issues especially on mobile banking services. To ensure that the opinions from different age sets were captured the study requested the respondents to specify age set. The results are as illustrated in Table 4.2.

Table 4.2 Age of the Respondents

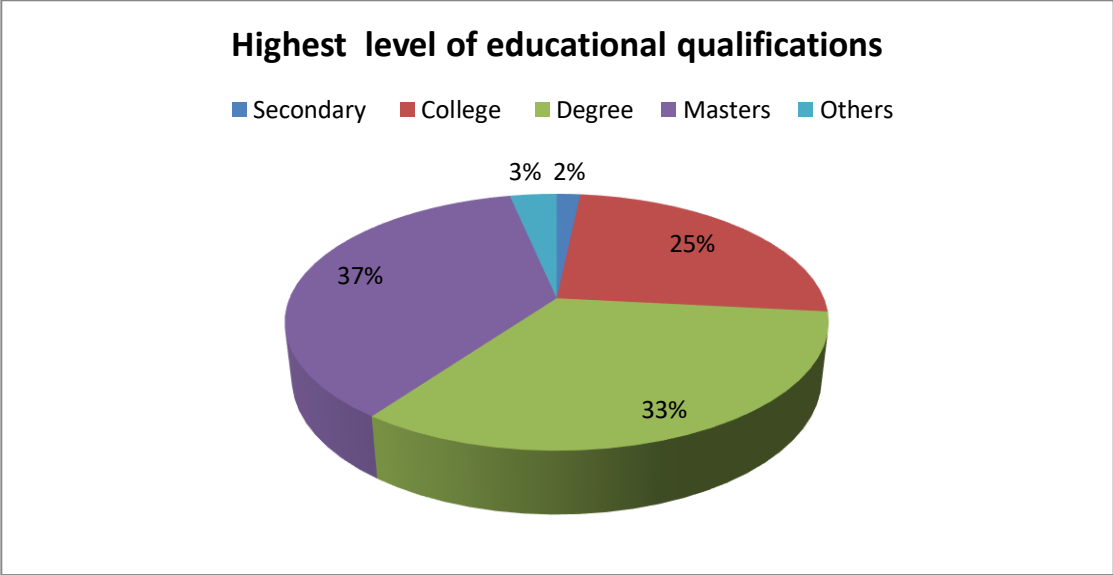
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Below 30 years	15	25.0	25.0	25.0
31-40	19	31.7	31.7	56.7
41-50 years	16	26.7	26.7	83.3
Over 50 years	10	16.7	16.7	100.0
Total	60	100.0	100.0	

Source: Survey Data (2019)

As shown in from the study results in Table 4.2, most of the respondents were in the age category of 31-40 representing 31.7% followed by those in the age category of 41-50 years at 26.7%. The results indicate that 25.0% were from the age category 30 years and below whereas 16.7% were from the age category of over 50 years. The implication of these findings is that commercial banks in Kenya have catered for all the age groups in their systems.

4.3.3 Highest Level of Academic Qualification of Respondents

How high the education level of an individual is affects views on various issues to do with mobile banking services. In order to ascertain the ability of the respondents to respond to the research questions the study to know the highest level of academic qualification. These findings as shown in Figure 4.2.



Source: Survey Data (2019)

Figure 4.2 Highest Level of Academic Qualification

Figure 4.2 shows that majority of the respondents 37% were masters` holders, 33% were degree holders while 25% were college graduates. The implication of these results is that the participants of this study had the required level of education to provide accurate answers to the questions provided.

4.3.3 Level of Experience of Respondents

The study sought to find out the level of experince of the respondents by asking the respondents to indicate the number of yeears they had worked for the organization. The study findings are as shown in Table 4.3.

Table 4.3 Level of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than one year	1	1.7	1.7	1.7
	1-4 years	10	16.7	16.7	18.3
	5-9 years	24	40.0	40.0	58.3
	10-14 years	17	28.3	28.3	86.7
	Above 15 years	8	13.3	13.3	100.0
	Total	60	100.0	100.0	

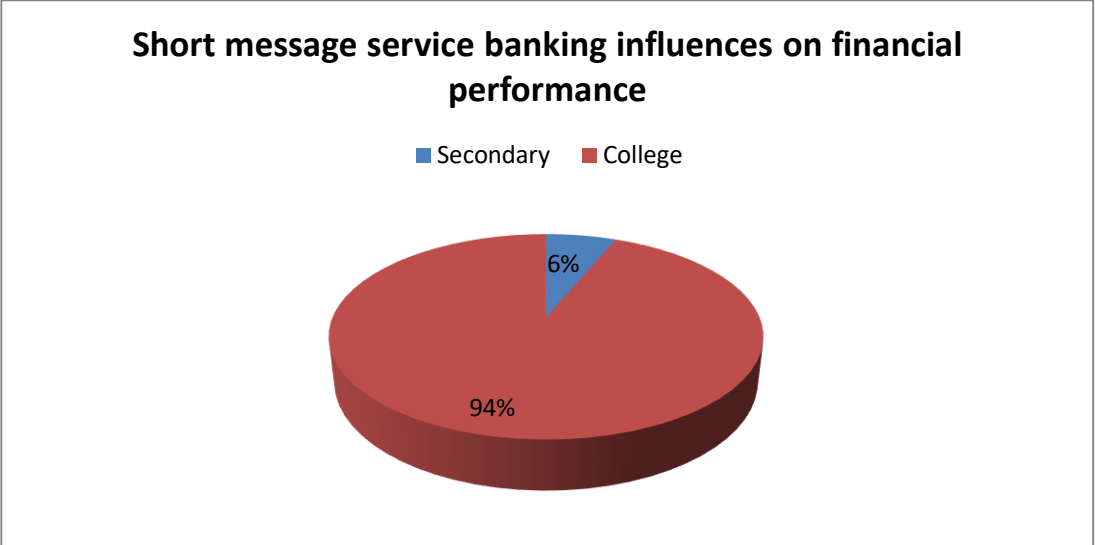
Source: Survey Data (2019)

As shown in Table 4.3 most of the respondents had worked for the organizations for a period of more than one year. The results show that 16.7% had worked for a period of 1-4 years, 40.0% had worked for a period of 5-9 years while 28.3% had worked for a period of 10-14 years. This reveals that most of the participants had worked for the organization for a period that has enabled them to understand the use of mobile banking services and how it influences financial performance.

4.4 Descriptive Statistics

4.4.1 Short Message Service Banking

In regards to short message service banking this paper sought to establish from the participants whether it influences on financial performance of commercial banks. The study results are as illustrated in Figure 4.3.



Source: Survey Data (2019)

Figure 4.3 Short Message Service Banking Influences on Financial Performance

The study results shown in Figure 4.3 indicate that majority of the participants at 69% were of the opinion that short message service banking has an influence on financial performance as opposed to 31% of the respondents. As shown from the study findings it important for commercial banks to focus more on short message service banking to lower operational costs thereby improving financial performance.

The study sought an explanation from the participants in regards to the how short message service banking influences on financial performance. The respondents argued that short message service banking has become and important part of banking, more and more people prefer to receive banking alerts through short message service which has not only improved service delivery but has had a positive impact on financial performance. The participants further stated that financial innovations by banking organizations such as the use of short message service have improved their financial performance.

The study was interested in establishing some of the influences of short message service banking on financial performance. The participants argued that the use of short message service banking by institutions has had a positive influence on financial performance since this has made basic financial services by customers to be more accessible through minimization of distance and time

to the nearest retail bank branches, reduces the bank`s overheads as well as costs relating to transactions. The respondents stated that m-banking applications like short message service banking offer customers banking services that are faster, transmitting data in addition to important and customer friendly services which influence financial performance positively.

This following section sought to investigate whether short message service banking influences on financial performance. The paper sought to determine the extent to which short message service banking influences on financial performance in a scale of 1-5 where 1 is No influence, 2 is least influence, 3 is great influence, 4 is greater influence and 5 is greatest influence. Analysis was carried out using means and standard deviations. The results are as illustrated in Table 4.4.

Table 4.4 Extent to which Short Message Service Banking influences on Financial Performance

Statement	Mean	St Dev
Receiving alerts from banks via text message	4.0000	.97424
Using SMS to contact bank with questions	4.0667	1.00620
Using SMS to verify purchases	4.0000	1.05766
Using SMS to make transactions	4.2333	1.11030

Source: Survey Data (2019)

As shown by the study results indicated in Table 4.4, majority of the respondents were of the opinion that receiving alerts from banks via text message had the greatest influence with a mean value of 4.00 and std deviation of 0.97, using SMS to contact bank with questions with a mean of 4.06 and std deviation of 1.01, using SMS to verify purchases with a mean value of 4.00 and std deviation of 1.05 and using SMS to make transactions with a mean of 4.23 and std deviation of 1.11.

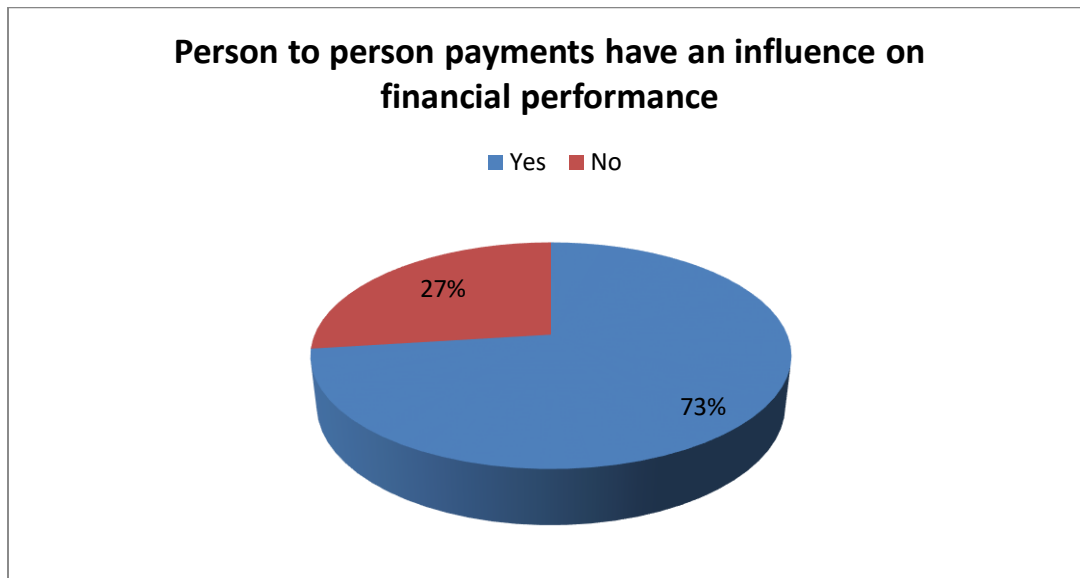
These results are in agreement with the findings of Bamoriya and Singh (2012) who established from the study that text messages are becoming an important part of banking for many people and that they opt to receive alerts from their banking institutions through text message. The message from the banking institutions to customers is on payment which is due, when payment

of any nature has been made and when the customers` account is nearly empty. The study established that two-way text messaging was also becoming an option in the banking institutions since it was not possible for a customer to use SMS to contact the banks on questions that need answers for example verification of purchases as well as making transactions. The study results also concur with those of Hicks and Niehans (1998) who established that the cash transfers between accounts, buying airtime or paying bills via a mobile device and are frequently performed via SMS and relate positively to financial performance. The study found out that through the use of SMS the banking institutions are able to reach the multitudes and to create stickiness among existing customers, due the capacity to provide services anytime and anywhere and there was also a high rate of penetration and a lot of potential to grow.

In addition the study findings were in agreement with the findings of Vincent et al., (2016) who established that the use SMS banking service can give good type of services starting from account data that should do with alerting the customers on the updates and transactions on their account through their mobile phones. People receive short messages on their phones informing them of their immediate transactions in their bank accounts. In addition, they assist in payments (utility bills), deposits, withdrawals, transfers, purchase airtime, request bank statements and perform thirteen different crucial banking tasks, bushed real time over their mobile phones.

4.4.2 Person to Person Payments

In relation to person to person payments the participants were asked to indicate whether person to person payments have an influence on financial performance of commercial banks. The study findings are as presented in Figure 4.4.



Source: Survey Data (2019)

Figure 4.4 Person to Person Payments have an Influence an Financial Performance

The paper results shown in Figure 4.6 indicate that most of the participants representing 73% stated that person to person payments have an influence on financial performance of commercial banks as opposed to 27% of the respondents. It necessary for commercial banks to consider using person to person payments to improve on their performance

The study sought to find out an explanation from the participants in relation to whether person to person payments have an influence on financial performance of commercial banks. According to the respondents there was an influence on financial performance of commercial banks as a result of using person to person payments technique in mobile banking. They argued that person to person payments greatly influence financial inclusion in commercial banks thus affecting financial performance.

The study sought to establish the effects of effects of person to person payments on financial performance of commercial banks. The participants stated the following as the effects of person to person payments on financial performance increased customer loyalty; increase in the flow of funds from the deposits to other investors which results in increased profitability and financial performance of the commercial banks. The respondents further stated that with person to person

payments there is increased convenience, efficiency, transactional optimization as well as loyalty of customers which enables the banking institutions to develop competitive edge. According to the respondents person to person payments increases the speed and simplicity with which transactions can be done which increases the banks` returns positively.

This following section carried out an investigation on whether person to person payments influences financial performance. The paper sought to determine the extent to which person to person payments influences on financial performance in a scale of 1-5 where 1 is no influence, 2 is least influence, 3 is great influence, 4 is greater influence and 5 is greatest influence. Analysis was carried out using means and standard deviations. The results are as shown in Table 4.5.

Table 4.5 Extent to which Person to Person Payments influences on Financial Performance

Statement	Mean	St Dev
Easy payment option offered	4.3333	.85701
International payments can be carried out easily	4.1167	.80447
The payment process is simple	4.4333	.85105
Minimal risks involved	4.4000	.74105

Source: Survey Data (2019)

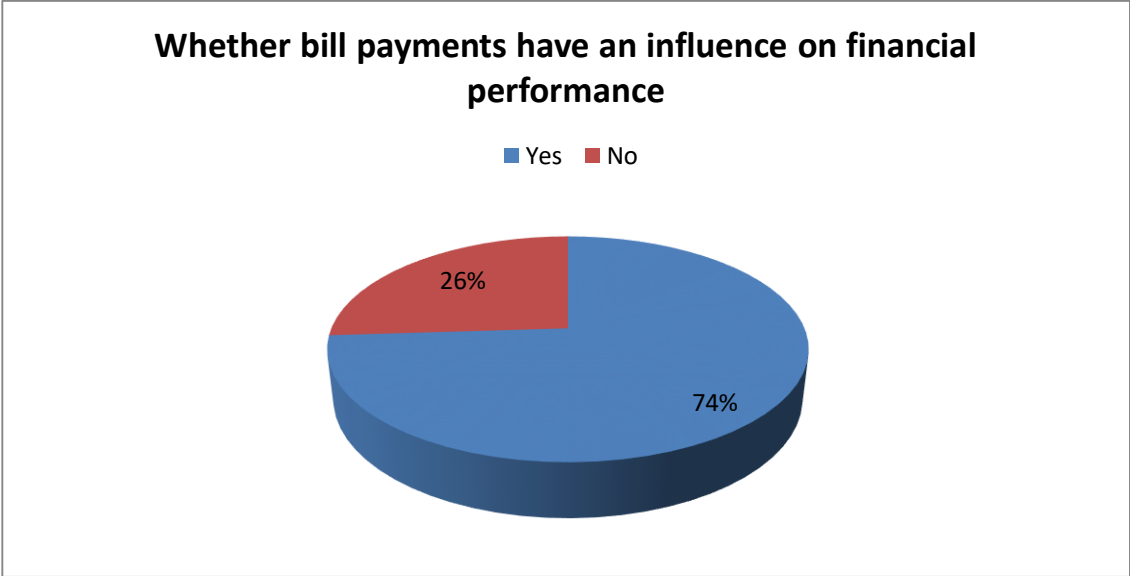
The study findings in Table 4.4 indicate that majority of the respondents agree to the greatest extent the influence of person to person payments on financial performance. The results indicate that easy payment option offered has the greatest influence with a mean value of 4.33 and std deviation of 0.85, international payments can be carried out easily statement with a mean of 4.11 and std deviation of 0.80, the payment process is simple with a mean value of 4.43 and std deviation of 0.74 and minimal risks involved with a mean of 4.40 and std deviation of 0.74.

These study results are in agreement with those of Muisyo, Alala and Musiega (2014) whose study revealed that the introduction of a myriad of mobile money services (MMS) by various mobile money service providers to customers has become common in the recent years as a way of gaining competitive advantage through diversification, maintaining customer loyalty and increasing market share in order to grow their profitability and improve their financial position.

Such services include person to person (P2P) mobile money transfer (MMT), pay bill services, loan to customers and access to a wide range of banking services e.g. a/c balances, mini statements, transfer of money from one`s mobile line a/c to one`s own bank a/c relate positively to financial performance. The study results were in agreement with Tchouassi (2012) who found out that SSA nation`s households are deprived; poor that are faced with financial expenses that are high and lacked access to bank accounts therefore mobile banking services facilitated person to person payment.

4.4.3 Bill Payments

The participants were asked to indicate whether bill payments have an influence on financial performance of commercial banks. The study findings are as illustrated in Figure 4.5.



Source: Survey Data (2019)

Figure 4.5 Whether Bill Payments have an influence on Financial Performance

The study results as shown in Figure 4.5 indicates that majority of the participants representing 74% stated that bill payments have an influence on financial performance of commercial banks while 26% of the respondents differed. As a result of these findings commercial banks need to

enhance their bill payments to get more clients paying bills using their systems so as to improve on their financial performance.

The study sought to establish from the respondents whether they thought bill payments have an influence on financial performance of commercial banks. The study results indicate that participants were of the opinion that commercial banks have experiences large revenues from different activities with the banking system core among them the bill payments activities. The respondents argued that through bill payments services account for a significant portion of commercial banks revenues and it is one of the most important aspects of payment service by banks. The respondents stated as a result of new payment technologies like bill payments have not only reduced the settlement time required for transactions but also financial costs that may arise from the processing of bill payments.

The paper sought to establish from the respondents some of the influences of bill payments on financial performance of commercial banks. According to the study results bill payments result in reduced transaction costs and greatly increases access to banking services hence improved financial performance. The participants argued that bill payments through online platforms has made the performance of workers more effective and efficient thereby boosting the fortune of commercial banks. This is achieved since customers can use their m-banking options to access their accounts outside the normal working hours to make bill payments in order to attend to their bill needs. The respondents further stated that through the electronic retail payment services like bill payments has improved the financial performance of the banking industry players by making banking transaction easier and has been brought closer to its customers.

This section was carried out to investigate whether bill payments influence financial performance. The study sought to determine the extent to which bill payments influence financial performance in a scale of 1-5 where 1 is no influence, 2 is least influence, 3 is great influence, 4 is greater influence and 5 is greatest influence. The following analysis was carried out using means and standard deviations. The study findings are as illustrated in Table 4.6.

Table 4.6 Extent to which Bill Payments Influence Financial Performance

Statement	Mean	St Dev
Electronic execution	4.0667	.77295
Convenient for installments	4.1167	.77824
Easy to save the biller information for reuse at a future time	4.1833	.78312
Payment data can also be downloaded	4.2500	.85354

Source: Survey Data (2019)

As shown in Table 4.6 the study results indicate that majority of the participants are of the opinion that the following statements have the greatest influence; electronic execution with a mean score of 4.06 and std deviation of 0.77, convenient for installments with a mean value of 4.11 and std deviation of 0.77, easy to save the biller information for reuse at a future time with a mean of 4.18 and std deviation of 0.78 and payment data can also be downloaded with a mean value of 4.25 and std deviation of 0.85.

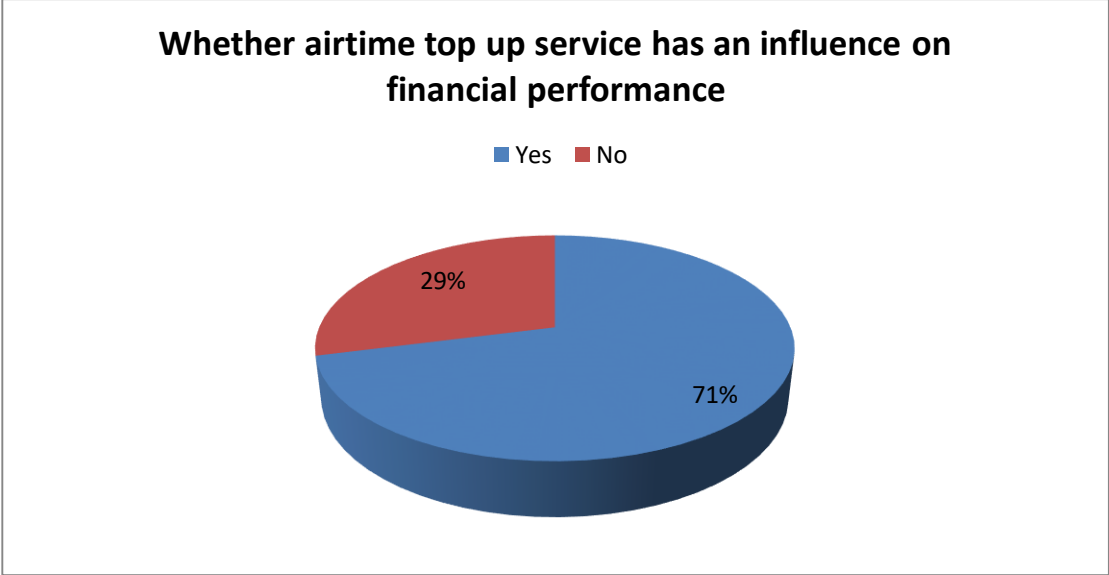
The research findings are in line with a study results of Kathuo, Rotich and Anyango (2015) who concluded that, banks that have adopted M-banking services have to a large extent increased their customer outreach, and hence have improved their financial performance. The findings revealed that many mobile banking products are being offered by banks such as Fund Transfer between Accounts/ E-funds transfer, Bill Payment, order for cheque books and bank statements and therefore concluded that the financial performance of the banks that provide these mobile banking products has improved because they ensure efficiency of the banking services.

The study concurs with the findings of Islam (2013) who study found out that mobile banking delivers services that are outside the known branches through branchless banking by adopting ICT in addition to using retail agents that are non-financial who operate for 365 days. The study established a positive impact on m-banking payments, withdrawals and deposits. According to the study results mobile banking is reliable, reduced costs, speedy and carrying out operations which reduce errors from the interaction of staff in the old banking systems. However, there was a research gap this paper sought to fill since this study was conducted on mobile banking as an

emerging issue in Bangladesh whereas the current study focused on mobile banking services and financial firm performance. The study findings also agree with those of Wambari (2009) who established use of mobile devices is as a result normal SME practices leading to financial benefits motivated from easy use in bill of payment applications.

4.4.4 Airtime Top Up Service

In regards to airtime top up service this paper sought to establish from the participants whether it influences on financial performance of commercial banks. The study results are as illustrated in Figure 4.6.



Source: Survey Data (2019)

Figure 4.6 Whether Airtime Top Up Service has an Influence on Financial Performance

The study results shown in Figure 4.6 indicate that majority of the participants at 71% were of the opinion that airtime top up service has an influence on financial performance as opposed to 29% of the respondents. As shown from the study findings it is important for commercial banks to put more effort on airtime top up service so as to improve on their financial performance.

The study sought to find out from the respondents whether they thought airtime top up service has an influence on financial performance of commercial banks. The explanation provided that

the respondents was that they rely on mobile money more than using financial institutions in running their operation including the purchase of airtime top up services and that commercial banks in Kenya have boosted their earning capability and controlling costs through adoption of innovations like the mobile banking and the use of services such as airtime top up service. The participants stated that mobile banking services such as airtime top up service has enabled commercial banks to increase their sales volumes, reducing costs of distribution and increasing customer satisfaction which end up influencing financial performance positively.

The study sought to establish from the respondents some of the influences of airtime top up service on financial performance. The respondents stated that through mobile banking services such as airtime top up has been additive in nature since it has added to the range of choices that customers have as well as adding the convenience of existing customers of the mainstream financial services which has a positive influence of financial performance since customers can buy airtime at their convenience.

This section investigates whether airtime top up service influences financial performance. The study sought to determine the extent to which airtime top up service influences financial performance using a scale of 1-5 where 1 is no influence, 2 is least influence, 3 is great influence, 4 is greater influence and 5 is greatest influence. The following analysis was carried out using means and standard deviations. The study results are as shown in Table 4.7.

Table 4.7 Extent to which Airtime Top Up Service Influences on Financial Performance

Statement	Mean	St Dev
Is added instantly to phones	4.2667	.88042
Perform airtime across countries	4.0333	.88234
Offers efficiency	4.1833	.81286
Enables airtime sambaza services	4.2500	.91364

Source: Survey Data (2019)

The study findings shown in Table 4.7 indicate that, majority of the participants felt that statement reviewed had the greatest influence; is added instantly to phones with a mean value of

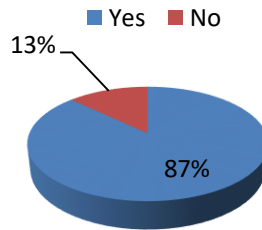
4.26 and std deviation of 0.88, perform airtime across countries with a mean score of 4.03 and std deviation of 0.88, offers efficiency with a mean of 4.18 and std deviation of 0.81 and enables airtime sambaza services with a mean score of 4.25 and std deviation of 0.91.

These study findings are in tandem with those of Lang, Nolle and De Young (2007) who did a study establishing the effect of e-banking on the wellbeing of financial institutions was carried on US community financial markets whereby comparison of performance by mortar banking institutions with virtual click and mortar banks. The conclusion drawn from the study was electronic banking improves profits that e- the commercial institutions therefore growing revenue streams. Further, electronic banking driving forces or factors include maximizing operating profits such as services offered to customers like airtime purchases and minimizing the operation costs. These study findings concurs with those of Visionteck (2013) who established that the electronic voucher distribution through the POS terminal is a simplified way to dispense prepaid mobile top-ups deployed at retailer business centers. It is designed in a manner to neglect the problems associated with distribution of the physical scratch cards. The use of the POS terminal has simplified the process of distributing airtime at the least price possible while increasing accessibility to the customers. The POS terminal operates on real time software solution, which provides the retailer access to recharge their accounts, with given amounts at anytime anywhere. The findings were also in agreement with Ogare (2013) who examined whether airtime top up service as an electronic banking service has a relationship with financial firms performance and established that e-banking through services offered by the platform such purchasing of airtime has a significant and positive impact of the profits of financial institutions.

4.4.5 Financial Performance

In regards to financial performance the participants were asked to indicate whether financial performance of commercial banks is influenced by mobile banking services. The study results are illustrated in Figure 4.7.

Financial performance of commercial banks is influenced by mobile banking services



Source: Survey Data (2019)

Figure 4.7 Financial Performance of Commercial Banks is influenced by Mobile Banking Services

The study results shown in Figure 4.7 indicate that most of the participants representing 87% stated that financial performance of commercial banks is influenced by mobile banking services as opposed to 13% of the respondents. As shown by the study results commercial need to consider mobile banking services when seeking to improve on their financial performance.

The study was interested in establishing whether financial performance of commercial banks is influenced by mobile banking services. According to the study results the respondents stated that mobile banking has continued to influence banking activities and their income structure which also affects their financial performance. The participants argued financial performance of commercial banks is influenced by mobile banking services since it give the banks the potential to expand their services beyond the geographical footprint as well as affording them the ability to cross-sell and up-sell their products and services to existing customers. The participants argued that banks have moved to mobile banking services which are branchless banking which has influenced their performance since this has had an effect on reducing banking costs, thereby improving profitability ratios and has offered them huge openings to provide extra services with immense flexibility to customers.

The following section investigated extent of influence of mobile banking variables on financial performance measures of commercial banks using a scale of 1-5 where 1 is no influence, 2 is least influence, 3 is great influence, 4 is greater influence and 5 is greatest influence. The study findings are as shown in Table 4.8.

Table 4.8 Extent to which Mobile Banking Services Influences Financial Performance

Statement	Mean	St Dev
Profitability	4.1333	.98233
Growth rates	4.4667	.62346
Cash flows	4.0667	1.00620
Cash from operations	4.4833	.77002

Source: Survey Data (2019)

The findings shown Table 4.8 indicate that participants rate the extent of influence of financial performance measures as follows; profitability with a mean score of 4.13 and std deviation of 0.98, growth rates with a mean value of 4.46 and std deviation of 0.62, cash flows with a mean of 4.06 and std deviation of 1.00 and cash from operations with a mean value of 4.48 and std deviation of 0.77.

4.5 Inferential Statistics

The study used inferential statistics to allow the research use samples to make generalizations in relation to the study population where the samples were drawn from. This was necessary owing to the fact that sampling incurs errors which might affect perfect representation of the population.

4.5.1 Correlation Analysis

Correlation analysis was used in this study to measure the degree of relationship between the study variables. This enables the researcher to have an idea the direction and the degree of the relationship between the variables reviewed in the study. This relationship is as shown in Table 4.9.

Table 4.9 Correlation Analysis

		Financial Performance	Short Message Service	Person to Person Payments	Bill Payments	Airtime Top Up Service
Financial Performance	Pearson Correlation	1	.674**	.512**	.797**	.748**
	Sig. (2-tailed)		.000	0.000	0.000	0.000
	N	60	60	60	60	60
Short Message Service	Pearson Correlation	.674**	1	.027	.096	.035
	Sig. (2-tailed)	.000		.062	.42	.121
	N	60	60	60	60	60
Person to Person Payments	Pearson Correlation	.512	.027	1	.058	-.071
	Sig. (2-tailed)	.000	.062		.658	.056
	N	60	60	60	60	60
Bill Payments	Pearson Correlation	.797**	.096	.058	1	.062
	Sig. (2-tailed)	.000	.42	.658		.450
	N	60	60	60	60	60
Airtime Top Up Service	Pearson Correlation	.748**	.035	-.071	.062	1
	Sig. (2-tailed)	.000	.121	.056	.450	
	N	60	60	60	60	60

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

Source: Survey Data (2019)

Short message service had an above average positive correlation of 0.674 with financial performance of commercial banks. Person to person had an average correlation of 0.512 with financial performance of commercial banks. Similarly, bill payments had a strong positive correlation of 0.797 with financial performance of commercial banks. Airtime top up service had an strong positive correlation of 0.748 with financial performance of commercial banks all statistically significant at Sig. = 0.000.

4.5.2 Regression Analysis

In order to establish the the impact of mobile banking services on the financial performance of commercial banks in Kenya multiple regression analysis was conducted. The study used SPSS Version 22 to get regression coefficients that were used to interpret the magnitude and direction of the relationship. The regression analysis model summary is as shown in Table 4.10.

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854 ^a	.730	.710	.52902

- a. Predictors: (Constant), Short message service, Person to person payments, Bill payments, Airtime top up service
- b. Dependent Variable: Financial Performance

Source: Survey Data (2019)

As shown from the study results in Table 4.10, the Coefficient of Multiple Determination (R^2) is 0.854 this implies that the regression line is of “*high goodness of fit*” explaining up to 85.4% of the variation in regards to financial performance of commercial banks while 22.6 was attributed to other variables that were not focused on in this study.

The study applied the Analysis of Variance (ANOVA) to determine what the combined influence of the independent variables was on the dependent variable. The study findings are as shown in Table 4.11.

Table 4.11 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
¹ Regression	41.541	4	10.385	37.109	.000 ^b
Residual	15.392	55	.280		
Total	56.933	59			

- a. Predictors: (Constant), Short message service, Person to person payments, Bill payments, Airtime top up service
- b. Dependent Variable: Financial Performance

Source: Survey Data (2019)

As shown from the study results in Table 4.11, the F static is 37.109 with a p-value of 0.000. The implication of this is that the combined influence of mobile banking services on the financial performance of commercial banks in Kenya is significant since the p-value is less than 0.05.

Table 4.12 Regression model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.513	.518		.990	.001
Short Message Service	-.043	.109	-.049	-.399	.000
Person to Person Payments	.126	.102	.099	1.241	.002
Bill payments	.461	.108	.528	4.276	.000
Airtime top up service	.396	.094	.457	4.204	.000

a. Dependent Variable: Financial performance of commercial banks

Source: Survey Data (2019)

As per the model coefficients in Table 4.36, the equation $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \dots\beta_4X_4$ becomes;

$$Y = 0.513 - 0.043X_1 + 0.126X_2 + 0.461X_3 + 0.396X_4$$

As shown in the study results all the predictor variables have a p-value of <0.05%. The implication of this is that the influence of short message service, person to person payments, bill payments, airtime top up service on the financial performance of commercial banks in Kenya is significant since the p-value is less than 0.05. As shown by the regression line established above, holding all the entire independent variable constant, financial performance of commercial banks in Kenya will be 0.513. As shown from the study results, holding all other variables constant, a decrease in short message service will lead to a decrease on financial performance of commercial banks in Kenya by 0.043 This study is in agreement with the findings of Bamoriya and Singh

(2012) who established from the study that text messages are becoming an important part of banking for many people. In the study they found out that most people opt to receive alerts from their banking institutions through text message. The message from the banking institutions to customers is on payment which is due, when payment of any nature has been made and when the customers' account is nearly empty. The study established that two-way text messaging was also becoming an option in the banking institutions since it was not possible for a customer to use SMS to contact the banks on questions that need answers for example verification of purchases as well as making transactions.

As shown from the regression results, holding all the other variables constant, an increase in person to person payments will lead to an increase on financial performance of commercial banks in Kenya by 0.126. This study concurs with the findings of Tellez and Donner (2008) who did a paper m-banking on development of the economy by linking its impact adoption and use. The study results found out that m-payments/m-banking had proved to be a central innovation for the developing countries since it enables the financial institutions to get more users and lowers transfer of money from one region to another.

On the other hand, holding all other variables at zero, an increase in bill payments will lead to an increase in financial performance of commercial banks in Kenya by 0.461. This study agrees with the findings of Koivu (2002) who established that mobile phone uptake in Kenya was unprecedented and that m-banking affect wellbeing of organizations, decision making behavior economic conditions. This study found out that the reliance by information technology devices performing financial transactions which include but not limited to bill payments is steadily gaining momentum in the country. The study was in conclusion that mobile banking as an innovation increasingly endeared to the people in many ways and in nearly all the industries and economy.

The regression results also indicate that taking all other predictor variables constant, an increase in airtime top up service will lead to an increase financial performance of commercial banks in Kenya by 0.396. This study is in tandem with the findings of Ogare (2013) who examined whether electronic banking has a relationship with financial firms performance. In his paper he

looked at credit and debit cards issues by the banks to customers, the number of ATMS, the usage levels of mobile banking, electronic funds transfer and point of sales terminals as components of e-banking. The study established that e-banking through services offered by the platform such purchasing of airtime has a significant and positive impact of the profits of financial institutions.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents sections like summary of the study findings, the conclusions that were drawn from the study findings and the recommendations on the influence of mobile banking services on the financial performance of commercial banks in Kenya.

5.2 Summary

The main objective of this paper was to establish the impact of mobile banking services on the financial performance of commercial banks in Kenya. The study objectives were; to assess the influence of short message service (SMS) banking on the financial performance of commercial banks in Kenya, to establish the effect of person to person payments on the financial performance of commercial banks in Kenya, to determine the effect of bill payments on the financial performance of commercial banks in Kenya and to find out the effect of airtime top up service on the financial performance of commercial banks in Kenya.

Majority of the participants were of the opinion that short message service banking has an influence on financial performance. The respondents argued that short message service banking has become an important part of banking, more and more people prefer to receive banking alerts through short message service which has not only improved service delivery but has had a positive impact on financial performance. The participants further stated that financial innovations by banking organizations such as the use of short message service have improved their financial performance. The participants argued that the use of short message service banking by institutions has had a positive influence on financial performance since this has made basic financial services by customers to be more accessible through minimization of distance and time to the nearest retail bank branches, reduces the bank`s overheads as well as costs relating to

transactions. The respondents stated that m-banking applications like short message service banking offer customers banking services that are faster, transmitting data in addition to important and customer friendly services which influence financial performance positively. Short message service had an above average positive correlation with financial performance of commercial banks and was statistically significant. This implies that a decrease in short message service will lead to a decrease on financial performance of commercial banks.

Most of the participants stated that person to person payments have an influence on financial performance of commercial banks. According to the respondents there was an influence on financial performance of commercial banks as a result of using person to person payments technique in mobile banking. They argued that person to person payments greatly influence financial inclusion in commercial banks thus affecting financial performance. The participants stated the following as the effects of person to person payments on financial performance increased customer loyalty; increase in the flow of funds from the deposits to other investors which results in increased profitability and financial performance of the commercial banks. The respondents further stated that with person to person payments there is increased convenience, efficiency, transactional optimization as well as loyalty of customers which enables the banking institutions to develop competitive edge. According to the respondents person to person payments increases the speed and simplicity with which transactions can be done which increases the banks` returns positively. Person to person had an average correlation with financial performance of commercial banks and was statistically significant. This reveals that an increase in person to person payments will lead to an increase on financial performance of commercial banks in Kenya.

Majority of the participants stated that bill payments have an influence on financial performance of commercial banks. The study results indicate that participants were of the opinion that commercial banks have experiences large revenues from different activities with the banking system core among them the bill payments activities. The respondents argued that through bill payments services account for a significant portion of commercial banks revenues and it is one of the most important aspects of payment service by banks. The respondents stated as a result of new payment technologies like bill payments have not only reduced the settlement time required for transactions but also financial costs that may arise from the processing of bill payments.

According to the study results bill payments result in reduced transaction costs and greatly increases access to banking services hence improved financial performance. The participants argued that bill payments through online platforms has made the performance of workers more effective and efficient thereby boosting the fortune of commercial banks. This is achieved since customers can use their m-banking options to access their accounts outside the normal working hours to make bill payments in order to attend to their bill needs. The respondents further stated that through the electronic retail payment services like bill payments has improved the financial performance of the banking industry players by making banking transaction easier and has been brought closer to its customers. Bill payments had a strong positive correlation with financial performance of commercial banks and was statistically significant. The implication is that an increase in bill payments will lead to an increase in financial performance of commercial banks in Kenya.

Majority of the participants were of the opinion that airtime top up service has an influence on financial performance. The explanation provided that the respondents was that they rely on mobile money more than using financial institutions in running their operation including the purchase of airtime top up services and that commercial banks in Kenya have boosted their earning capability and controlling costs through adoption of innovations like the mobile banking and the use of services such as airtime top up service. The participants stated that mobile banking services such as airtime top up service has enabled commercial banks to increase their sales volumes, reducing costs of distribution and increasing customer satisfaction which end up influencing financial performance positively. The respondents stated that through mobile banking services such as airtime top up has been additive in nature since it has added to the range of choices that customers have as well as adding the convenience of existing customers of the mainstream financial services which has a positive influence of financial performance since customers can buy airtime at their convenience. Airtime top up service had an strong positive correlation with financial performance of commercial banks and was statistically significant. This depicts that an increase in airtime top up service will lead to an increase financial performance of commercial banks in Kenya.

5.3 Conclusions

Owing to the study results the following conclusions based on the findings were drawn. The study concludes that short message service banking has become an important part of banking, more and more people prefer to receive banking alerts through short message service which has not only improved service delivery but has had a positive impact on financial performance. The use of short message service banking by institutions has had a positive influence on financial performance since this has made basic financial services by customers to be more accessible through minimization of distance and time to the nearest retail bank branches, reduces the bank's overheads as well as costs relating to transactions.

In summary there was an influence on financial performance of commercial banks as a result of using person to person payments technique in mobile banking. Person to person payments greatly influence financial inclusion in commercial banks thus affecting financial performance.

In conclusion commercial banks have experienced large revenues from different activities with the banking system core among them the bill payments activities. New payment technologies like bill payments have not only reduced the settlement time required for transactions but also financial costs that may arise from the processing of bill payments.

People rely on mobile money more than using financial institutions in running their operation including the purchase of airtime top up services and that commercial banks in Kenya have boosted their earning capability and controlling costs through adoption of innovations like the mobile banking and the use of services such as airtime top up service. Mobile banking services such as airtime top up service has enabled commercial banks to increase their sales volumes, reducing costs of distribution and increasing customer satisfaction which ends up influencing financial performance positively.

5.4 Recommendations for Study

The study recommends that it is important for commercial banks to focus more on short message service banking to lower operational costs thereby improving financial performance. For the second objective the study recommends that commercial banks under the guidance of Central Bank of Kenya need to consider using person to person payments to improve on their performance.

It is recommended that commercial banks need to enhance their bill payments to get more clients paying bills using their systems so as to improve on their financial performance and bring more stakeholders on board. The study recommends that it is important for commercial banks to put more effort on airtime top up service so as to improve on their financial performance.

5.5 Suggestions for Further Study

Owing to the fact that this study did not evaluate all possible mobile banking services that contribute to financial performance of commercial banks further research is recommended other than variables like short message service banking, person to person payments, bill payments and airtime top up service. As a result of increased incidences of online fraud leading to huge losses by banks a study is recommended on the effects of electronic retail payment services on the risk associated with commercial banks. Since the current study explored mobile banking services with financial performance of commercial banks in Kenya, the study recommends that; similar study should be carried out in other countries in East Africa for comparison purposes and to allow for findings to be generalized.

REFERENCES

- Al-Jabir, I. M. (2012). Mobile banking adoption: application of diffusion of innovation theory, *Journal of Electronic Commerce Research*, 13(4), 40-56.
- Anyasi, F. I., & Otubu, P.A. (2009). Mobile Phone Technology in Banking System: It's Economic Effect, *Research Journal of Information Technology* 1(1), 1-5.
- Bamoriya, H., & Singh, R. (2012) SMS advertising in India: is TAM a robust model for explaining intention?, *Organisations and Markets in Emerging Economies*, 1(5), 89-101.
- Bisignano, J. (1992). *Banking competition, regulation and the philosophy of financial development: a search for first principles,* in the internationalization of capital markets and the regulatory response, John Fingleton (ed.). London: Graham andTrotman.
- Bolt, W., & Humphrey, D. B. (2007), "Payment network scale economies, SEPA, and cash replacement," *Review of Network Economics*, 6, (4)453–473.
- Coelho, F. (2003),"Multiple channel structures in financial services: a framework", *Journal of Financial Services Marketing*, 8(1), 22-34
- Cooper, D. R., & Schindler, P. S. (2003). *Business Research Methods* (8th edition). USA:McGraw-Hill.
- Cooper, C. R., & Schindler, P. S. (2008). *Business research methods* (10 ed.). Boston: McGraw-Hill
- Diamond, D.W., & Dybvig, P. H. (1983). "Bank Runs, Deposit Insurance, and Liquidity." *Journal of Political Economy* 91 (5): 401–19.
- Daniel, E. (1999), Provision of Electronic Banking in the UK and the Republic of Ireland, *International Journal of Bank Marketing*, 17(2), 72-83
- DeYoung, R., Lang, W.W., & Nolle, D. L. (2007), How the Internet affects output and performance at community banks, *Journal of Banking & Finance* 31 1033–1060
- Donner, J., & Tellez, A. C. (2008), Mobile banking and economic development: Linking adoption, impact, and use, *Asian Journal of Communication*, 18(4), 318-322.
- Gefen, D., Karahanna, E., & Straub. (2003). Trust and TAM in online shopping: an integrated model. *MIS Quarterly*, 27(1), 51-90.
- Gerrard, P., & Cunningham, J. (2003) 'The diffusion of Internet banking among Singapore consumers', *International Journal of Bank Marketing*, 21(1), 16–28.
- Gitau, R. M. (2011).The relationship between financial innovation and financial performance of commercial banks in Kenya. *Unpublished MBA project*, University of Nairobi, Nairobi, Kenya.

- Greenwood, J., & Jovanovic, B. (1990). Financial Development, Growth, and the Distribution of Income. *The Journal of Political Economy*, 98 (5), 1076–1107
- Islam, M.S. (2013), “Mobile Banking: An Emerging Issue in Bangladesh,” *ASA University Review*, 7, (1) 21-29.
- Jayawardhera, C., & Foley P. (2000) “Changes in the banking sector- the case of internet banking in the UK”, *Electronic Networking Application and Policy*, 10 (1),19-30
- Kathuo R. W., Rotich, G., & Anyango, W. (2015), effects of mobile banking on the financial Performance of banking institutions in Kenya, *Unpublished MBA Thesis*, University of Nairobi.
- Khrawish, H.A. (2011) Determinants of Commercial Banks Performance: Evidence from Jordan. *International Research Journal of Finance and Economics. Zarqa University*, 5(5), 19-45
- Kigen, K. P. (2010). The impact of mobile banking on transaction costs of microfinance institutions, *Unpublished MBA Thesis*, University of Nairobi
- Kingoo, H. (2011). The relationship between electronic banking and financial performance of commercial banks in Kenya. *Unpublished MBA Thesis*, University of Nairobi
- Koivu, T. (2002). *Do efficient banking sectors accelerate economic growth in transition countries?* Bank of Finland Institute for Economies in Transition
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (2nd ed.). New Delhi: New Age International Publishers.
- Lee, K. S., Lee, H. S., & Kim, S. Y. (2007), Factors Influencing the Adoption Behavior of Mobile Banking: A South Korean perspective, *Journal of Internet Banking and Commerce*, 12 (2), 20-31
- Leland, H., & Pyle, H. (1977), "Informational Asymmetries, Financial Structure, and Financial Intermediation," *Journal of Finance*, 32(2), 371-387.
- Moon, J.W., & Kim, Y.G. (2001), "Extending the TAM for the World-Wide-Web context," *Information and Management Journal* 3(38) 217-230
- Mugane, M., & Njuguna, R. (2019). Mobile Banking Services with Financial Performance on Commercial Banks in Kenya. *International Journal of Current Aspects*, 3(VI), 176-192. <https://doi.org/10.35942/ijcab.v3iVI.84>
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Qualitative and Quantitative Approaches*. Nairobi: Acts Press.
- Muisyo, J. M., Alala, O., & Musiega, D. (2014). The Effects of Mobile Money Services on the Performance of the Banking Institution: A Case of Kakamega Town. *The international Journal of Engineering and Sciences*. 3(4). 16-24

- Murthy, Y., & Sree, R. (2003) A Study on Financial Ratios of major Commercial Banks. *Research Studies*, College of Banking & Financial Studies, Sultanate of Oman
- Mutua R. W. (2013).effects of mobile banking on the financial Performance of commercial banks in Kenya, *Unpublished MBA Thesis*, University of Nairobi.
- Ndung'u, N. (2011), Governor Central Bank of Kenya in his speech during the Launch of the Mobile Pay Tangaza E-Commerce and Money Transfer Service on 24th January 2011. *Speech available at //www.centralbank.go.ke/downloads/speeches/2011/Tangaza%20E-Commerce%20Jan%2024.pdf*. Accessed 14 July 2011
- Ngechu, M. (2004), *Understanding the research process and methods. An introduction to research methods*. Acts Press, Nairobi.
- Ogare, H.O. (2013). The effect of electronic banking on the financial performance of commercial banks in Kenya. *Unpublished MBA project*, University of Nairobi.
- Polatoglu, V.N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of internet banking services. *International Journal of Bank Marketing*, 19 (4), 156-65.
- Pikkarainen, T., Pikkarainen, K., Karjauoto, H., & Pahlila, S. (2004). Consumer acceptance of online banking: an extension of the technology acceptance model. *Internet Research*, 14 (3), 224-235.
- Scholten, B., & Van Wensveen, D. (2003). The Theory of Financial Intermediation: An Essay on What It Does (Not) Explain. Vienna: SUERF – The European Money and Finance Forum.
- Sekaran, U., & Bougie, R. (2009). *Research methods for business: a skill-building approach* (5th ed.). Haddington: John Wiley & Sons
- Sohail, M. & Shanmugham, B. (2003) E-banking and customer preferences in Malaysia: *An empirical investigation*, *Information Sciences*, 150 (3/4), 207-217
- Tan, M., & Teo, T.S.H. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for information Systems*, 1(5), 1-42.
- Tchouassi, G. (2012) Can Mobile Phones Really Work to Extend Banking Services to the Unbanked? Empirical Lessons from Selected Sub-Saharan Africa Countries, *International journal of Development Societies*, 1,(2), 70-81.
- Tiwari, R. Buse, S., & Herstatt, C. (2006), *Mobile Banking As Business Strategy: Impact Of Mobile Technologies On Customer Behaviour And Its Implications For Banks*, *Mobile Banking As Business Strategy: Impact Of Mobile Technologies On Customer Behaviour And Its Implications For Banks*. Working Paper No. 37. Presented at “Portland International Conference on Management of Engineering and Technology” (PICMET) 2006, 8 – 13 July 2006, Istanbul (Turkey)

APPENDICES

APPENDIX I: LETTER TO THE RESPONDENTS

Maurine Mugane
Kenyatta University
School of Business
NAIROBI-KENYA

RE: REQUEST FOR INFORMATION

I am a student in the post graduate program at Kenyatta University. I am at the stage of carrying out my research paper on “impact of mobile banking on the financial performance of commercial banks in Kenya”, part of the requirement in the degree program. Kindly spare a few minutes to fill the questionnaire sincerely.

Thanking you advance.

Yours faithfully,

Maurine Mugane

D53/OL/CTY/26965/2015

APPENDIX II: QUESTIONNAIRE

Kindly provide answers and opinions in relation questions provided below. Your honest response will be highly welcome. The answers provided in this questionnaire shall be treated with confidentiality and shall only be for academic purposes. Kindly spare about ten minutes of your time to fill this questionnaire.

SECTION A: PERSONAL DATA

- 1 Department _____
- 2 Gender (tick)
Male
Female
- 3 Age category (tick)
Below 30 years
31 – 40 years
41 – 50 years
Over 50 years
- 4 Highest level of educational qualifications (tick)
Secondary
College
Degree
Masters
Others (specify)
- 5 For how long have you worked for the organization (tick)
Less than one year
1 – 4 years
5 – 9 years
10 – 14 years
Above 15 years

SECTION B: MOBILE BANKING ON THE FINANCIAL PERFORMANCE

1. Short Message Service Banking

a) Do you think short message service banking influences on financial performance?(Tick)

Yes ()

No ()

b) Provide and explanation

.....

c) What do you think are some of the influences of short message service banking on financial performance?

.....

d) Please use the scale of 1-5 shown below to tick the extent of influence of the following short message service banking factors on financial performance.

1	2	3	4	5
No	Least	great	greater	greatest
Influence	Influence	Influence	Influence	Influence

Factor	1	2	3	4	5
---------------	----------	----------	----------	----------	----------

Receiving alerts from banks via text message					
Using SMS to contact bank with questions					
Using SMS to verify purchases					
Using SMS to make transactions.					

2. Person to Person Payments

a) Do you think person to person payments have an influence on financial performance of commercial banks?(Tick)

Yes ()

No ()

b) Provide and explanation

.....
.....
.....

c) What are some of the effects of person to person payments on financial performance of commercial banks?

.....
.....
.....
.....

d) Please use the scale of 1-5 shown below to tick the extent of influence of the following person to person payment factors on financial performance of commercial banks.

1
 2
 3
 4
 5

No Least great greater greatest
 Influence Influence Influence Influence Influence

Factor	1	2	3	4	5
Easy payment option offered					
International payments can be carried out easily					
The payment process is simple					
Minimal risks involved					

3. Bill Payments

a) Do you think bill payments have an influence on financial performance of commercial banks?(Tick)

Yes ()

No ()

b) Provide and explanation

.....

c) What are some of influences of bill payments on financial performance of commercial banks?

.....

d) Please use the scale of 1-5 shown below to tick the extent of influence of the following bill payments factors on financial performance of commercial banks.

1	2	3	4	5
No	Least	great	greater	greatest
Influence	Influence	Influence	Influence	Influence

Factor	1	2	3	4	5
Electronic execution					
Convenient for installments					
Easy to save the biller information for reuse at a future time					
Payment data can also be downloaded					

4. Airtime Top Up Service

a) Do you think airtime top up service has an influence on financial performance of commercial banks?(Tick)

Yes ()

No ()

b) Provide and explanation

.....

.....

.....

c) What are some of the influences of airtime top up service on financial performance?

.....

 d) Please use the scale of 1-5 shown below to tick the extent of influence of the following airtime top up service factors on financial performance.

1	2	3	4	5
No	Least	great	greater	greatest
Influence	Influence	Influence	Influence	Influence

Factor	1	2	3	4	5
Is added instantly to phones					
Perform airtime across countries					
Offers efficiency					
Enables airtime sambaza services					

5. Financial Performance

a) Do you think financial performance of commercial banks is influenced by mobile banking services?(Tick)

Yes ()

No ()

b) Provide and explanation

.....

c) Please use the scale of 1-5 shown below to tick the extent of influence of the following financial performance measures of commercial banks.

1	2	3	4	5
No	Least	great	greater	greatest
Influence	Influence	Influence	Influence	Influence

Factor	1	2	3	4	5
Profitability					
Growth rates					
Cash flows					
Cash from operations					

d. What other comment on the impact of mobile banking services on the financial performance of commercial banks in Kenya you feel should have been addressed?

.....

.....

.....

Thank you for participating in this study

APPENDIX III: DOCUMENT REVIEW GUIDE

Year period	2014	2015	2016	2017	2018
Revenue					
Cost of goods sold					
Cash from operations					
Capital expenditures					
Interests					
Non-cash expenses					
Gains/losses on investments					
Amortization					
Stock-based compensation					
Depreciation					

