

**THE EFFECT OF ALTERNATIVE BANKING CHANNELS ON FINANCIAL
PERFORMANCE OF COMMERCIAL BANKS IN KENYA**

BY

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DECLARATION

I declare that this research project is my original work and has not been submitted before for a degree in any other University.

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Chris.

DEDICATION

To Dorcas Muiyuro and My Family.

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LIST OF ABBREVIATIONS

ATMs	:	Automated Teller Machines
CAMELS	:	Capital Adequacy, Asset Quality, Management Quality, Earnings Potential, Liquidity, and Sensitivity to Market Risk
CBK	:	Central Bank of Kenya
EFTPOS	:	Electronic Funds Transfer at Point Of Sale
IBM	:	International Business Machines
ICT	:	Information and Communications Technology
KCB	:	Kenya Commercial Banks
PDA	:	Personal Digital Assistant
POS	:	Point of Sales
PWC	:	PricewaterhouseCoopers
ROA	:	Return on Assets
ROE	:	Return on Equity
ROI	:	Return on Investments
SPSS	:	Statistical package for Social Sciences
SSA	:	Sub-Saharan Africa
U.S.A	:	United States of America.

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ABSTRACT

The advance of communication and computer technology has made it possible for people to carry out banking transactions from any location. In an effort to reach the unbanked people and financial institutions outreach on alternative banking channels, a revolution in the range of payment solutions has been witnessed. However, alternative banking channels are faced with various challenges which raise concerns on their impact on the profitability of banks. Such challenges include lack of customer confidence, security concerns, system failures, cases of transaction errors and network failures. Further, despite the existence of alternative banking channels, bank halls continue to be congested which shows customers continue seeking services in bank branches despite presence of alternative banking channels. The objective of this study was to establish the effect of alternative banking channels on financial performance of commercial banks in Kenya. This study used descriptive research design. The target population was commercial banks in Kenya. The study used secondary data collected from banks annual financial reports and websites. The study was limited to a time scope of five years starting 2010 to the year 2014. Quantitative data collected was analyzed using descriptive and inferential statistics. Statistical Package for Social Sciences (SPSS V. 21.0) was used for data analysis. Regression model was used to establish the relationship between the study variables. The research findings were presented using tables and figures. The study established that 73.4% of the variation in financial performance of commercial banks in Kenya was explained jointly by operating expenses, agency banking, mobile banking and customer deposits based on obtained coefficient of determination (R^2) of 0.734. Further, the study established that agency banking, mobile banking, customer deposits and operating expenses were positively related to financial performance of commercial banks based on obtained regression coefficients of 0.651, 0.016, 1.852 and 9.553 respectively. The study further established that the rate at which mobile banking was used declined since 2012. The study established that operating expenses increased in the year 2014 contrary to the other years. The researcher recommends to the management of commercial banks to adopt more alternative banking channels as well as exploiting more innovation that enhance alternative banking. Further, it is recommended that banks management investigate into the factors contributing to increase in operating expenses and put into place best practice to reverse the situation. Finally, bank management need to establish the level of awareness and conversance of customers on mobile banking.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Recent economic turmoil and increasing market complexity has placed unprecedented pressure on financial institutions. The rise of the digital consumer and the high-cost infrastructure of physical banking locations are leading to a declining ROI for branches (PWC, 2012). Branches remain an important interaction point, playing an essential role in complex product sales and relationship building for both retail and small-business customers. But as consumers transform the way they bank, the value proposition of traditional branches is in question. Mwangi (2007) perceives that evolving the branch strategy to align with changing consumer and economic realities can help banks boost ROI and position themselves for the future.

Leading banks are moving away from managing branches and instead are managing distribution across all of the bank's channels. As part of their multi-channel distribution strategy, leading banks' branch channels include a variety of branch models that balance retail and small-business customer needs in the local market with the cost of delivery. Not all models work for all banks. Adopting a combination of branch models based on target customer segments in the local market as well as the bank's strategic goals is the most effective strategy. Crane (2010) notes that if executed well, the branch strategy of the future can be mutually beneficial for banks and their customer.

From the global perspective, alternative banking channels have been adopted by banks due to the vast changes in technology and customer perspective. For instance, by 2010, a reported 5.5 million customers were registered users of online banking at the middle east

and an estimated 30% of all banking transaction were conducted online (FANERA LTD, 2012). According to a 2011 survey, 62% of respondents said that Internet is their preferred banking method. Only 20% selected branch banking - a sharp decline compared with 2007 when 40% of respondents preferred to bank at a branch. According to report by State Bank (2015), branchless banking (BB) transactions slid by 6 per cent to 66.8 million during July-September quarter of 2014 as against 71.2m in the preceding quarter.

Locally, Kenyan banking sector has undergone tremendous changes in the last two decades. Advances in technology and changing economic conditions have created impetus for this change. Commercial banks have been adopting alternative banking channels as well as innovating new delivery channels at a high rate. The banks uses internet, automated teller machines (ATMs), POS devices, EFTPOS devices and mobile phones as technologies to deliver its banking services through a combination of distribution channels including stationary bank branches, mobile bank branches, ATMs, bank agents, Online banking, and mobile banking (Mwangi, 2007). Each of these distribution channel serve to deliver a set of banking services and are part of distribution channels that may be used either separately or in conjunction to form the overall distribution channel strategy. It is noted that mobile phone branchless banking has successfully functioned mainly in Kenya with seven million customers, followed by South Africa and Philippines.

1.1.1 Alternative Banking Channels

According to IBM Global Services, alternative banking is a set of alternative delivery channels. It is conducting financial transactions electronically, without physically interacting with the bank. Alternative banking is alternative options for process banking transactions other than traditional means (Chebii, 2013). Alternative banking are sometimes referred to as

branchless banking, implying they are a distribution channel strategy used for delivering financial services without relying on bank branches. While the strategy may complement an existing bank branch network for giving customers a broader range of channels through which they can access financial services, branchless banking can also be used as a separate channel strategy that entirely forgoes bank branches. Alternative banking is also known as e-banking, electronic banking, online banking, virtual banking, direct banking and high tech-banking.

The advance of communication and computer technology have made it possible that one can do most banking transactions from a any location even without stepping into a physical financial structure through alternative banking channels. In an effort to reach the unbanked people and financial institutions outreach on alternative banking channels, a revolution in the range of payment solutions has been witnessed. Alternative banking channels used includes all modern means of banking such as ATM, internet banking, bank automation, core banking, credit cards, debit cards, mobile banking (Chris et al , 2005). According to Chebii (2013) alternative channels which have highly been adopted include Mobile banking, Agent Banking and Internet Banking. Ogilvie (2008) argues that alternative banking channels are the newer methods of carrying on banking operations

According to Howcroft (1993) alternative distribution channels provides convenient alternatives to branch banking. For Alternative banking customers don't have to visit physical branch as most of banking transactions are possible through alternative channels (Kumbhar 2009). Kimball and Gregor (1995) argue that alternative distribution channels aren't only important to reducing costs and improving competitiveness, but also ability to retain the existing customer case as well as to attract new customers. Bank executives

looking to attract new customers while engaging and reducing the attrition of existing customers can use alternate delivery channels as an end to their means.

1.1.2 Financial Performance

Performance is the degree to which an achievement is being or has been accomplished. It is the act of performing; execution, accomplishment, fulfillment, etc. It is the accomplishment of a given task measured against preset standards of accuracy, completeness, cost, and speed. The firm's success, conditions, and compliance is measures through performance. On the other hand, financial performance is a measure of the change of the financial state of an organization, or the financial outcomes that results from management decisions and the execution of those decisions by members of the organization (Greenwood & Jovanovic, 1990). Financial performance is conceptualized as the extent to which a firm increases sales, profits, and return on equity. Financial performance is essential to the survival of firms in the competitive and uncertain environment (Sousa & Voss, 2002). The success of an organization is gauged highly on financial performance hence, performance has been highly measured using financial measures. Financial performance ultimately reflects whether or not service quality is realized in a firm.

Galor and Zeira (2000) proposed four possible types of measurement for organizational performance namely: outcomes (turnover, absenteeism, job satisfaction); organizational outcomes (productivity, quality, service); financial accounting outcomes (return on assets, profitability) and capital market outcomes (stock price, growth, returns). However, scholars have proposed a broader performance construct of 'business performance' to incorporate non-financial measures including market share, customer satisfaction and new products. Measures recommended for financial analysis that determine a firm's financial

performance are grouped into five broad categories: profitability, liquidity, solvency, repayment capacity and financial efficiency (Crane, 2010). The components of CAMELS—an acronym for Capital Adequacy, Asset Quality, Management Quality, Earnings Potential, Liquidity, and Sensitivity to Market Risk— have traditionally been the yard stick for an assessment of banks’ performance. Since CAMELS combines the financial soundness (credit risk) and market (market risk) indicators, it is used by banking sector supervisory authorities (King et al., 2006) and rating agencies (Rawcliffe et al., 2008) to assess soundness of banks.

1.1.3 Effect of Alternative Banking Channels on Financial Performance

Mwangi (2007) argues that channels like the ATM and Internet Banking enable banks to reach a wide consumer base across geographies with little effort. According to PWC (2012), evolving branch strategy and marketing initiatives to align with changing consumer and economic realities can help banks boost ROI and position themselves for the future. PWC (2012) further notes that an increasingly digital consumer and the high-cost infrastructure of physical banking locations point to a declining ROI for branch networks. Alternative channels are taken as a cost saving method that can be used to reach a large number of customers especially the low income market segment for business sustainability.

According to Mahalaxmi (2013), alternate channels have the potential reduce the transaction costs for the banks. Same sentiments are raised by Kaleem and Ahmad (2008) who argues that alternative banking minimizes the cost of transactions, saves time, minimizes inconvenience, provides up-to-date information, increases operational efficiency, reduces HR requirements, facilitates quick responses, improves service quality and minimizes the risk of carrying cash. However, Mahalaxmi (2013) notes that banks can realize the full benefit of the roll out of alternate channels only if there is a perceptible increase in the usage by customers.

Okun (2012) affirms that banks can attract more low cost deposits by adopting alternative banking channels innovation such as Mpesa and agency banking in order to attract deposits at the lowest cost possible. Customer deposits are cheap sources of funds thus it will enable banks to maximize on interest spread, which will mean higher profitability.

On the other hand, alternative banking channels are faced with risks including performance risk, financial risk, and operational Risk among others. Ezeoha (2005) affirms that there has been fear of inadequate security in banking channels. Ezeoha (2005) points out that alternative delivery channels are prone to issues including Customers' reluctance to use electronic interactions for wealth management decisions, Cyber-attacks on portals, Server maintenance in order to support high traffic and unauthorized access and fraudulent transactions. These occurrences can have a negative effect on the financial performance of the banks.

1.1.4 Commercial Banks in Kenya

Commercial banks in Kenya are governed by the Companies Act (Cap 486), the Banking Act (Cap 488), the Central Bank of Kenya Act (Cap 491), and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalised in 1995 and exchange controls lifted. The Central Bank of Kenya, which falls under the Ministry of Finance, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. Central Bank of Kenya publishes information on Kenya's commercial banks and non-banking financial institutions, interest rates and other publications and guidelines. There are 43 registered banks operating in Kenya.

Banks represent a significant and influential sector of business worldwide that plays a crucial role in the Kenyan and global economy. Commercial banks are financial intermediaries that serve as financial resource mobilization points in the global economy. The role of banks in an economy is paramount because they execute monetary policy and provide means for facilitating payment for goods and services in the domestic and international trade (Lencer, 2011). They channel funds needed by business and household sectors from surplus spending to deficit spending units in the economy. A well developed efficient banking sector is an important prerequisite for saving and investment decisions needed for rapid economic growth. A well functioning banking sector provides a system by which a country's most profitable and efficient projects are systematically and continuously funded. Commercial banks are custodians of depositor's funds and operate by receiving cash deposits from the general public and loaning them out to the needy at statutorily allowed interest rates. Loans are based on the credit policy of the bank that is tightly coupled with the central bank interest rate policy.

Commercial banks have been deploying both traditional and new alternative channels for banking activities. M-PESA which is an electronic banking system that employs use of mobile phones has tremendously been adopted by all local commercial banks thus making it the highest growing network for financial transactions (Liu & Mithika, 2009). Commercial banks also started agency banking in Kenya where people with established businesses are appointed to serve as agents for bank services. For instance, cooperative bank has its services branded as "Coop kwa Jirani", Equity bank – "Equity Agents" and Kenya Commercial Banks – "KCB Mtaani" among others. Alternative banking channels is a strategy that has been

widely employed by various local commercial banks hence it is imperative to study the effects they have on their performance.

1.2 Research Problem

All commercial banks are profit oriented (Hannsens & Schultz, 2001). For that reason, alternative banking channels are taken to be one of the key ways of optimizing services and minimizing costs. Commercial banks are also keen on transforming their operations in order to provide 24-7 services. For this to be realized, alternative banking channels are viewed as the best option to provide greater differentiation from their competitors (Park & Weber, 2002). Hence, the emergence of new technologies, processes, markets and competitor banks places demand on any commercial bank to apply any skills and channels necessary to enhance their financial performance, remain competitive and achieve competitive advantage (Parasuman et al., 2001).

Current, banks alternative banking channels are faced with various challenges which brings concerns on their impact on the profitability of banks (Maungu, 2015). Maungu further notes that among the various barriers faced include lack of customer confidence, security concerns, system failures, cases of transaction errors and network failures. Further, it has been noted by EBL (2014) that despite the existence of alternative banking channels, bank halls continue to be congested. This is occurring despite banks like equity doubling over the counter cash withdrawal charges. This clearly shows that despite alternative banking channels customers continue seeking services in bank branches. Further, such trend puts in to question, the impact of alternative banking channels on the financial performance of banks given that customers still flock into banks despite existence of alternative banking channels. Joseph et al. (2003) argue that unreliable channels of distribution highly lowers customer's perception

on the quality of service offered and hence reduces the bank's credibility hence profitability. The questions in this study therefore relates to whether mobile banking , internet banking, and agency banking and other banking channels are affecting the financial performance of the banks.

Globally, Musiime and Malinga (2011) did a study on internet banking, consumer adoption and customer satisfaction. The study established that there was a significantly positive relationship between Internet banking and customer satisfaction. Locally, Okun (2012) did a study on the effect of level of deposits on financial performance of Commercial Banks in Kenya. The results indicate that there is a positive and significant relationship between Deposits Ratio and ROE. Kamau (2014) did a study on the effects of financial innovations on the financial performance of commercial banks in Kenya. The study findings established that financial innovations had great impact on the financial performance of the banks. To the best of the researcher's knowledge, no study had been done on the effect of the effects of alternative banking channels on financial performance of commercial banks. This study therefore sought to fill this knowledge gap by investigating what is the effect of alternative banking channels on financial performance of commercial banks in Kenya?

1.3 Research Objective

To establish the effect of alternative banking channels on financial performance of commercial banks in Kenya.

1.4 Value of the Study

The study would be beneficial to commercial bank managers as its focus is on alternative banking channel. The findings would give valuable insight on the effect of the banking

channels on the financial performance of banks which would guide banks in adopting, managing and expanding their alternative banking channels.

The findings of this study would be important to policy makers in government bodies as they would be guided on their policy making on banking industries. This would result to enacting of policies that regulate the alternative banking channels in the best interest of the banks and the customers.

Finally, the study would contribute to the broader realm of academic research as it would add value to academic research in the broader area of banking. Future researchers would not only use this study as a form of reference for future studies, but also suggest future research activities that can be explored.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents reviewed theories and literature from research studies carried out by other scholars. The specific areas covered here include theoretical review, determinants of financial performance, empirical review of existing literature and summary of the literature review. The literature was derived to give relevance to the research and avoid duplication of work done by other academicians.

2.2 Theoretical Review

This section presents the theoretical review with regard to the study. The study was anchored on financial intermediation theory and cost agency theory.

2.2.1 Financial Intermediation Theory

The financial intermediation theory originates from the work of Gurley and Shaw (1960). The theory is based on agency theory, transactional cost theory and informational asymmetry theory (Bert and Dick, 2003). Financial intermediation is a process which involves surplus units depositing funds with financial institutions who then lend to deficit units (Bisignano, 1992) According to this theory financial intermediaries come into existence because of failure to have complete information, high transactional costs and the regulation methods. Financial intermediation theory views intermediaries as a way of reducing informational asymmetries and transaction costs through pooling resources of customers hence resulting to

scale economies (Alexandra et al., 2009). The most important contribution of intermediaries is a steady flow of funds from surplus to deficit units.

This study adopted the financial intermediation theory since it tries to justify the reasons behind banks establishing alternative banking channels. Establishment of alternative banking channels is seen as a way that can result to long term growth, maintenance of liquidity and sustainability.

According to Scholtens and van Wensveen (2003), the role of the financial intermediary is essentially seen as that of creating specialized financial commodities. Financial intermediaries exist due to market imperfections. As such, in a 'perfect' market situation, with no transaction or information costs, financial intermediaries would not exist.

2.2.2 Agency Theory

Agency Theory was developed primarily by Jensen and Meckling (1976). Agency theory analyzes the relationships between a business and its agents. The key issues in agency theory center upon whether adequate market mechanisms exist that agents to act in ways that maximize the utility of a firms where ownership and control are separated. Under the terms of agency theory, a principal (P) passes on authority to an agent (A) to conduct transactions and make decisions on behalf of the principal in an effort to maximize P's utility preferences. Agency problems can arise if: P and A have different goals; P and A have disparate skills in evaluating A's performance; P and A possess different sets of information relevant to the managerial decisions A must make as a representative of P; or P and A have different degrees of risk aversion. At the core of agency problems is the fact that principals may not be able to

monitor agents, either perfectly or costless, as to the agent's actions or the information behind those actions.

In the commercial banking industry, ownership is becoming increasingly diversified among individual and institutional shareholders, and the dominance of individual stockholders in the industry appears, on the whole, to be decreasing. These trends may exacerbate "agency problems" in the banking industry if these problems truly exist. Agent banks are retail establishments contracted by the banks and authorized by the central banks to render services for banks. This theory points out the possibility of emergence of problems if the coordination between the banks and alternative channels is not well managed.

2.2.3 Stakeholders Management Theory

Stakeholder Management Theory was developed in the '80s in the works of Freeman (1984) and Freeman and Reed (1983). The Stakeholder management theory has been a managerial approach since its own foundation. It has been developed to give managers a broader perspective on their responsibility for enterprise's or project activities and for the related value creation processes (Rusconi, 2007). Its main goal is to help managers to find the balance between the various relationships that can impact upon the enterprise and affect it while it is trying to reach for its own goals (Freeman & Philips, 2002).

The stakeholder approach has been described as a powerful means of understanding the firm in its environment (Oakley, 2011). This approach is intended to broaden the management's vision of its roles and responsibilities beyond the profit maximization function (Mansuri & Rao, 2004) and stakeholders identified in input-output models of the firm, to also include interests and claims of non-stockholding groups. Patton (2008) elaborated that the

stakeholder model entails that all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there is no pre-set priority of one set of interests and benefits over another (Karl, 2007). Associated corporations, prospective employees, prospective customers, and the public at large, needs to be taken into consideration.

2.2.4 Stewardship Theory

Stewardship theory is an alternative view of agency theory, in which managers are assumed to act in their own self interests at the expense of shareholders (Jay & Hesterly, 2008). It specifies certain mechanisms which reduces agency loss including tie executive compensation, levels of benefits and also managers incentive schemes by rewarding them financially or offering shares that aligns financial interest of executives to motivate them for better performance. The executive manager, under this theory, far from being an opportunistic shirker, essentially wants to do a good job, to be a good steward of the corporate assets. Thus, stewardship theory holds that there is no inherent, general problem of executive motivation.

The model of man in stewardship theory is based upon the assumption that the manager will make decisions in the best interest of the organization, putting collectivist options above self-servicing options. This type of person is motivated by doing what's right for the organization, because she believes that she will ultimately benefit when the organization thrives. The steward manager maximizes the performance of the organization, working under the premise that both the steward and the principal benefit from a strong organization (Mallin, 2010).

2.3 Determinants of Financial Performance

According to Omondi, Maokomba and Musiega (2014), alternative banking channels makes it so easy to access financial services thus motivating more clients to subscribe and use of banking services. The authors suggest that the enhanced access and subscription to commercial banks can lead to higher profitability. From the consumers' perspective, alternative banking channels allow consumers easier access to financial services, lower bill-paying, and time saving in managing their finances (Hernandez and Mazzon, 2007).

2.3.1 Agency banking

The use of agents diminishes transaction costs as well as addressing the lack of inducements or capacity to institute formal branches in definite areas (Porteous, 2005). Regulation allowing agent banking enables for sufficient business enticements for both agents and financial institutions to amplify outreach by delivering financial services via a network of agents (Melzer, 2006). The use of agents offer the possibility of massive outreach to people in locations that remain underserved, especially those in hard-to-reach rural areas.

According to Ivatury and Lyman (2006), agency banking has enable bank customers to access the basic banking services, for example, cash deposit, cash withdrawal and bank balance inquiry conveniently or what would be termed as within the comfort of their neighbor-hood. The convenience of access to banking services and the extended hours that the agencies work has been the most attractive features to the customer.

According to Kiragu, Aduda and Ndwiga (2013),banking agents enable commercial banks to divert existing customers from crowded branches providing a “complementary”, often more

convenient channel. They use agents to reach an “additional” client segment or geography. Otherwise, reaching poor clients in rural areas is prohibitively expensive for banks since transaction numbers and volumes do not cover the cost of a branch. Banking agents that piggy back on existing retail infrastructure – and lower set up and running cost - play a vital role in offering many low-income people access to a range of financial services. Also, low-income clients often feel more comfortable banking at their local store than walking into a marble branch which increase the commercial banks’ revenue.

2.3.2 Mobile banking

Mobile banking is defined as a channel whereby the customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant (PDA) (Barnes & Corbitt, 2003). Mobile banking (M-banking) involves the use of a mobile phone or any other mobile device to undertake financial transactions linked to a client’s account. M-banking is one of the newest approaches to the provision of financial services through ICT, made possible by the widespread adoption of mobile phones in developing and under-developed countries. The roll out of mobile telephony has been rapid and has extended access well beyond already connected customers in these countries. The terms mobile banking refer, collectively to a set of applications that enable people to use their mobile telephones to manipulate their bank accounts, store value in an account linked to their handsets and transfer funds.

It is assumed that the mobile phone as a channel for service consumption would offer enormous potential in banking, since today a mobile phone is an integral part of customers' lives and a growing number of these devices are also equipped with internet connection (Laukkanen & Lauronen, 2005). Previous studies indicate that factors contributing to the

adoption of mobile banking are related to convenience, access to the service regardless of time and place, privacy and savings in time and effort. Furthermore, it is argued that the use of mobile banking services would increase one's self-prestige (Lee et al., 2003).

According to Ginn (2011), mobile banking provides banks viable access to outreach areas and at the same time enables them to improve customer convenience and profitability by mobilizing wealth management products. Mobile alerts and smartphone applications help investors take informed decisions and perform transactions similar to those on Internet banking. All the tools available online can be provided to smartphone users through mobile applications.

2.3.3 Customer Deposits

According to Mohd (2009) increased channels of delivery by banks lead to availing banking services to the unbanked and this in turn result to large volumes of transactions. Mohd (2009) further argues that indirect channels such as ATMs, agents, or mobile phones necessarily mean that transactions are initiated remotely. The authors however notes that the system supporting alternative banking must be resilient as well, with little or no down-time and a back-up system in place, as customers who are using such channels are likely away from nearby bank branches and would not be able to visit a branch.

Reddy (2005) affirms that the economic justification of a new alternative channel usually rests on high volumes of transactions. The author further argues that alternate channels provide convenience for the regular transactions and provide banks with higher profits with lower operational expenses and transaction cost. Ginn (2011) while researching on online banking, argues that that internet not only provides an efficient mode of transaction,

accessible anytime and anywhere, but also allows investors to use self-help features to take informed decisions. The key for banks is to determine the optimal channel mix for each customer that will maximize revenue or reduce costs without significantly reducing customer satisfaction or engagement.

A Tower Group survey² conducted on usage of different delivery channels highlights the fact that use of branches has gone down and customers increasingly prefer using alternative delivery channels hence leading to more money being moved through alternative channels. According to Ernst & Young's Global consumer banking survey report (2011) transaction volumes in the contact center channel have increased considerably in developed countries as a result of alternative channels but similar case has not been witnessed in other geographies. According to this survey, branches account for 39% of total transactions, internet banking (30%) and ATM (18%) follow in close second and third positions.

2.3.4 Operating Expenses

Omondi, Maokomba and Musiega (2014) affirm that one very significant feature of alternative banking channels is the reduced costs associated with banking. This is achieved by the reduction of staff through self-service channels since the number of staff is drastically reduced. The diminished cost impacts on the profitability of banks since it erases the avenues of expenditure and creates fresh fields of revenue. According to Mols (2000), mobile banking has advantages for the banks to maintain competition, to save costs, to enhance mass customization, marketing and communication activities, and to maintain and attract customers. It is expected that alternative banking can lead to lower cost. This is achieved by the reduction of staff through self-service channels since the number of staff is drastically

reduced. The diminished cost impacts on the profitability of banks since it erases the avenues of expenditure and creates fresh fields of revenue.

Kiragu, Aduda and Ndwiga (2013) affirm that agency banks also improves banks performance as it reduces huge savings on cost of construction of bank premises and leasing costs than when banks are using the Agency premises. It also cuts on human resource expenses. The banks do not have to employ new staff to manage the agency and the cost of training if any is to the bare minimum. It further, saves on equipment like furniture and computers. Additionally, the convenience of access to banking services and the extended hours that the banking agencies work is attractive features to the customer. This also helps increase banks' revenue will minimizing costs.

According to a 2010 TowerGroup study, the costs of handling customers' transaction vary widely by channel. This study hence suggests that, it would seem prudent to move as many customers as possible to automated or digital channels and away from branches and call centers. Banks have to evaluate the optimal mix of channels their customers use to interact with the institution and to transact their business due to the costs associated with different channels.

2.4 Empirical Review

An empirical review is when a researcher reviews the information currently available concerning the topic and the historical background of the topic. It's used to demonstrate thorough understanding of the topic in which a researcher is conducting the research. It also shows that the problem being studied has not been done before in the way proposed by the

researcher. A number of studies have been done both internationally and locally in regards to alternative banking. Some of the studies were mentioned below.

2.4.1 International Evidences

Donner and Tellez (2008) did a study on mobile banking and economic development where they sought to link adoption, impact, and use. The study established that through offering a way to lower the costs of moving money from place to place and offering a way to bring more users into contact with formal financial systems, m-banking/m-payments systems could prove to be an important innovation for the developing world. However, the true measure of that importance required multiple studies using multiple methodologies and multiple theoretical perspectives before answering the questions about adoption and impact.

Al-Jabri (2012) studied on mobile banking adoption by looking at the application of diffusion of innovation theory and established that with better mobile banking support and provision of variety of services, the more useful customers perceive mobile banking to be and to increase their level of adoption. Al-Jabri (2012) suggested, banks must seek to reduce risk perceived by their customers by offering specific guarantees protecting them and taking their complaints seriously and urgently.

Tchouassi (2012) sought to find out whether mobile phones really work to extend banking services to the unbanked using empirical Lessons from Selected Sub-Saharan Africa Countries. This study sought to discuss how mobile phones could be used to extend banking services to the unbanked, poor and vulnerable population. The study noted that poor, vulnerable and low-income households in Sub-Saharan Africa (SSA) countries often lacked access to bank accounts and faced high costs for conducting basic financial transactions. The

mobile phone presented a great opportunity for the provision of financial services to the unbanked.

Mizanur (2013) investigated on the implementation of mobile banking in Bangladesh. The specific purpose of this research was to assess the Opportunities and Challenges of mobile banking in the country. The research showed tremendous potential for mobile banking in Bangladesh and revealed some of the key barriers of progress as well.

Adetunji (2013) investigated on the adoption of mobile banking in Nigeria. The study found out that age, educational qualification, relative advantage, complexity, compatibility, observability and trialability are important determinants of the adoption of mobile banking.

Siddik, Gang, Yanjuan and Sajal (2014) did a study on the financial inclusion through mobile banking in Bangladesh. The study found out that Perceived financial cost, Perceived risk and Subjective norm are the most influencing factors that affect people's behavioral intention to adopt (or continue to use) mobile banking.

2.4.2 Local Evidences

Cheruiyot (2010) did a study on impact of internet banking on financial performance of commercial banks in Kenya. He measured the internet variable using banking intensity as derived from a web feature data collected from bank websites. He observed from the multiple regression results that the profitability and offering of Internet banking does have a small significant association.

Kigen (2010) analyzed the impact of mobile banking on transaction costs of microfinance institutions by looking at mobile banking adoption and the behavior of transaction costs. The

study established that mobile banking had reduced transaction costs considerably though they were not directly felt by the banks because of the then small mobile banking customer base.

Kirimi (2011) studied the extent of implementation of agency banking among commercial banks in Kenya. The study established that there is difficulty in enforcing appropriate oversight by the agent and customer interaction was inconsistent with overall banking regulatory framework. The findings revealed need for regular training of agents on changes in operational processes and policies in order to eradicate occurrence of error and mistakes that obstruct penetration of agency banking in Kenya thus enhance banks' financial performance.

Okun (2012) did a study on the effect of level of deposits on financial performance of Commercial Banks in Kenya. The study established that a positive and significant relationship between Deposits Ratio and ROE and Deposits Ratio and ROA. The study recommended that commercial banks in Kenya should invest in attracting more low cost deposits by adopting alternative banking channels innovation such as Mpesa and agency banking in order to attract deposits at the lowest cost possible and to reduce costs associated with other forms of deposit mobilization.

Kithuka (2012) sought to establish the factors influencing growth of agency banking in Kenya. The study sampled 100 Equity Bank agencies doing bank focused, bank led and non-bank led transactions in Kwale County. The study established that convenience of the money transfer technology plus its accessibility, cost, support and security influence the use of agency banking.

Waithanji (2012) sought to establish effect of agent banking as a financial deepening initiative in Kenya. Descriptive statistics were used for the analysis. The findings revealed lack of connection between agent banking and financial deepening. Waithanji noted that the relationship could not be conclusively determined due to the low number of banks that have implemented it and impact may become clearer once all banks adopt agency banking.

Munyoki (2013) did a study on the effect of online banking on financial performance of commercial banks in Kenya. The study found out that generally, online banking has a weak positive and significant influence on the financial performance of commercial banks in Kenya. This is because online bank cut banks costs, increase commission income, reduce staffing levels and make banking more convenient for customers.

Omondi, Maokomba and Musiega (2014) investigated on the effects of alternative banking channels on profitability Co-operative bank of Kenya. The study found out that banks should try to make sure that ABCs' services are designed in the way that customers can easily use them; they are faster which will lead to high subscription rate for previously unbanked segment; banks must also use modern technology in their ABCs services as these will make them user friendly, faster and convenient; Customers should subscribe to ABCs services since they will save them time, money as well as enable them to perform several transactions at their comfort anywhere and at any time.

2.5 Summary of the Literature Review

This chapter presented the theories which educate on alternative banking and commercial banks financial performance relationship. Financial intermediation theory offers powerful and intuitively pleasing predictions on the important contribution of intermediaries in

ensuring a steady flow of funds from surplus to deficit units. Agency theory on the other hand is centered upon whether adequate market mechanisms exist to enable agents to act in ways that maximize the utility of a firm where ownership and control are separated. All these theories are under the umbrella of alternative banking and financial performance of banks.

Several studies were reviewed which studied on performance such as Al-Jabri, 2012; Tchouassi, 2012; Donner and Tellez, 2008; DeYoung, 2005; Omondi, Maokomba and Musiega; 2014; Kithuka, 2012, Okun, 2012 and Munyoki, 2013. However, these studies did not investigate the effect of alternative banking channels on financial performance of commercial banks in Kenya. Although these studies provided important insight into banking channels, few research works examined the alternative banking channels. Additionally, some studies focused solely on agency banking. Hence this study sought to fill this research gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presented the research methodology to be used by the study. The sections in this chapter include the research design, target population of the study, the sample data collection and data analysis and presentation techniques.

3.2 Research Design

This study adopted descriptive research design. According to Kothari (2004), descriptive study is concerned with finding out the what, where and how of a phenomenon. Descriptive research design was considered convenient since it did not involve any manipulation of the variable under study but enabled the researcher to establish the current status of the phenomena. Hence, descriptive research design enabled the researchers to examine the effect of alternative banking channels on financial performance of commercial banks in Kenya.

3.3 Target Population

Target population is the population to which a researcher wants to generalize the results of the study (Mugenda & Mugenda, 2003). The target population was commercial banks in Kenya. As at 7th July 2015, there were 43 licensed commercial banks in Kenya (Appendix I).

3.4 Data Collection

The secondary data on financial performance and alternative banking channels were from the annual financial reports. Information and data was collected from the official websites of the banks. The study was limited to a time scope of 5 year starting 2010 to the year 2014. The

time scope was considered adequate for establishing the trend in the alternative banking channels on financial performance of commercial banks in Kenya. Computations were done annually.

3.5 Data Analysis

In this study, quantitative data gathered from the banks' annual reports was analyzed using descriptive and inferential statistics. Statistical package for Social Sciences (SPSS V. 21.0) was used to aid in data analysis. The research findings were presented using tables and figures.

3.5.1 Analytical Model

Analytical model is the study technique that is used to determine the relationship between the research variables. This model is based on Kigen (2010) who analyzed the impact of mobile banking on transaction costs of microfinance institutions by looking at mobile banking adoption and the behavior of transaction costs. The following regression model was used to establish the relationship between the study 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 of Commercial Banks as measured by Return on Assets
(ROA)

X₁ = Agency banking (measured by ratio of the number banking agents in the current year [Y_t] to number of banking agents in the previous year [Y_{t-1}])

X₂ = Mobile banking (measured by the ratio of the number of mobile banking users in the current year [Y_t] to number of mobile banking users in the previous year [Y_{t-1}])

X_3 = Customer Deposits (percentage change in deposits per year).

X_4 = Operating Expenses (measured using cost to income ratio)

β_0 = constant of the regression

$\beta_1, \beta_2, \beta_3$ and β_4 = the coefficients of independent variables

ε = Residual (error) term

3.5.2 Test of Significance

The significance in this study was tested at 95% confidence level and 5% significant levels.

If the significance value obtained by the study was less than the critical value (α) set i.e.

0.05, then the conclusion was that the model was significant in explaining the relationship.

Else the model was regarded as insignificant.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter is a detailed presentation of the results of the study. Secondary data was analyzed and presented in form of tables and charts in line with the objective of the study which was to establish the effect of alternative banking channels on financial performance of commercial banks in Kenya.

4.2 Descriptive Statistics

The summary of descriptive statistics for financial performance of commercial banks, agency banking, mobile banking, customer deposits and operating expenses are as tabulated in table 4.1 below.

Table 4.1: Summary of Descriptive Statistics of the Study Variables

	Mean	Std.	Skewness		Kurtosis	
	Statistic	Deviation	Statistic	Std. Error	Statistic	Std. Error
Financial performance	3.8948	.22737	.170	.361	-1.264	.709
Agency banking	1.7376	.27997	1.432	.361	.141	.709
Mobile banking	19.5170	5.94015	-.681	.361	-.870	.709
Customer Deposits	1.5119	.11802	-.249	.361	-1.453	.709
Operating Expenses	.5397	.02217	.378	.361	-.907	.709

Source: Research Findings

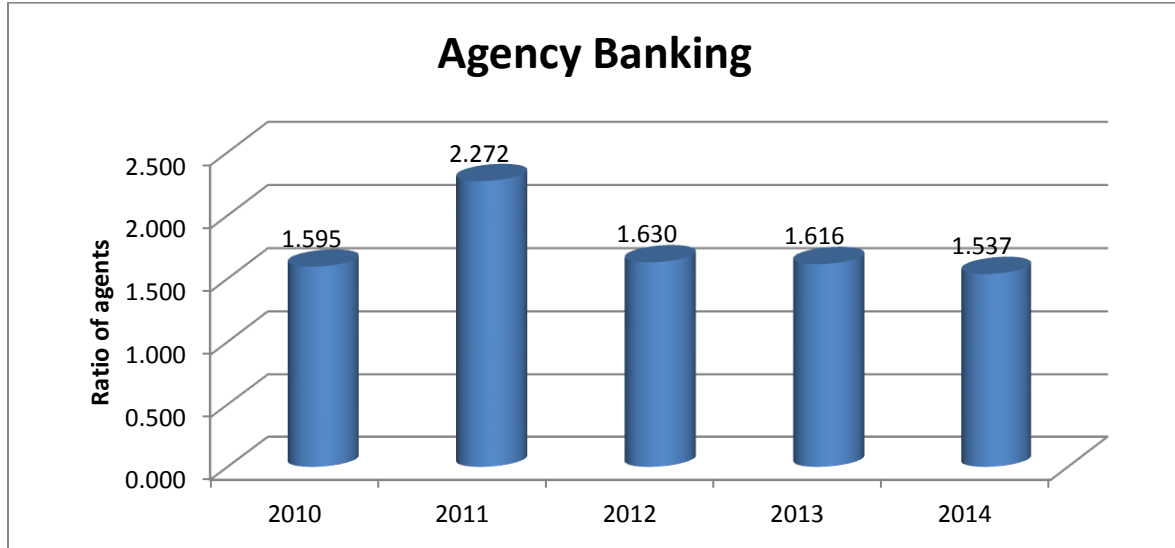
From the findings, the average financial performance of commercial banks over the study period was 3.8948 while agency banking was 1.7376. More so, mobile banking had an average of 19.5170 while customer deposits and operating expenses averaged at 1.5119 and 0.5397 respectively.

Further, the study sought to establish symmetry and normality of the study variables using Skewness and Kurtosis. From the findings, financial performance, agency banking and operating expenses were positively skewed as shown by values of 0.170, 1.432 and 0.378 respectively. Furthermore, mobile banking and customer deposits were negatively skewed as shown by mean scores of -0.681 and -0.249 respectively. Additionally, skewness values fall between the range of +2 and -2 implying that the variables were symmetrical. Kurtosis results revealed that all the study variables had kurtosis values falling between the range of +2 and -2. According to George and Mallery (2010), values for asymmetry and kurtosis between -3 and +3 are considered acceptable in order to prove normal univariate distribution. Based on this assertion, a conclusion was made that the study variables were of acceptable skewness and that they were normal distributed.

4.2.1 Agency Banking

The study sought to establish the trend in agency banking over the study period measured by ratio of the number banking agents in a particular year to number of banking agents in the previous year. The findings are presented in appendix II and figure 4.1.

Figure 4.1: Agency Banking



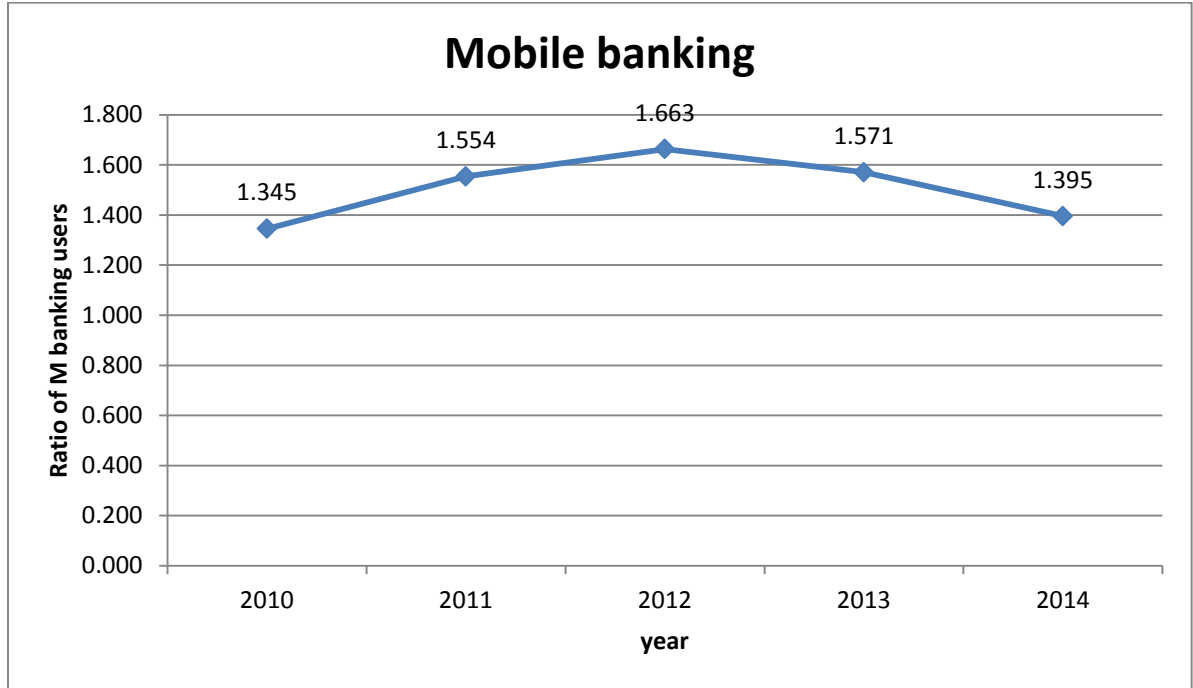
Source: Research Findings

According to the research findings, the ratio of the number of bank agents in the year 2010 was 1.595. This ratio increased sharply to 2.272 in the year 2011. This is an indication that the highest rate of increase in agency banking was recorded in 2011. Further the ratio of agency banking decreased in the year 2012 to 1.630 before increasing to 1.616 in the year 2013. As at the final year of the study, the agency banking ratio was 1.537. The findings imply that the rate of increase in agency banking varied across the study period with the year 2011 witnessing the highest growth rate. Interestingly, all the ratio values were greater than one which is a clear indication that agency banking was increasing over the study period.

4.2.2 Mobile Banking

The study sought to find out the changes in mobile banking over the study period. This was measured by the ratio of the number of mobile banking users in the current year to number of mobile banking users in the previous year. The findings are as shown in appendix II and figure 4.2.

Figure 4.2: Mobile Banking



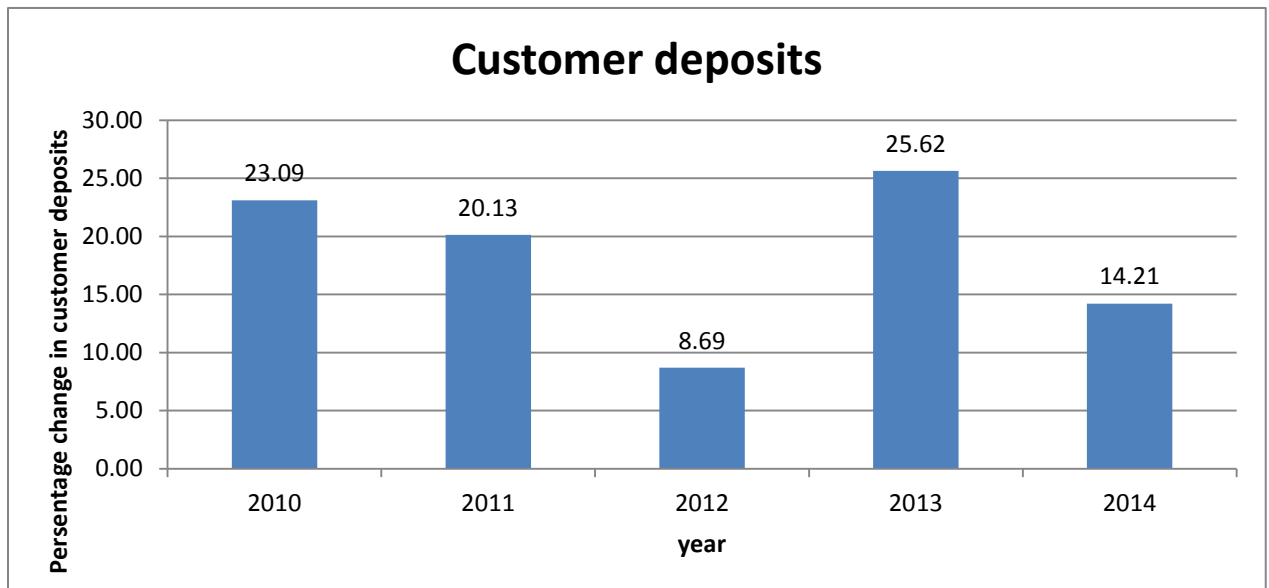
Source: Research Findings

According to the findings, the ratio of mobile banking users as at the year 2010 was 1.345 this ratio increased to 1.554 in the year 2011 and further to 1.663 as at the year 2012. This increase implies that the rate at which mobile banking usage across banks increased was higher as compared to the previous years. However, the year 2013 recorded a slight decline in mobile banking ratio to 1.571 which further declined to 1.395 in 2014. These findings imply that the rate at which mobile banking was used increased between 2010 and 2012 but declined slightly over the following years. Interestingly, the ratios obtained were more than one which is an implication that the number of mobile banking users increased continuously over the study period.

4.2.3 Customer Deposits

The study sought to establish the trend in the customer deposits across the commercial banks in Kenya over the study period. Customer deposits were measured as a change in deposits per year. The findings are presented in appendix III and figure 4.3 below.

Figure 4.3: Customer Deposits



Source: Research Findings

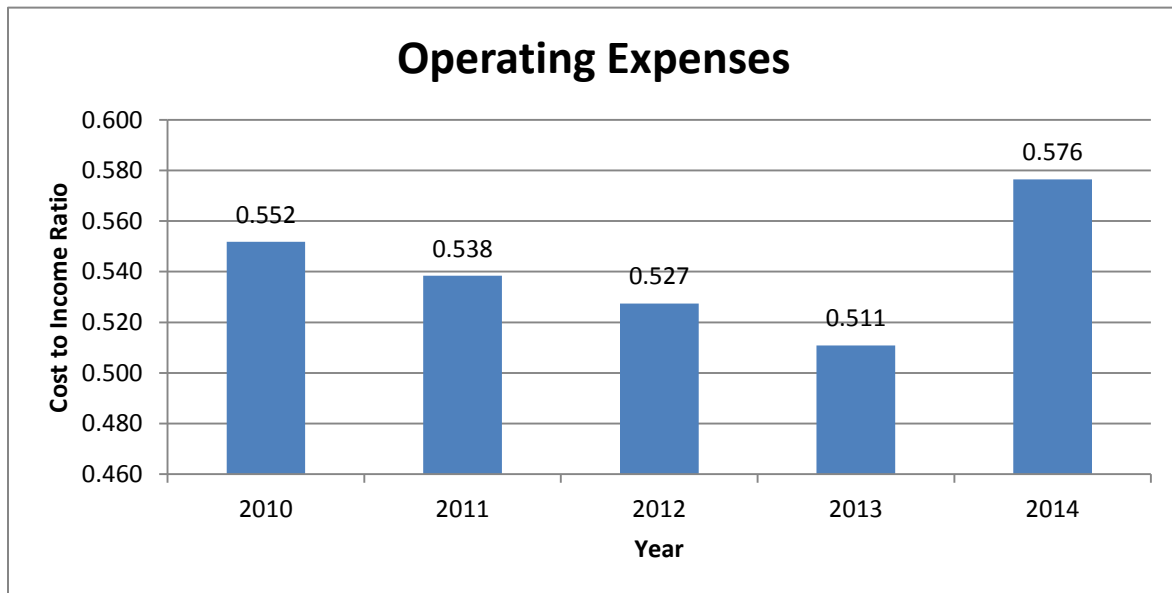
As shown above, all the changes in customer deposits were positive which imply that there was increase in customer deposits over the study period despite the rate fluctuating with time. Of important concern, the change in customer deposit as at the year 2010 in relation to the previous year 2009 was 23.09%. This change declined slightly to 20.13% in the year 2011 and further to 8.69% in 2012. However, customer deposits increased sharply in the year 2013 leading to a change in customer deposits by 25.62%. The change in customer deposits then declined to 14.21% in the year 2014. The findings imply that there was general variation in the rate at which customer deposits increased from year to another across the study period.

Worth noting, failure to have negative changes in customer deposits implies that customer deposits had been increasing, though at varying rates, which could be attributed to increased adoption of alternative banking channels.

4.2.4 Operating Expenses

This study focused on establishing the trend of the operating expenses of commercial banks which was expressed as cost to income ratio. The results are as shown in appendix III and figure 4.4 below.

Figure 4.4: Operating Expenses



Source: Research Findings

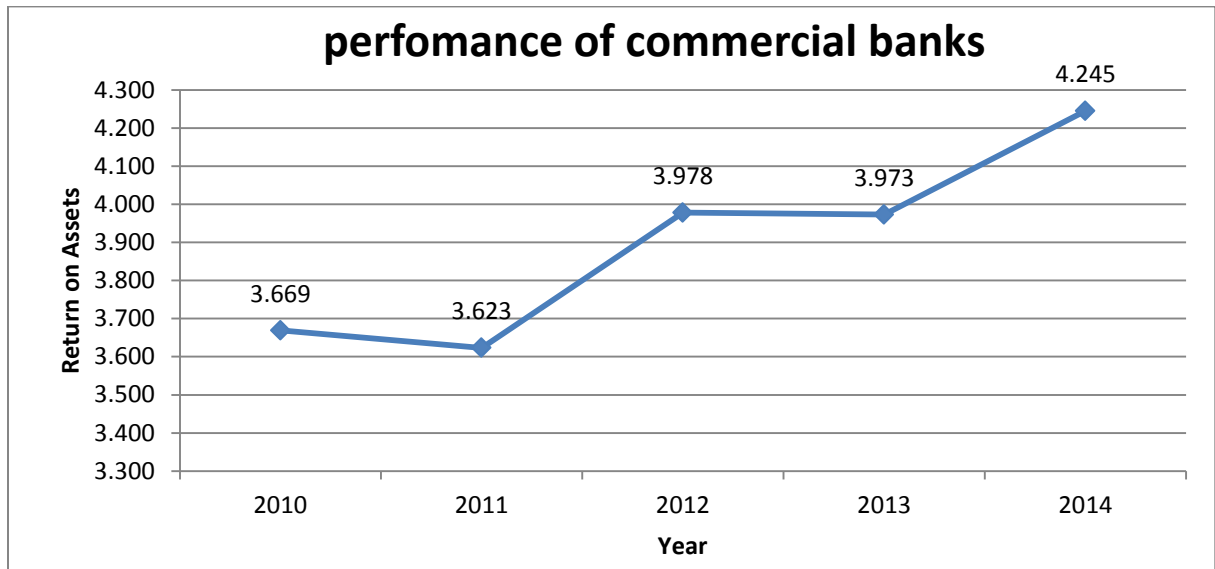
According to the findings, the operating expenses of banks decreased across the study period despite increase in year 2014. As at the year 2010, operating expenses were 0.55 units which decreased to 0.54 in the year 2011 and further to 0.53 in the year 2012. As at the year 2013, operating expenses were at a low of 0.51. This is the lowest operating expenses recorded during the study period. However, the operating expenses increased in the year 2014 to a

high of 0.58. The trend obtained shows that adoption of alternative banking channels enabled banks to lower their service delivery costs and increasing their operating income.

4.2.5 Financial Performance

The study sought to establish the trend in the financial performance of commercial banks in Kenya measured by Return on Assets (ROA). The findings are as shown in appendix III and figure 4.5 below.

Figure 4. 5: Financial Performance of commercial banks



Source: Research Findings

As shown in figure 4.5 above, return on assets of the banks were 3.699 as at the year 2010. ROA declined slightly to 3.623 in the year 2011 which was the lowest ROA realized over the study period. The trend reversed in the following year whereby ROA increased sharply to 3.978 before decreasing slightly to 3.973 in the year 2013. As at the final year of the study, return on assets had increased to a high of 4.245. These results imply that financial performance of banks had generally increased over the study period. Hence, it can be

construed to imply that banking alternative banking channels had been promoting financial performance of commercial banks.

4.3 Inferential Statistics

In this study, quantitative data collected was analysed using descriptive and inferential statistics. This section presents the inferential statistics whereby correlation analysis, regression analysis and Analysis of Variance (ANOVA) are presented.

4.3.1 Correlation Analysis

Karl Pearson’s correlation analysis was run at 5% significance level aimed at establishing how operating expenses, agency banking, mobile banking and customer deposits (independent variables) were correlated with financial performance of commercial banks.

The correlation matrix is presented in table 4.2 below.

Table 4.2: Correlation Matrix

		Financial performance	Agency banking	Mobile banking	Customer Deposits	Operating Expenses
Financial performance	Pearson Correlation	1				
	Sig. (2-tailed)					
Agency banking	Pearson Correlation	.665**	1			
	Sig. (2-tailed)	.000				
Mobile banking	Pearson Correlation	.395**	.082	1		
	Sig. (2-tailed)	.009	.600			
Customer Deposits	Pearson Correlation	.023*	.266	-.115	1	
	Sig. (2-tailed)	.041	.084	.465		
Operating Expenses	Pearson Correlation	.255*	-.141	-.395**	-.760**	1
	Sig. (2-tailed)	.019	.367	.009	.000	

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

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

Source: Research Findings

The results showed that positive correlations existed between alternative banking channels and financial performance of commercial banks. However, the strength of the correlations differed with each dimension. For correlation between agency banking and financial performance, the Pearson correlation value was 0.665. This indicated a strong positive relationship between agency banking and financial performance of commercial banks. However, the Pearson correlations for mobile banking, operating expenses and customer deposits were lower at 0.395, 0.255 and 0.023 respectively. Further, the significant values (P-values) obtained corresponding to the obtained Pearson correlation coefficients were less than 0.05, the significance level of the study. This is an implication that the correlations between alternative banking channels and financial performance of commercial banks were statistically significant. Hence it can be deduced that operating expenses, agency banking, mobile banking and customer deposits reliably predicted financial performance of commercial banks.

4.3.2 Regression Analysis

In this study, regression analysis was done aimed at establishing the contribution of the variable to the regression equation. Firstly, the study aimed at establishing the variation in financial performance of commercial banks in Kenya explained by the alternative banking channels. This was achieved through the use of coefficient of multiple determination (R^2). R^2 is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. The findings were presented in table 4.3.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857 ^a	.734	.706	.12336

a. Predictors: (Constant), Operating Expenses , Agency banking , Mobile banking , Customer Deposits

Source: Research Findings

According to the table above, a coefficient of determination (R^2) of 0.734 was obtained implying that 73.4% of the variations in financial performance of commercial banks in Kenya were explained jointly by operating expenses, agency banking, mobile banking and customer deposits. Further, the study sought to establish the coefficients of the regression model and the findings presented in table 4.4.

Table 4.4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-3.042	1.680		-1.810	.078
1 Agency banking	.651	.074	.802	8.796	.000
Mobile banking	.016	.005	.149	3.20	.028
Customer Deposits	1.852	.372	.962	4.978	.000
Operating Expenses	9.553	2.072	.932	4.611	.000

a. Dependent Variable: Financial performance

Source: Research Findings

From the coefficients table, the regression model obtained was;

$$Y = -3.042 + 0.651X_1 + 0.016X_2 + 1.852X_3 + 9.553X_4$$

The regression model implied that financial performance of commercial banks would be - 3.042 units holding other factors constant. Further, a unit change in agency banking holding other factors constant would change financial performance of commercial banks by 0.651 units; a unit change in mobile banking holding the other factors constant would change

financial performance of commercial banks by 0.016 units. A unit change in customer deposits holding the other factors constant would change financial performance of commercial banks by 1.852 units while a unit change in operating expenses holding the other factors constant would change financial performance of commercial banks by 9.553 units. The study also found out that at 5% level of significance, all the coefficients of the independent variables were significant since their corresponding asymptotic significances were less than significance level of the study ($\alpha=0.05$).

4.3.3 Analysis of Variance

The study further sought to establish the significance of the model using Analysis of Variance Technique (ANOVA). The findings are presented in table 4.5 below.

Table 4.5: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	1.593	4	.398	26.168	.000 ^b
	Residual	.578	38	.015		
	Total	2.171	42			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), Operating Expenses , Agency banking , Mobile banking , Customer Deposits

Source: Research Findings

From the ANOVA table, the regression model predicting the relationship between alternative banking channels and performance of commercial banks was significant as the asymptotic significance generated was 0.000 which was less than $\alpha=0.05$, the significance level of the study. Also, the F calculated at 5% level of significance was 26.168 which was greater than $F_{(4,38, 5\%)} \text{ critical} = 2.626$ which implies that the model was significant.

4.4 Interpretation of the Findings

The research findings indicated that the Pearson correlations coefficients between operating expenses, agency banking, mobile banking and customer deposits and financial performance of commercial banks were 0.665, 0.395, 0.023 and 0.255 respectively. These findings imply that there exist positive correlations between alternative banking channels and financial performance of banks. Further, the findings imply that agency banking has the strongest correlation with financial performance of banks. Further, the significant values (P- values) obtained corresponding to the obtained Pearson correlation coefficients were less than 0.05, the significance level of the study. This is an implication that correlations between alternative banking channels and financial performance of commercial banks are statistically significant.

According to the study findings, the variation in the financial performance of commercial banks explained by agency banking, mobile banking, customer deposits and operating expenses was 73.4%. This is according to the obtained coefficient of determination of 0.734. The findings agency banking, mobile banking, customer deposits and operating expenses explain almost three quarters (73.4%) of the variation in financial performance of banks. However, there are other factors that explain the remaining 26.6% of the variation in financial performance of banks. In this study, constant coefficient of the model of -3.042 was obtained. This implies that holding alternative banking channels constant, the performance of commercial banks would be negative. Hence, the findings imply that alternative banking channels enhances financial performance of banks to a great extent.

Worth noting, the coefficient of agency banking was 0.651. This implies that more investment by banks into agency banking results to increased Return on assets. More so, the coefficients of mobile banking and customer deposits were 0.016 and 1.852 respectively.

This is an indication that mobile banking and customer deposits enhances the financial performance of banks whereby a unit increase in mobile banking increases financial performance of banks by 0.016 units while a unit increase in customer deposits increases financial performance of banks by 1.852. The study established that there had been decline in cost to income ratio over the study period. This implies that the operating expenses had been reducing over the study period while operating expenses had been increasing. The findings from ANOVA revealed that the model was significant. This implies that alternative banking channels reliably predict financial performance of commercial banks.

The findings agree with Mohd (2009) who argue that increased channels of delivery by banks lead to availing banking services to the unbanked and this in turn result to large volumes of transactions. Reddy (2005), too, echoes these findings by pointing out that economic justification of a new alternative channel usually rests on high volumes of transactions. The findings are further, in agreement with Kiragu, Aduda and Ndwiga (2013) who affirm that agency banks improves banks performance as it reduces huge savings on cost of construction of bank premises and leasing costs than when banks are using the agency premises.

The findings concur with Porteous (2005) who argues that the use of agents diminishes transaction costs. Same sentiments are raised by Reddy (2005). Omondi, Maokomba and Musiega (2014), too, concur with the findings by arguing that one very significant feature of alternative banking channels is the reduced costs associated with banking. Same views are raised by Mols (2000) who argues that mobile banking has advantages for the banks to maintain competition, to save costs, to enhance mass customization, marketing and communication activities, and to maintain and attract customers. Tchouassi (2012) argue that

mobile phone present a great opportunity for the provision of financial services to the unbanked.

The study findings are in line with Ginn (2011) who argues that mobile banking provides banks viable access to outreach areas and at the same time enables them to improve customer convenience and profitability by mobilizing wealth management products. The findings are further supported by Ernst & Young's Global consumer banking survey report (2011) which established that transaction volumes in the contact center channel have increased considerably in developed countries as a result of alternative channels. Okun (2012) revealed that a positive and significant relationship exists between Deposits Ratio and ROE and Deposits Ratio and ROA.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study summary, conclusions and recommendations based on the study findings. The objective of this study was to investigate the effect of alternative banking channels on financial performance of commercial banks in Kenya.

5.2 Summary

The study found out that the rate of increase in agency banking varied across the study period with 2011 witnessing the highest growth rate. Further, the obtained ratios were greater than one implying that agency banking was increasing over the study period. The study established that the ratio of the number of bank agents in the year 2010 was 1.595 which increased sharply to 2.272 in the year 2011 before decreasing in the year 2012 to 1.630. The ratios for the year 2013 and 2014 were 1.616 and 1.537 respectively. Regarding mobile banking, a ratio of 1.345 was recorded in 2010 which increased to 1.554 in the year 2011 and further to 1.663 as at the year 2012. The year 2013 and 2014 recorded ratios of 1.571 and 1.395 respectively.

Pertaining customer deposits, the study revealed that customer deposits had been increasing over the study period, but at varying rates. The change in customer deposit at the year 2010 in relation to the previous year 2009 was 23.09%. This change declined slightly to 20.13% in the year 2011 and further to 8.69% in 2012. However, customer deposits increased sharply in the year 2013 leading to a change in customer deposits by 25.62%. The change in customer deposits then declined to 14.21% in the year 2014. On operating expenses, the study

established that they decreased across the study period despite increase in year 2014. As at the year 2010, operating expenses were 0.55 units which decreased to 0.51 by the year 2013. Operating expenses however increased in the year 2014 to a high of 0.58. With regard to ROA, the study established that financial performance of banks had generally increased over the study period. Return on assets of the banks were 3.699 as at the year 2010 which increased to 3.978 in 2012 before decreasing slightly to 3.973 in the year 2013. As at the year 2014, ROA was 4.245.

The study established that 73.4% of the variation in financial performance of commercial banks in Kenya was explained jointly by operating expenses, agency banking, mobile banking and customer deposits. This was based on obtained coefficient of determination (R^2) of 0.734. More so, the regression model predicting the relationship between alternative banking channels and performance of commercial banks was significant as the asymptotic significance generated was 0.000 which was less than $\alpha=0.05$, the significance level of the study. Finally the study established that agency banking, mobile banking, customer deposits and operating expenses were positively related to financial performance of commercial banks based on obtained regression coefficients of 0.651, 0.016, 1.852 and 9.553 respectively.

5.3 Conclusion

The study concludes that agency banking has a positive effect on the financial performance of commercial banks whereby it enhances the financial performance of commercial banks. The rate at which agency banking is being adopted by banks has been increasing since 2010. However, the rate at which agency banking is expanding varies from year to year.

Mobile banking, too, enhances financial performance of commercial banks in Kenya. Since 2010, there has been growth of mobile banking. Mobile banking leads to increased Return on Assets being realized by commercial banks.

Decline in operating expenses have a positive implication on the financial performance of banks. Reduction in operating expense of the commercial banks leads to more increase in operating income of the banks and hence increased operational efficiency. There has been decline in the operating costs of commercial banks in Kenya over the study period.

Finally, customer deposits have a positive effect on the financial performance of commercial banks in Kenya. Increase in the rates at which customers make deposits increases the financial performance of commercial banks while decrease in the rate at which customers make deposits with banks affects the financial performance of banks negatively. Customer deposits have been increasing over the study since 2010, though at varying rates. Such increase is as a result of alternative banking. Also, the financial performance of banks increases as a result of utilizing alternative banking channels.

5.4 Recommendations for Policy

The study found out that alternative banking channels have a positive effect on the financial performance of commercial banks. Based on this finding, the researcher recommends to the management of commercial banks to adopt more alternative banking channels as well as exploiting more innovation that enhance alternative banking.

The study established that operating expenses increased in the year 2014 contrary to the other years. Given that the study established that operating expenses have an implication on the

financial performance of banks, the researcher recommends to the banks management to investigate the causes of this increase and put into place best practice to reverse the situation.

The study established that agency banking has a positive impact on the performance of commercial banks. Based on this finding, it is recommended that bank managers need to ensure that there are bank agents in areas that are not yet covered. More so, they need to ensure that the agents are active.

The study also, established that mobile banking enhances the financial performance of banks. In view of this, it is recommended that bank management need to establish the level of awareness and conversance of customers with mobile banking. More so, they need to ensure that customer awareness on mobile banking is promoted.

5.5 Limitations of the Study

Despite various banking having adopted alternative banking channels, they lacked records of alternative banking channels of some years. Rather, the banks only acknowledged the presence of alternative banking channels in their financial statements.

The study also faced limitation whereby banks launched various banking channels differed across the banks. Hence this brought about some variation.

Data used in the study was yearly because of the time constrained in mining the daily data obtained. The result could differ probably if quarterly data were used.

In addition, some international banks had annual reported generated based on all the regions they cover other. Hence it was tedious extracting data for Kenyan operations only.

5.6 Recommendations for Further Studies

The study revealed that 73.4% of the variations in financial performance of commercial banks were explained jointly by the independent variables under study. The subject matter of this project still attracts considerable intellectual effort for further studies to determine the factors explaining the remaining 26.6% variation in financial performance of commercial banks.

Further, the study revealed that operating expenses increased in the year 2014 contrary the other years. Hence, the causes of such increase in operating expenses need to be investigated. This would shed led and guide bank management in making reliable decisions that help mitigate the tendency of operating expense increase.

The study also established that the rate at which mobile banking was used increased between 2010 and 2012 but the rate of usage declined slightly over the following years. From this revelation, it is necessary that further research to be done investigating the cause of such variation as such information would be informative to bank management and policy makers in understanding the factors that cause variation in the usage of mobile banking.

In addition, further studies need to be done on the perception of customers on the alternative banking channels adopted by commercial banks. This would be of importance in enhancing the aligning alternative banking channels with expectations of the customers.

REFERENCES

- Adetunji, O. (2013). Going cashless: adoption of mobile banking in Nigeria. *Arabian Journal of Business and Management Review*, 1(2), 9-17.
- Alexandru, C., Genu, G., & Romanescu, M. L. (2009). The Assessment of Banking Performances Indicators of Performance in Bank Area. MPRA Paper No. 11600.
- Banking on Multichannel, McKinsey Report (2010).
- Bert, S., & Dick, V. W. (2003). The Theory of Financial Intermediation: An Essay on what it does (not) explain. *Journal of the European Money and Finance Forum*, 3, 11- 31.
- Chebii, M. (2013). Kenya Commercial Bank and SME banking alternative channels. Retrieved from <http://smefinanceforum.org/post/kenya-commercial-bank-and-sme-banking-alternative-channels-by-milkah-chebii-from-kcb>.
- Christopher, G. C., Mike, L. Visit and Amy, W. A (2005). Logit Analysis of Electronic Banking in New Zealand. *International Journal of Bank Market*, 24, 360- 383.
- EBL. (2014). Financial results half year 2014. Retrieved from <http://equitybankgroup.com/index.php/investorrelations/financial-results>.
- Ernst & Young's Global consumer banking survey report. (2011).
- Ezeoha, E. E. (2005). Regulating Internet Banking in Nigeria: Problems and Challenges. *Part1 Journal of Internet Banking and Commerce*, 11(1), 23-54.
- FANERA LTD (2012). Alternative Delivery Channels in Banking- A new Direction. Retrieved from <http://www.slideshare.net/chrs17sim/alternative-delivery-channels-in-banking>.
- Galor, O., & Zeira, J. (2000). Income Distribution and Macroeconomics. *Review of Economic Studies*, 60, 35- 52.

- Ginn, M. A. (2011). Role of Alternate Channels in Banking and Wealth Management. Retrieved from <http://www.infosys.com/finacle/solutions/thought-papers/Documents/role-alternate-channels.pdf>.
- Greenwood, J., & Jovanovic, B. (1990). Financial development, growth, and the distribution of income. *Journal of Political Economy*, 98 (5), 1076–1107
- Gurley, J., & Shaw, E. (1960). Money in a Theory of Finance. Washington, DC: Brookings Institution
- Hannsens, D. M., & Schultz, R. L. (2001). Market Response Models: Econometric and Time Series Analysis. Boston, USA: Kluwer Academic Publishers.
- Howcroft, J.B. (1993). Branch Networks and Alternative Distribution Channels: Threats and Opportunities. *International Journal of Bank Marketing*, 11(6), 26 – 31.
- Ivatury, G., & Lyman, T. (2006). Use of Agents in Branchless Banking for the Poor: Rewards, Risks, and Regulation. Washington D.C: CGAP Focus Note No. 38.
- Jay, B. B., & Hesterly, W. S. (2008). Strategic Management and Competitive Advantages. Pearson Prentice Hall. p. 273.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behavior, agency costs, and ownership structure. *J. Financ. Econ.*, 3, 305-60.
- Joseph, M., McClure, C., & Joseph, B. (2003). Service Quality in Banking Sector: The Impact of Technology on Service Delivery. *International Journal of Bank Marketing*, 17 (4), 182-191.
- Kaleem, A., & Ahmad, S. (2008). Bankers perceptions of electronic banking in Pakistan, Retrieved from <http://www.arraydev.com/commerce/jjbc>.
- Kamau, M. J. (2014). Effects of Financial Innovations on the Financial Performance of Commercial Banks in Kenya. *International Journal of Humanities and Social Science*, 4(7).

- Kimball, R., & Gregor, W. (1995). How distribution is transforming retail banking: Changes leading banks are making. *Journal of Retail Banking Services*, 17 (3), 1–9.
- King, T. B., Nuxoll, D. A., & Yeager, T. J. (2006). Are the Causes of Bank Distress Changing? Can Researchers Keep Up? *Federal Reserve Bank of St. Louis Review*, 88, 57–80.
- Kiragu P, Aduda, J. O., & Ndwiga, J. M. (2013). The Relationship between Agency Banking and Financial Performance of Commercial Banks in Kenya. *Journal of Finance and Investment Analysis*, 2(4), 97-117.
- Kirimi, S. G. (2011). The Extent of Implementation of Agency Banking Among Commercial Banks in Kenya. MBA Project, University of Nairobi.
- Kithuka, B.K. (2012). Factors influencing growth of agency banking in Kenya: the case of Equity bank, Kwalecounty, Kenya. MA Thesis, University of Nairobi
- Kumbhar V. M. (2009). Alternative Banking: A Modern Practice in India, Professional Banker. India: ICFAI University press.
- Liu, A.T., & Mithika, M. K. (2009). Mobile Banking – The Key to Building Credit History for the Poor? Kenya Case study: Linking Mobile Banking and Mobile Payment Platforms to Credit Bureaus, (USAID) United States Agency for International Development. Retrieved from <http://www.microfinancegateway.org/gm/document-1.9.37062/49.pdf>.
- Mahalaxmi, K. (2013). Alternate Banking Channels for Customer Convenience. *International Journal of Scientific Research*, 2 (2), 2277 – 8179.
- Maungu, D. O. (2015). An investigation of the influence of alternative financial delivery channels on the performance of commercial banks in Kenya. Unpublished MBA thesis, Kenyatta University.

- McCaffrey, M., & Matibe, E. (2014). The Status of Agents in Kenya: Proliferation, Dominance, Evolution & Impact. Retrieved from <http://www.helix-institute.com/blog/status-agents-kenya-proliferation-dominance-evolution-impact>.
- Mizanur R. (2013). Implementation of Mobile Banking in Bangladesh: Opportunities and Challenges. *Journal of Electronics and Communication Engineering*, 7(5), 53-58.
- Mohd, A. P. (2009). Financial Markets and Intermediaries, Kalyani Publishers, New Delhi.
- Mugenda, O. M., & Mugenda, A. G. (2003). Research Methods; Quantitative & Qualitative approaches. Nairobi: Acts Press.
- Munyoki T. N. (2013). Effect of online banking on financial performance of commercial banks in Kenya. MBA Project, University of Nairobi.
- Musiime, A., & Malinga, R. (2011). Internet banking, consumer adoption and customer satisfaction. *African Journal of Marketing Management*, 3(10), 261-269
- Mwangi, J. (2007). Equity Bank: Alternate Delivery Channels. Retrieved from <http://siteresources.worldbank.org/FSLP/Resources/Equity-NextGenerationConference.ppt>
- Ndirangu, D. K. (2013). The effect of agency banking on financial performance of commercial banks in Kenya. Unpublished MBA thesis, University of Nairobi.
- Okun, D. M. (2012). The effect of level of deposits on financial performance of Commercial Banks in Kenya. Unpublished MBA thesis, University of Nairobi.
- Omondi O. M., Maokomba, C., Musiega, D. (2014). The effects of alternative banking channels on profitability of commercial banks- case of the Co-operative bank of Kenya. *The International Journal of Engineering and Science (IJES)*, 3 (3), 29-34.
- Parasuraman, A., Zeithaml, V., & Malhotra, A. (2001). E-S-QUAL: A Multiple-Item Scale for Assessing Electronic Service quality. *Journal of Service Research*, 7(3), 213-234.

- Park, K. H., & Weber, W. L. (2002). A note of efficiency and productivity growth in the Korean banking industry, 1992-2002. *Journal of Banking and Finance*, 30, 2371-2386
- PWC. (2012). Rebooting the branch: Branch strategy in a multi-channel, global environment. Retrieved from <http://www.pwc.com/us/en/financial-services/publications/Viewpoints/reinventing-branch-banking-network.jhtml>.
- Rawcliffe, G., Peach, J., Haas, S., Moss, E. J., Marshall, D., & Shaw, P. V. (2008). Bank Rating Methodology, Criteria Report (Fitch Ratings: Banks).
- Reddy, Y. V. (2005). Banking Sector Reforms in India: An Overview. RBI Bulletin.
- Siddik, N. A., Gang, S, Yanjuan, C & Sajal K. (2014). Financial Inclusion through Mobile Banking: A Case of Bangladesh. *Journal of Applied Finance & Banking*, 4(6), 109-136.
- Sousa, R., & Voss, C. (2006). Service quality in multi-channel services employing virtual channels, *Journal of Service Research*, 8(4), 356-371.
- State Bank. (2015). 6pc decline in branchless banking transactions. Retrieved from <http://www.dawn.com/news/1156875>.
- Waithanji, M.N. (2012). Effect of agent banking as a financial deepening initiative in Kenya. MBA Project, University of Nairobi.

APPENDICES

Appendix I: List of Licensed Commercial Banks in Kenya as at 7th July 2015

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd
4. Bank of India
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Chase Bank (K) Ltd.
8. Citibank N.A Kenya
9. Commercial Bank of Africa Ltd.
10. Consolidated Bank of Kenya Ltd.
11. Co-operative Bank of Kenya Ltd.
12. Credit Bank Ltd.
13. Development Bank of Kenya Ltd.
14. Diamond Trust Bank Kenya Ltd
15. Dubai Bank Kenya Ltd
16. Ecobank Kenya Ltd
17. Equatorial Commercial Bank Ltd.
18. Equity Bank Ltd.
19. Family Bank Limited
20. Fidelity Commercial Bank Ltd
21. Fina Bank Ltd
22. First community Bank Limited
23. Giro Commercial Bank Ltd.
24. Guardian Bank Ltd
25. Gulf African Bank Limited
26. Habib Bank A.G Zurich
27. Habib Bank Ltd
28. Housing Finance Company of Kenya
29. Imperial Bank Ltd
30. I & M Bank Ltd
31. Jamii Bora Bank Limited.
32. Kenya Commercial Bank Ltd
33. K-Rep Bank Ltd
34. Middle East Bank (K) Ltd
35. National Bank of Kenya Ltd
36. NIC Bank Ltd
37. Oriental Commercial Bank Ltd
38. Paramount Universal Bank Ltd
39. Prime Bank Ltd
40. Standard Chartered Bank Kenya Ltd
41. Trans-National Bank Ltd
42. UBA Kenya Bank Limited
43. Victoria Commercial Bank Ltd

Source: Central Bank of Kenya, 2015

Appendix II: Agency Banking and Agency banking

	Average Mobile banking users (millions)	Mobile banking users in the current year [Y_t] / mobile banking users in the previous year [Y_{t-1}]	Average number of banking agents	Banking agents in the current year [Y_t] / banking agents in the previous year [Y_{t-1}]
2009	0.175		525	
2010	0.235	1.345	838	1.595
2011	0.366	1.554	1903	2.272
2012	0.608	1.663	3102	1.630
2013	0.956	1.571	5011	1.616
2014	1.334	1.395	7702	1.537

Source: Commercial Banks Annual Reports (2009-2014)

Appendix III: Return on Assets, Operating Expenses and Customer deposits

Year	Return on Assets	Operating Expenses (cost to income ratio)	Customer deposits	Customer Deposits (percentage change in deposits per year)
2009			23438.62	
2010	3.669	0.552	28850.61	23.09
2011	3.623	0.538	34659.65	20.13
2012	3.978	0.527	37671.30	8.69
2013	3.973	0.511	47324.35	25.62
2014	4.245	0.576	54048.45	14.21

Source: Commercial Banks Annual Reports (2009-2014)