EFFECT OF MOBILE MONEY INNOVATIONS ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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This research project has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

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LIST OF ABBREVIATIONS

ATM	Automated Teller Machine
CBK	Central Bank of Kenya
CBS	Core Banking Solution
CRM	Customer Relationship Management
MMI	Mobile Money Innovation
MMS	Mobile Money Services
MNOs	Mobile Network Operators
NSE	Nairobi Securities Exchange
POS	Point of Sale
RBV	Resource Based View
ROA	Return on Assets
SMS	Short Message Service
TAM	Technology Acceptance Model
VSAT	Very Small Aperture Technology

ABSTRACT

A lot of reforms have been undertaken in the banking sector in Kenya that have led to mobile money innovations of bank products, activities and increased the efficiency of the financial system. All these developments coupled with changes in the international financial environment and the increasing integration of domestic and international financial markets have led to rapid mobile money innovations. The rising importance of the financial sector in modern economies, as well as the rapid rate of innovation in that sector, has generated a research interest in commercial banks financial performance through mobile money innovations. This study sought to determine the effect of mobile money innovations on financial performance of commercial banks in Kenya. The study's population was all the 42 commercial banks operating in Kenya. The independent variable for the study was mobile money innovations as measured by natural logarithm of total value of transactions through mobile money innovations. The control variables were liquidity as measured by the current ratio, firm size as measured by natural logarithm of total assets and capital adequacy as measured by the ratio of gross loans and advances to total assets. Financial performance was the dependent variable which the study sought to explain and it was measured by return on assets. Secondary data was collected for a period of 5 years (January 2013 to December 2017) on an annual basis. The study employed a descriptive cross-sectional research design and a multiple linear regression model was used to analyze the association between the variables. Data analysis was undertaken using the Statistical package for social sciences version 21. The results of the study produced R-square value of 0.312 which means that about 31.2 percent of the variation in the Kenyan commercial banks' financial performance can be explained by the four selected independent variables while 68.8 percent in the variation of financial performance of commercial banks was associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with financial performance (R=0.558). ANOVA results show that the F statistic was significant at 5% level with a p=0.000. Therefore the model was fit to explain the relationship between the selected variables. The results further revealed that capital adequacy and bank size produced positive and statistically significant values for this study. The study found that mobile money innovations and liquidity are statistically insignificant determinant of financial performance of commercial banks. This study recommends that measures should be put in place to enhance capital adequacy and bank sizes among commercial banks as this will improve their financial performance.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Improvement in technology and changing economic conditions are among the strategies adopted by commercial banks to boost for innovations in the delivery of goods and services (James & James, 2014). Use of mobile money innovations in the banking industry has grown normal nowadays as a means to maintain client's loyalty and to increase market share. The mobile money innovative systems (like mobile banking, borrowings, and lending) mainly target earning though unbanked residents of interior and hard to reach regions (James, Odiek & Douglas, 2014). Mobile money innovations technology, like mobile payments, mobile banking, mobile borrowing and digital identities has made it efficient and cheaper for customers to access financial services, financial security is also increased and poses an opportunity for banking institutions to reduce operational and administrative costs (James & James, 2014).

This study was guided by several theories such as the technology acceptance model, resource based view theory and the financial intermediation theory that have tried to explain the relationships between mobile money innovations and financial performance of firms. Technology Acceptance Model (TAM) clarifies the way clients embrace and make use of an innovative idea. TAM will be applied in this study to establish how technology acceptance influences technological innovations among commercial banks in Kenya. Resource Based View (RBV) theory as developed by Wernerfelt (1984) suggests that resources enables the firm to achieve competitiveness through enhancing innovations thus firms need to focus on how they can identify and use resources to develop a sustained competitive advantage which will enhance their

performance. Financial intermediation theory suggests that for financial institutions to boost their performance, they have to enhance customer deposits through inventing technologies which will allow clients in transacting efficiently and conveniently.

In Kenyan context, the vital reformation taken, presents opportunities for enhanced banking sector financial performance. This includes making the following operational; credit reference bureaus, agency banking, improvement of payments system by use of e-commerce and Microfinance Act. Mobile money innovations have resulted into many diverse services like account information, that alert clients on the updates and operations on their account using their mobile phones (James, Odiek & Douglas, 2014). Customers get messages about instant transactions in their acounts. Through the mobile money innovations, one can make utility bill payments, withdrawals, transfers, airtime purchase, and bank statements request etc , at any time via their phones. The collaboration of the government and financial companies, mobile network operators, mobile money providers, and donors help expand mobile money innovations throughout the world, helping nations move to electronic payments and ensure better financial services to its customers (Health Finance and Governance, 2013).

1.1.1 Mobile Money Innovations

Mobile money innovation deals with making investments in recent technology so as to improve the revenue system and enhance efficiency and effectiveness of the system. Mobile money innovation involves automation of systems and structures that are crucial in order to improve and simplify financial performance. With mobile money innovation as a modern system in banks, revenue collection can be mobilized and this can increase collection efficiency as well as expand revenue base and

financial transactions of goods and services (Health finance and governance, 2013).

Various studies have defined mobile money innovations (MMI) as the new technologies supporting money transfer services and financial transactions operated under financial regulation and performed by financial institutions via the mobile phone as opposed to the traditional over-the- counter transactions(John, Fredrick & Jagongo, 2014). Financial inventions like mobile and internet banking, debit and credit cards etc are happening very fast in world banking industry. Instead of transacting over the counter in commercial banks, customers are enabled to transact through their mobile phone devices. Mobile money innovations allow those unable to access financial institutions or without a bank account to perform financial transactions as quickly and easily as sending a text message (Kigen 2010).

Studies in Kenya on mobile money innovations reveals that MMI has not only led to increased number of individuals enrolling for banking services but also increased revenue for commercial banks as a result of transactions fees and interest income (Kigen 2010). In lieu of this, commercial banks in Kenya are currently incorporating the mobile innovations technology into their services and designing sophisticated banking services geared towards an increase in their market share and overall profitability.

1.1.2 Financial Performance

Al-Matari, Al-Swidi and Fadzil (2014) define financial performance as the ability of a firm to achieve the range of set financial goals such as profitability. It is the extent to which financial benchmarks of a firm has been achieved or surpassed. It shows the extent at which financial objectives are being accomplished. As outlined by Baba and Nasieku (2016) financial performance show how a company uses assets to generate

revenues and thus it gives direction to the stakeholder in their decision making. Nzuve (2016) asserts that the health of the bank industry largely depends on their financial performance which is used to indicate the strengths and weaknesses of individual banks. Moreover, the government and regulatory agencies are interested on how banks perform for the regulation purposes.

Financial performance aims at things that influence the financial statements of a besiness directly (Omondi & Muturi, 2013). The performance of the firm's is the main appraisal tool used by external parties (Bonn, 2000). Hence this explains why firm's performance is used as the gauge. The level of attainment of the firm's objectives defines its performance. Financial performance is the results attained from achieving external and internal objectives of a firm (Lin, 2008). Performance has several names, including growth, competitiveness and survival (Nyamita, 2014).

Financial performance can be measured using a number of ratios, for instance, return on assets and net interest margin. ROA is a measure that reveals the capacity of the bank to utilize the assets available in generating profits (Milinović, 2014). ROA is calculated by dividing operating profit by total asset ratio which is used for calculating earnings from all company's financial resources. On the other hand, NIM measures the spread of the interest paid out to the bank's lenders, for instance, liability accounts, and the interest income that the banks generates in relation to the value of their assets. The NIM variable can be expressed as the net interest income divided by total revenue assets (Gul et al., 2011).

1.1.3 Mobile Money Innovations and Financial Performance

Both past and recent studies on the field of mobile money innovations have shown a positive association between mobile money innovation and financial performance

measures. The previous paradigm of studying the effects of innovative activities on financial performance has shifted focus to more complex innovative channels and processes that utilize various modes of innovation to attain improved performances in different setups (Loof & Heshmati, 2013; Kemp, 2003; Bessler et al., 2008).

Roberts and Amit (2003) define the significance of mobile money innovation as a source of competitive advantage and a tool for attaining better financial performance. A positive association has been established between mobile money innovation and firm financial performance by several studies such as those by (Han et al., 1998) and (Calantone et al., 1995). Innovation is an all rounded activity that is applicable in all firm activities such as production, process, marketing, and even the management of the organization (Kao, 1989). However, product, process and market are the most used in innovation literature (Otero-Neira et al., 2009; Johne & Davies, 2000).

Mahalaxmi (2013) argues that mobile money innovation significantly reduces the bank's the transaction costs. Kaleem and Ahmad (2008) also concurs with Mahalaxmi and asserts that mobile money innovations saves time, minimizes the cost of transactions, provides current information, minimizes inconvenience, reduces human resource requirements, increases operational efficiency, minimizes the risk of carrying cash, improves service quality and facilitates quick responses in the banking sector. However, the benefits of mobile money innovations can fully be realized by banks if fully embraced by customers (Mahalaxmi 2013). According to Okun (2012), much lower cost deposits could be realized by banks through adoption of mobile money innovations such as Mpesa so as to attract deposits at lower costs. Banks use customer deposits to maximize on interest spread which subsequently increases their profitability.

1.1.4 Commercial Banks in Kenya

Commercial banking business involves accepting deposits, giving credit, money remittances and any other financial services. The industry performs one of the very important role in the financial sector with a lot of emphasizes on mobilizing of savings and credit provision in the economy. According to the Bank supervision yearly Report (2017), industry comprises of Central Bank as the regulatory authority. The industry also has 1 mortgage finance and 42 commercial banks. Among the 42 commercial banks in the country, 30 are locally owned banks, 9 microfinance banks and 14 foreign owned. Among the 42 commercial banks that we have in the Kenyan banking sector only 11 of the 42 are listed at the NSE.

In the 21st century, banking is considered as innovative banking. The banking philosophy has completely been transformed by technological changes along with many financial innovations which has heightened the competitiveness of Kenya's banking industry. The banking system operates under an environment experiencing huge dynamism and challenges which has necessitated for new product, process and market innovations. The application of information technology has yielded new innovations in product designing and changed their mode of delivery in the banking and finance sectors. Several initiatives are being undertaken in the banking sector to offer better customer services with the aid of new technologies. Internet banking has been employed as a strategic resource for attainment of higher efficiency, reduction of cost and control of operations through replacement of labor intensive and paper based methods with automated processes hence causing higher profitability and productivity. Innovations in the Kenyan banking sector include; Internet banking, Short Messaging Services (SMS) banking, M-Pesa, ATMs and Very Small Aperture Technology (VSAT) (Ocharo & Muturi, 2016).

1.2 Research Problem

A key assumption of most research work done on the improvement of operations has been technological innovations are directly proportional to improvements in performance (Upton & Kim, 1999). The process of technological innovation and implementation forms a critical part in the growth of many nations. A change of past techniques and adoption of local technology similar to that of more advanced industrialized nations lead to indigenous technological innovations (Roehm & Sternthal, 2001). The advancement in technology has caused some tasks to be more efficient and cost effective but it also has its fair share of challenges (Aladwani, 2001). This has seen firms in the banking sector use technology to develop alternative banking channels to reduce costs and enhance efficiency and convenience but still fail (Kombe & Wafula, 2015). This entails a review of the impact mobile money innovations have on performance of banks.

Many changes done in Kenyan have caused mobile money innovations of bank products, activities and increase in effectiveness of financial system. Advancement in banks through mobile money innovations technology and changing economic conditions have forced this shift in the commercial banks in Kenya banking industry. The increased need for the financial sector and the speed at which inventions are made in this sector, has stimulated interest in research in commercial banks' performance through mobile money innovations.

Studies that discusses mobile money innovations and financial performance innovations proposes many theories about them (Mishra & Pradhah, 2008; Weber, 2008; Mario, 2007; Resina, 2004). These studies, however, are relative on empirical studies that provide a quantitative analysis of financial innovation by financial

institutions (Mishra & Pradhah, 2008). Though the change in form of new financial instruments and latest and more efficient ways of providing financial services has influenced the entire global financial system, little research about this subject is documented (Noyer, 2007). Few attempts involving its definition, impacts on money demand financial institutions is available in the literature (Hasan, 2009; Sukudhew, et al 2007); Scott and White (2002). Few or none systematic qualitative and quantitative analysis of the effects of mobile money innovation on financial performance of commercial banks variables is available in studies more so in Kenya.

Many students have studied on financial innovation and electronic banking in Kenya. Kigen (2010) studied on influences of mobile banking on transaction expenses of microfinance institutions and found that that time, mobile banking had decreased transaction costs notably although not directly felt by the banks due to the then small mobile banking customer. James, Odiek and Douglas (2014) studied the influences of mobile money innovations on the financial performance of banking institutions; a case of Kakamega town where they found out that provision of mobile money services had a positive effect on the performance. Though MMI had cut into the banking institutions market, such institutions had generated counter measures like agency banking, m-banking and internet banking etc, to cancel out the undesirable effect of mobile money. From the above discussions, it is evident that no or few researches have focused on MMI and the financial performance by Kenyan commercial banks. This study therefore sought to answer the research question; what is the effect of mobile money innovations on financial performance of commercial banks in Kenya?

1.3 Objective of the Study

The objective of this study was to determine the effect of Mobile money innovations on Performance of commercial banks in Kenya.

1.4 Value of the Study

Study findings can be helpful to different stakeholders in the field. To commercial banks' management, it will inform them on the financial impact of mobile money innovations, financial inclusion and performance on their institution on the delivery of goods and services. The management of these financial institutions and markets can plan on realizing maximum benefits from MMI.

To policy makers in public sector, the results will add to the available policy tools that may direct governance of commercial banks and banking industry in Kenya and shade empirical light on mobile money innovations and governance structures and banks performance.

In practice, the findings could therefore be used to support and shape, tighten or guide policy review on these variables within the banking industry context. To scholars and researchers, the study will act as a spring board to identify research gaps that need to be addressed in the management science as the basis for other relevant researches on the area of corporate governance and financial institutions' performance.

For the theory agencies the financial institutions and markets, like CBK, the results will form the basis in informing the policy formulation regarding the regulation of the mobile money goods and services in Kenya and this may help improve policy direction in regulation of mobile money innovation and enhance economic growth.

To the academicians as well as finance students, this study will add knowledge in the discipline of mobile money innovation and financial performance. The study may be useful in that it can be a source of reference material on areas where future research may be carried out.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews theories that form the foundation of this study. In addition, previous empirical studies that have been carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of financial performance, conceptual framework showing the relationship between study variables and a literature review summary.

2.2 Theoretical Framework

This presents review of the relevant theories that explains the relationship between financial innovations and efficiency. The theoretical reviews covered are technology acceptance model, financial intermediation theory and the resource based view theory.

2.2.1 Technology Acceptance Theory

TAM as developed by Davis (1989) clarifies the way clients embrace/acknowledge and utilize an innovation. This model asserts that once a client is given an alternative innovation, some aspects influence their choices on the means and time of utilization. This incorporates its apparent convenience and seen helpfulness. TAM embraces settled causal chain of genuine conduct convictions, goal and disposition. This was produced by social clinicians from the hypothesis of contemplated activity. In Davis' study, two vital parts are recognized; seen convenience and seen helpfulness (Davis, Toxall & Pallister, 2002).

In other studies regarding technology, TAM is widely adopted and greatly contributes to the development of a prediction of an individual’s usage of technology (Fishbein &

Ajzen, 2010). Perceived ease of use influences the perceived usefulness and the intention for adoption (Davis, 1989). Despite TAM being an important source for theoretical framework in the study of adoption and use of technology it has many limitations which include the initial purpose designing the model which is parsimony and generality (Dishaw & Strong, 1999), not taking into consideration non-organizational setting of the organization (Davis & Venkatesh 2000), and ignoring the factors which moderate the adoption of ICT (Sun & Zhang, 2006). This theory has affected research in acceptance of technology. In this exploration, TAM will be utilized to discover how the utilization of technology enhances financial performance and how the accessibility of technology impacts the utilization of mobile money innovations among commercial banks in Kenya.

2.2.2 Financial Intermediation Theory

The financial intermediation theory was advanced by Mises (1912) and postulates that that financial institutions especially banks perform a significant duty in financial intermediation. The banks play the role of mobilizing customers with surplus money and availing them for lending to those with a shortage at a cost commonly referred to as interest. This association allows the banks to create a state of liquidity since money is taken from customers with short term maturity funds and lend to customers with long term maturity basis (Dewatripont, Tirole & Rochet, 2010). Mises (1912) argues that the banks' role as credit negotiators is characterized by lending borrowed money.

Financial intermediation through borrowing and lending money can thus be described as the key role of the banks. According to Mises (1912), involvement in financial intermediation by banks denies them the role of creating money while retreating from the process presents them with a chance to create money. However Allen and

Santomero (2001) criticize the theory on grounds that it perceives risk management as an emerging factor in the financial sector and puts the concept of participation costs at the front line. This theory is applicable to the study since bank performance could be enhanced by improving customer deposits through development of channels that will facilitate easy and convenient undertaking of bank transactions by the customers.

2.2.3 Resource Based View Theory

This theory was developed by Wernerfelt (1984) and it contends that maintained upper hand and enhanced execution by a firm might be acknowledged by misusing profitable, uncommon, non-substitutable and incompletely imitable assets (Hart, 1995). A significant asset or heap of assets enables a venture to bridle openings and diminish dangers in its condition. An uncommon asset or heap of assets is one that isn't controlled by countless. A non-substitutable asset or heap of assets is one for which a proportional asset can't undoubtedly be made by contending firm or firms. An incompletely imitable asset or heap of assets is one that is hard to imitate or one that can be repeated at a critical cost (Hart, 1995). Ignorant (1983) records these assets to incorporate all abilities, resources, hierarchical procedures, learning and data controlled by a firm.

Assets can just extend the firm esteem in the event that they are utilized in a way that thinks about the dynamic outside business condition (Sirmon, Hitt & Ireland, 2007). The assets can be sorted as substantial or elusive (Mentzer, Min & Bobbitt, 2004). Wagner (2006) contends that technological innovations are defined as the desirable practices acquired from efficient technologies. Desirable practices will support the technological functions in the delivery of services of high quality and sustain superior

performance therefore technological innovation frameworks are resources that fall within RBV it causes improvement in service delivery and performance.

Under RBV by exploiting technological innovation practices, banks build capabilities for improved financial performance. This theory is relevant to the study because it recognizes organizational processes and technological innovations as resources that can be used to improve the financial performance of organizations.

2.3 Determinants of Financial Performance

An organization's performance is influenced by a number of factors; these are either internal or external. Internal factors differ from one bank to the next and are within a bank's scope of manipulation. These comprise of information technology innovations, capital size, labor productivity, deposit liabilities, management quality, credit portfolio, interest rate policy, bank size and ownership. External factors affecting the performance of a bank are mainly GDP, macroeconomic policy stability, Inflation, Political instability and Interest rate (Athanasoglou, Brissimis & Delis, 2005).

2.3.1 Information Technology

The strategy on (ICT) encompasses the bank framework for technology developments, services, technical direction, and managing risk. Strategy on information communication embodies the priorities and principles which are set in the strategic plan of the bank and any various subsidiary strategies (Osman, Ali, Zainuddin, Wan Rashid & Jusoff, 2009). The organizations around the world may adopt and integrate ICT in a system so as to gain a competitive edge in the market. Information Communication ICT has led to efficiency and effectiveness of the system through an innovative products and services (Rashid & Hassan, 2009).

Technology is important in enabling objectives that are strategic be achieved including product development, capabilities and services which gives the firm a competitive edge over various forces of competition which face the market environment. It may be used as a competitive weapon once a strategic business opportunity is identified. Competitive edge can be attained through ensuring the organization ability to deal with substitute products, customers and suppliers. Power of bargaining of customers and suppliers, traditional positioning. Investments in complex Information and Communication Technology (ICT) increases firm's efficiency and creates barrier to entry in the market. Information and Communication Technology ICT is used in cost reduction by reducing cost of the business processes and reducing the costs to suppliers and customers. It contributes a bigger role differentiation through creation of new features which improve the organization products that are existing and their services which results to unique features of the products (Nyangosi, 2008).

2.3.2 Capital Adequacy

According to Athanasoglou et al., (2005), capital is a significant variable in determining bank financial performance. Capital is the owner's contribution which supports the bank's activities and acts as a buffer against negative occurrence. In capital markets that are not perfect, well-capitalized banks must reduce borrowing so as to support a certain index of assets, and as a result of lower prospective bankruptcy costs they tend to face lower funding costs.

A well-capitalized bank has a signaling effect to the market that a performance above average is to be expected. Athanasoglou et al., (2005) realized that capital contributions positively affected bank profitability, which reflects sound financial

condition of banks in Greece. Also, Berger et al., (1987) noted positive causality in both direction between capital contributions and profitability in companies.

2.3.3 Bank Size

Bank size determines the extent to which a firm is affected by legal and financial factors. The size of the bank is also closely linked with the capital adequacy because large banks raise less expensive capital and thus generate huge profits. Bank size has a positive correlation with the return on assets indicating that large banks can achieve economies of scales that reduce operational cost and hence help banks to improve their financial performance (Amato & Burson, 2007). Magweva and Marime (2016) link bank size to capital rations claiming that they are positively related to each other suggesting that as the size increases profitability rises.

The amount of assets owned by an organization determine it size (Amato & Burson, 2007). It is argued that large firms have adequate resources to undertake a number of large projects with better returns than firms with small amounts of total assets. In addition, firms with large amounts of total assets have adequate collateral which they can pledge to access credit and other debt facilities compared to their smaller counterparts (Njoroge, 2014). Lee (2009) established that the total assets controlled by a firm as measured by the total assets have an influence on the level of profitability recorded from one year to another.

2.3.4 Bank Liquidity

Liquidity is defined as the degree in which an entity is able to honor debt obligations falling due in the next twelve months through cash or cash equivalents for example assets that are short term can be quickly converted into cash. Liquidity results from the managers' ability to fulfill their commitments that fall due to policy holders as

well as other creditors without having to increase profits from activities such as underwriting and investment and as well as their ability to liquidate financial assets. (Adam & Buckle, 2003)

According to Liargovas and Skandalis (2008), liquid assets can be used by firms for purposes of financing their activities and investments in instances where the external finance is not forthcoming.). Firms with higher liquidity are able to deal with unexpected or unforeseen contingencies as well as cope with its obligations that fall due in periods of low earnings. Almajali et al., (2012) noted that firm's liquidity may have notable impact on insurance companies' financial performance; therefore he suggested that insurance companies should aim at increasing their current assets while decreasing their current liabilities. However, Jovanic (1982) noted that an abundance of liquidity may at times result to more harm. He therefore concludes that impact of liquidity on firms' financial performance is ambiguous.

2.4 Empirical Review

Studies have been conducted both locally and internationally to support the relationship between mobile money innovations and financial performance, but these studies have produced mixed results.

2.4.1 Global Studies

A survey by Kumbhar (2011) examined alternative banking channels and customers' satisfaction in Indian private and government banks. The major factors related to customer satisfaction with respect to alternative banking were observed in the two sectors. These entailed education, age, bank customers profession, brand perception, perceived value and service quality. The likert scale based questionnaires were used for data collection. The study established that quality of service, perceived value and

brand perception and have a positive association with customer satisfaction. However a strong association existed between alternative banking and customer satisfaction. It was concluded from the study that facts should be considered by banks so as to enhance service quality of alternative banking services thus leading to increased customer satisfaction.

Olu-Bankole, Ola-Bankole and Brown (2011) conducted a cross-sectional survey on mobile banking in Nigeria using primary data. In total, 250 questionnaires and interviews were collected from the selected mobile banking customers. The study found culture as the most vital determinant of the adoption behaviour of users of mobile banking in Nigeria.

Ching et al., (2011) examined the determinants of the adoption of mobile banking in Malaysia using empirical analysis. TAM was used to determine the level of acceptance of mobile banking in Malaysia. The study's objective was to examine the association between constructs of perceived usefulness, perceived risks, social norms, perceived relative advantages and perceived innovativeness towards behavioral intention in the adoption of mobile banking. Results showed that perceived usefulness, relative advantages, perceived risks and personal innovativeness were the factors affecting mobile users' behavioral intention to adopt mobile banking services in Malaysia.

Tchouassi (2012) sought to use empirical studies from selected Sub –Saharan Countries to establish whether mobile phones actually contribute in extending banking services to the unbanked. The aim of the study was to find how mobile phones could be used to the unbanked and poor segment of the population. The findings revealed that poor and vulnerable households in Sub-Saharan Africa

countries are often incur high financial transactions while undertaking basic financial transactions. Therefore, the use of mobile phone could improve the provision of financial services in this segment and that economic and technological innovation, regulatory and policy innovation was required to extend this services.

Aini (2014) conducted a triangulation study utilizing both primary and secondary data to establish the issues and challenges facing mobile banking in India. Primary data was used in the study.The results indicate that approximately 61.33% respondents find the mobile banking less costly and time saving and 58.67% respondents would wish to try this service. The paper also established a number of factors such as availability and ease of use of mobile banking related technologies, which explain why consumers are not using mobile banking and other technologies in banking.

2.4.2 Local Studies

Okiro and Ndung'u (2013) conducted a survey study to establish the influence of mobile and internet-banking on performance of Kenyan financial institutions where the survey was carried out on Nairobi financial institutions. The study targeted 30 financial institutions and discovered that the most common internet service was balance inquiry whereas the least is online bill payment. The frequently used mobile banking service was cash withdrawal while purchasing commodities was the least used.

A study by Ndungu (2015) examined the impact of alternative banking channels on the performance of Kenyan financial institutions. It employed the descriptive research design. The secondary data used for the study were retrieved from the CBK annual reports. It was established from the study that alternative banking channels such as agency banking, mobile banking, operating expenses and customer deposits are

responsible for 73.4% change in the financial performance. Further, mobile banking adoption had declined as from 2012. It was recommended that in order to enhance alternative banking, more alternative banking channels and innovations should be adopted by Kenyan commercial banks.

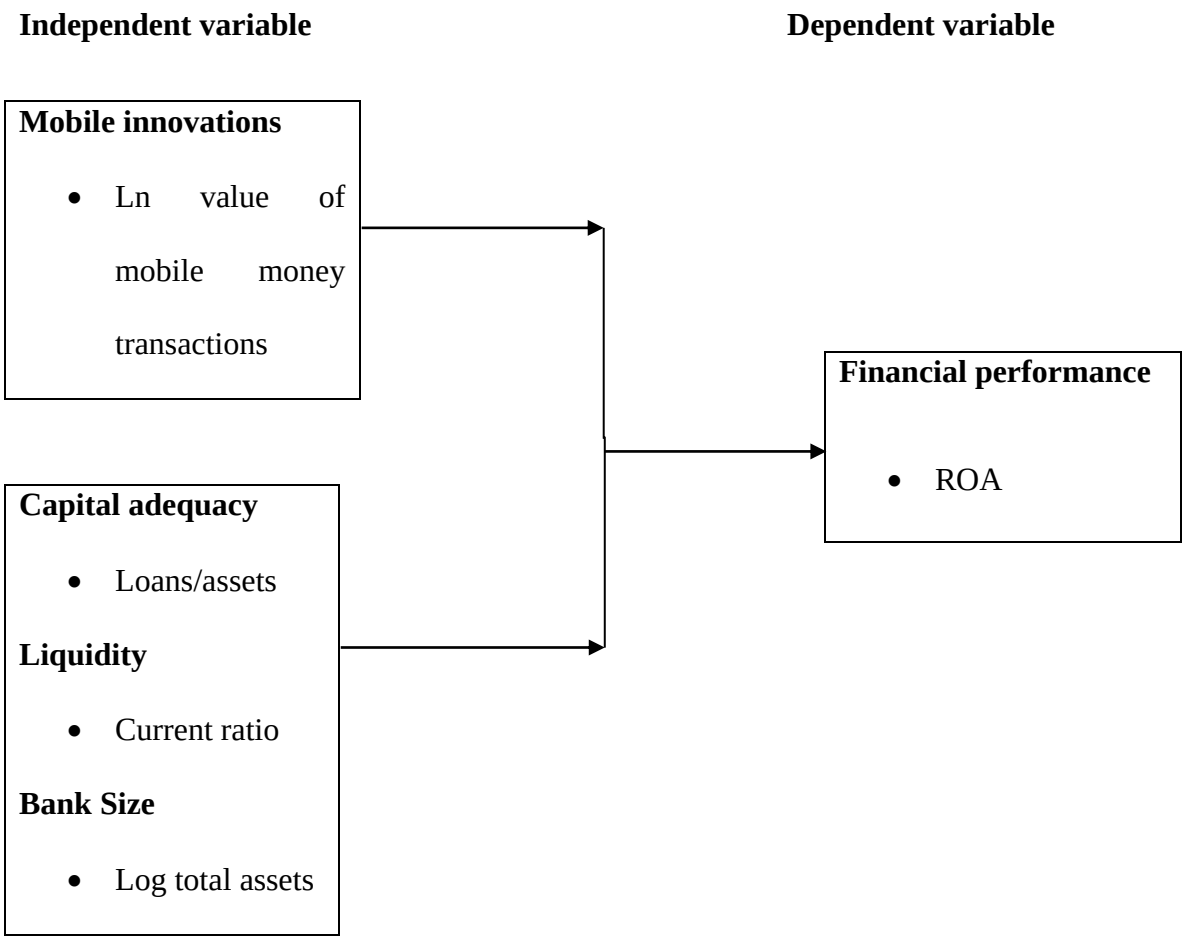
Gichungu and Oloko (2015) examined the influence of innovative technology having on commercial institutions' performance in the country. The goal was to establish of ATM banking, mobile phone banking and other platforms currently being used by people to do banking such as online banking as well as agency banking on the Kenyan financial banks' performance using all the 43 Kenyan commercial banks as the Sample. The conclusion was that the sampled banks' financial performance was significantly and positively influenced by these banking platforms between the time frame 2009 and 2013.

Mwiti (2016) explored the effects of alternative banking channels on the financial performance of Kenyan commercial banks. The study indicated that a strong association exists between alternative banking channels and Kenyan commercial banks' financial performance. The study further established that mobile banking, ATMs, internet and agency banking, positively influence financial performance of the commercial banks and in a statistically significant way.

2.5 Conceptual Framework

Independent variables will be mobile money innovations as measured by natural logarithm of the value of mobile money transactions per year. The control variables were capital adequacy, liquidity and bank size while financial performance as determined by ROA was the dependent variable.

Figure 2.1: The Conceptual Model



Source: Researcher (2018)

2.6 Summary of the Literature Review

A number of theoretical frameworks have explained the theoretically expected connection between mobile money innovations and financial performance of banks. The theories covered in this review are; technology acceptance model, financial intermediation theory and resource based view theory. Some of the key influencers of financial performance have also been explored in this section. A number of empirical studies have been conducted both globally and locally on mobile money innovations and financial performance of firms. The findings of these studies have also been

explored in this chapter. The lack of consensus among international studies on the impacts of mobile money innovations on financial performance is an enough reason to conduct further studies. The reviewed studies in the Kenyan context have either failed to show how the Kenyan commercial bank's financial performance is affected by mobile money innovations or consider one aspect of mobile money innovation. The current study intended to fill this research gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In determination of the impact of mobile money innovations on financial performance of commercial banks, a research methodology was necessary to outline how the research will be carried out. This chapter has four sections namely; research design, data collection, diagnostic tests and data analysis.

3.2 Research Design

A descriptive cross-sectional research design was employed in this study to investigate the relationship between mobile money innovations and financial performance of commercial banks. Descriptive design was utilized as the researcher is interested in finding out the state of affairs as they exist (Khan, 2008). This research design was appropriate for the study as the researcher was familiar with the phenomenon under investigation but want to know more in terms of the nature of relationships between the study variables. In addition, a descriptive research aims at providing a valid and accurate representation of the study variables and this helps in responding to the research question (Cooper & Schindler, 2008).

3.3 Population

This study's population comprised of the 42 Kenyan commercial banks operating as at 31/12/2017. Since the population is finite, a census of the 42 banks was undertaken for the study (see appendix one).

3.4 Data Collection

Secondary data was obtained solely from the published annual financial reports of the commercial banks operating in Kenya between January 2013 and December 2017 and captured in a data collection sheet. The reports were obtained from the Central Bank Website and banks annual reports. The end result was annual information detailing the independent variables and dependent variable for the 42 commercial banks in Kenya.

3.5 Diagnostic Tests

Linearity show that two variables X and Y are connected by a mathematical equation Y=bX in which c is a constant number. The linearity test was derived by the scatterplot testing or F-statistic in ANOVA. Stationarity test is a process where the statistical properties such as mean, variance and autocorrelation structure do not change with time. Stationarity was obtained from the run sequence plot. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This was determined by Shapiro-walk test or Kolmogorov-Smirnov test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It was tested using Durbin-Watson statistic (Khan, 2008).

Multicollinearity is said to occur when there is a nearly exact or exact linear relation among two or more of the independent variables. This was tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent variable is an indication that the determinant is one while it is zero if there is a complete linear dependence between them and as it approaches to zero then the multicollinearity becomes more intense. Variance Inflation Factors (VIF) and

tolerance levels were also carried out to show the degree of multicollinearity (Burns & Burns, 2008).

3.6 Data Analysis

The SPSS software version 21 was used in the analysis of the data. The researcher quantitatively presented the findings using graphs and tables. Presentation of the findings was done by use of percentages, frequencies, measures of central tendencies and dispersion displayed in tables. Inferential statistics included Pearson correlation, multiple regressions, ANOVA and coefficient of determination. The regression model below was applied:

$$Y= \alpha+ \beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_4 +\varepsilon.$$

In which: Y = Financial performance as measured by ROA on an annual basis

α =y intercept of the regression equation.

β_1, β_2, β_3, β_4 =are the slope of the regression

X_1 = Mobile money innovations as measured by the natural logarithm of the total value of mobile money transactions per year

X_2 = Capital adequacy as measured by ratio of loans and advances to total assets per year

X_3 = Bank liquidity as measured by current ratio per year

X_4 = Bank size as measured by natural logarithm of total assets per year

ε =error term

3.6.1 Tests of Significance

The researcher carried out parametric tests to establish the statistical significance of both the overall model and individual parameters. The F-test was used to determine

the significance of the overall model and it was obtained from Analysis of Variance (ANOVA) while a t-test was used to establish statistical significance of individual variables.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

The chapter focused on the analysis of the collected data to establish the impact of mobile money innovations on financial performance of the Kenyan commercial banks. Using descriptive statistics, correlation analysis and regression analysis, the results of the study were presented in table forms as shown in the following sections.

4.2 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. A test of Multicollinearity was undertaken. Tolerance of the variable and the VIF value were used where values more than 0.2 for Tolerance and values less than 10 for VIF meaning that Multicollinearity doesn't exist. Multiple regressions is applicable if strong relationship among variables doesn't exist. From the findings, all the variables had tolerance values >0.2 and VIF values <10 as shown in table 4.1 showing that Multicollinearity among the independent variables doesn't exist.

Table 4.1: Multicollinearity Test for Tolerance and VIF

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Mobile money innovations	0.392	1.463
Capital adequacy	0.398	1.982
Bank liquidity	0.388	1.422
Bank size	0.376	1.398

Source: Research Findings (2018)

Shapiro-walk test and Kolmogorov-Smirnov test was used to test for normality. The null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The results of the test are as shown below

Table 4.2: Normality Test

ROA	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Mobile money innovations	.176	205	.300	.892	205	.784
Capital adequacy	.175	205	.300	.874	205	.812
Bank liquidity	.174	205	.300	.913	205	.789
Bank size	.176	205	.300	.892	205	.784
a. Lilliefors Significance Correction						

Source: Research Findings (2018)

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 which implies that the research data was normally distributed and therefore the null hypothesis was rejected. The data was therefore appropriate for use to conduct parametric tests such as Pearson's correlation, regression analysis and analysis of variance.

Autocorrelation tests were run in order to check for correlation of error terms across time periods. Autocorrelation was tested using the Durbin Watson test. A durbin-watson statistic of 1.911 indicated that the variable residuals were not serially correlated since the value was within the acceptable range of between 1.5 and 2.5.

Table 4.3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.558[a]	.312	.298	.016196	1.911

a. Predictors: (Constant), Bank size, Capital adequacy, Liquidity, Mobile money innovations

b. Dependent Variable: ROA

Source: Research Findings (2018)

4.4 Descriptive Analysis

Descriptive statistics gives a presentation of the average, maximum and minimum values of variables applied together with their standard deviations in this study.

Table 4.4 shows the descriptive statistics for the variables applied in the study. An analysis of all the variables was acquired using SPSS software for the period of five years (2013 to 2017) for all the 41 banks that provided data for this study. The mean, standard deviation, minimum and maximum for all the variables selected for this study are as shown in the table below.

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	205	-.053	.067	.02389	.019329
Mobile money innovations	205	4.323	5.588	5.08245	.326780
Capital adequacy	205	.025	.969	.46090	.217898
Liquidity	205	.140	.948	.38181	.129532
Bank size	205	6.794	8.703	7.68560	.534062
Valid N (listwise)	205				

Source: Research Findings (2018)

4.5 Correlation Analysis

The association between any two variables used in the study is established using correlation analysis. This relationship ranges between (-) strong negative correlation and (+) perfect positive correlation. Pearson correlation was employed to analyze the level of association between the commercial banks' financial performance and the independent variables for this study (mobile money innovations, bank liquidity, bank size and capital adequacy).

The study found out that liquidity, capital adequacy and bank size have a positive and statistically significant correlation with the commercial banks' financial performance as shown by (r =. 167, p = .017; r =. 147, p = .036; r = .530, p = .000) respectively. Mobile money innovations were found to have a positive but insignificant correlation with financial performance.

Table 4.5: Correlation Analysis

		ROA	Mobile money innovations	Capital adequacy	Liquidity	Bank size
ROA	Pearson Correlation	1				
	Sig. (2-tailed)					
Mobile money innovations	Pearson Correlation	.008	1			
	Sig. (2-tailed)	.915				
Capital adequacy	Pearson Correlation	.167*	.237**	1		
	Sig. (2-tailed)	.017	.001			
Liquidity	Pearson Correlation	.147*	.019	-.117	1	
	Sig. (2-tailed)	.036	.784	.095		
Bank size	Pearson Correlation	.530**	.069	.032	.138*	1
	Sig. (2-tailed)	.000	.323	.644	.048	

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

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

c. Listwise N=205

Source: Research Findings (2018)

4.6 Regression Analysis

Financial performance was regressed against four predictor variables; mobile money innovations, bank liquidity, bank size and bank capital adequacy. The regression analysis was executed at a significance level of 5%. The critical value obtained from the F – table was measured against the one acquired from the regression analysis.

The study obtained the model summary statistics as shown in table 4.6 below.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.558[a]	.312	.298	.016196	1.911

a. Predictors: (Constant), Bank size, Capital adequacy, Liquidity, Mobile money innovations

b. Dependent Variable: ROA

Source: Research Findings (2018)

R squared, being the coefficient of determination shows the deviations in the response variable that's as a result of changes in the predictor variables. From the outcome in table 4.6 above, the value of R square was 0.312, a discovery that 31.2 percent of the deviations in financial performance of commercial banks is caused by changes in mobile money innovations, bank liquidity, bank size and bank capital adequacy. Other variables not included in the model justify for 68.8 percent of the variations in financial performance of the Kenyan commercial banks. Also, the results revealed that there exists a strong relationship among the selected independent variables and the financial performance as shown by the correlation coefficient (R) equal to 0.558.

A durbin-watson statistic of 1.911 indicated that the variable residuals were not serially correlated since the value was more than 1.5.

Table 4.7: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.024	4	.006	22.641	.000[b]
	Residual	.052	200	.000		
	Total	.076	204			

a. Dependent Variable: ROA

b. Predictors: (Constant), Bank size, Capital adequacy, Liquidity, Mobile money innovations

Source: Research Findings (2018)

The significance value is 0.000 which is less than p=0.05. This implies that the model was statistically significant in predicting how mobile money innovations, bank liquidity, bank size and bank capital adequacy affects the Kenyan commercial banks' financial performance.

Coefficients of determination were used as indicators of the direction of the association between the independent variables and the commercial banks' financial performance. The p-value under sig. column was used as an indicator of the significance of the association between the dependent and the independent variables. At 95% confidence level, a p-value of less than 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates that the dependent

variables have a statistically insignificant association with the independent variables. The results are indicated in table 4.5

Table 4.8: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.128	.024		-5.326	.000
	Mobile money innovations	.000	.004	.007	.116	.908
	Capital adequacy	.014	.005	.160	2.624	.009
	Liquidity	.014	.009	.095	1.586	.114
	Bank size	.019	.002	.512	8.601	.000

a. Dependent Variable: ROA

Source: Research Findings (2018)

From the above results, it is evident that apart from mobile money innovations and liquidity, the other two independent variables produced positive and statistically significant values for this study (high t-values, $p < 0.05$). Mobile money innovations and liquidity produced positive but statistically insignificant values for this study.

The following regression equation was estimated:

$Y = -0.128 + 0.014X_1 + 0.019X_2$

Where,

Y = Financial performance

X_1= Capital adequacy

X_2= Bank size

On the estimated regression model above, the constant = -0.128 shows that if selected dependent variables (mobile money innovations, bank liquidity, bank size and bank capital adequacy) were rated zero, the commercial banks' financial performance would be -0.128. A unit increase in capital adequacy or bank size will result in an increase in financial performance by 0.014 and 0.019 respectively. Mobile money innovations and liquidity were found to be insignificant determiners of financial performance.

4.7 Discussion of Research Findings

The aim of the study was to determine the association between mobile money innovations and financial performance of the Kenyan commercial. Mobile money innovations in this study was the independent variable in this study and was measured by the natural logarithm of total value of transactions through mobile money innovations. The control variables were liquidity as measured by the current ratio, firm size as measured by natural logarithm of total assets and capital adequacy as measured by ratio of loans and advances to assets total per year. Financial performance was the dependent variable which the study sought to explain and it was measured by return on assets.

The Pearson correlation coefficients between the variables revealed that mobile money innovations have a positive but statistically insignificant correlation with the commercial banks' financial performance. It also revealed that a positive and significant correlation exists between capital adequacy and liquidity with financial performance of commercial banks. Bank size exhibited a strong positive and

significant association with financial performance of Kenyan insurance firms The model summary revealed that the independent variables: mobile money innovations, bank liquidity, bank size and bank capital adequacy explains 31.2% of changes in the dependent variable as depicted by R^2 value meaning this model doesn't include other factors that account for 68.8% of changes in the commercial banks' financial performance. The model is fit at 95% level of confidence since the F-value is 22.641. This shows that the overall multiple regression model is statistically significant and is an adequate model for predicting and explaining the influence of the selected independent variables on the Kenyan commercial banks' financial performance.

The results concur with Gichungu and Oloko (2015) who examined the influence of innovative technology having on commercial institutions' performance in the country. The aim was to establish impacts of ATM banking, mobile phone banking and other platforms currently being used by people to do banking such as online banking as well as agency banking on the Kenyan financial banks' performance using all the 43 Kenyan commercial banks as the Sample. The study conclusion was that the sampled banks' financial performance was significantly and positively influenced by these banking platforms between the time frame 2009 and 2013.

The study disagrees with Mwiti (2016) who explored the effects of alternative banking channels on the financial performance of Kenyan commercial banks. The study used six year (2011-2015) data for analysis. Regression analysis was used find out the effect of alternative banking channels on the financial performance of commercial banks. The study indicated that a strong association exists between alternative banking channels and Kenyan commercial banks' financial performance. The study further established that mobile banking, ATMs, internet and agency

banking positively influence financial performance of the commercial banks and in a statistically significant way.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter shows the summary of research findings, the conclusions made from the results, and the recommendations for policy and practice. The chapter also discusses a few limitations encountered as well as suggestions for future research.

5.2 Summary of Findings

The aim of the study was to examine the impact of mobile money innovations on the Kenyan financial bank's financial performance. The independent variables for the study were mobile money innovations, bank liquidity, bank size and bank capital adequacy. A descriptive cross-sectional research design was employed in the study. Secondary data was obtained from CBK and SPSS software used in analyzing it. The study used annual data for 41 commercial banks covering a period of five years from January 2013 to December 2017.

From the results of correlation analysis mobile money innovations was found to have a positive but statistically insignificant correlation with the commercial banks' financial performance. The study also found out that a positive and significant correlation exists between capital adequacy and liquidity with financial performance of commercial banks while firm size exhibited a strong and significant association with financial performance.

The co-efficient of determination R-square value was 0.312 which means that about 31.2 percent of the variation in financial performance of the Kenyan commercial banks can be explained by the four selected independent variables while 68.8 percent

in the variation of financial performance was associated with other factors not covered in this research. The study also found a strong correlation between the independent variables and the commercial banks' financial performance (R=0.558). ANOVA results indicate that the F statistic was at 5% significance level with a p=0.000. Therefore the model was fit in explaining the association between the selected variables.

The regression results show that when all the independent variables selected for the study have zero value, the financial performance of commercial banks will be -0.128. A unit increase in capital adequacy or bank size will result in an increase in financial performance by 0.014 and 0.019 respectively. Mobile money innovations and liquidity were found to be insignificant determiners of financial performance.

5.3 Conclusion

It can be concluded from the findings that the Kenyan commercial banks' financial performance is significantly affected by capital adequacy and bank size. The study therefore concludes that a unit increase in these variables causes a significant increase in financial performance. The study found that mobile money innovations and liquidity are statistically insignificant determinants of financial performance and therefore this study concludes that these variables does not influence to a large extent the Kenyan commercial bank's financial performance.

This study concludes that independent variables selected for this study mobile money innovations, bank liquidity, bank size and bank capital adequacy influence to a large extent financial performance. Thus, it can be concluded that these variables greatly influence financial performance of commercial banks as revealed by the p value in anova summary. The fact that the four independent variables explain 31.2% of

changes in financial performance imply that the variables not included in the model explain 68.8% of changes in Kenyan commercial banks' financial performance

Results agree with Gichungu and Oloko (2015) who examined the influence of innovative technology having on commercial institutions' performance in the country. The goal of the study was to investigate effect of ATM banking, mobile phone banking and other platforms currently being used by people to do banking such as online banking as well as agency banking on the Kenyan financial banks' performance using all the 43 Kenyan commercial banks as Sample. By use of multiple linear regression in analyzing the data a conclusion was made that the sampled banks' financial performance was significantly and positively influenced by these banking platforms between the time frame 2009 and 2013.

5.4 Recommendations

The study established that mobile money innovations have a positive but insignificant influence on financial performance. Thus the study wishes to make the following recommendations for policy change: Commercial banks in Kenya should invest heavily in mobile money innovations since this will cause improvement in the financial performance of the banks. The Kenyan Government through the Central bank should come up with policies that generate a conducive environment for commercial banks to operate in since it will translate to economic growth of the country.

The study found out that a positive relationship exists between financial performance and capital adequacy. This study recommends that a comprehensive assessment of a firm's immediate capital adequacy should be undertaken to ensure that banks are

operating at the required levels of capital as bank's capital adequacy has been found to be a significant determiner of financial performance.

The study concluded that there is positive relationship between financial performance and size of a bank. This study recommends that banks' management and directors should aim at increasing their asset base by coming up with measures and policies aimed at enlarging the banks' assets as this will eventually have a direct influence on financial performance of the bank. From the findings of this study, big banks in terms of asset base are expected to perform better than small banks and therefore banks should strive to grow their asset base.

5.5 Limitations of the Study

The scope of this research was for five years 2013-2017. It has not been determined if the results would hold for a longer study period. Furthermore it is uncertain whether similar findings would result beyond 2017. A longer study period is more reliable as it will take into account major economic conditions such as booms and recessions.

Data quality is one of the study limitations. From this research, it is hard to conclude whether the results present the true facts about the situation. Data that has been used is only assumed to be accurate. There is also a great inconsistency in the measures used depending on the prevailing conditions. Secondary data was employed in the study which was already in existent as opposed to primary data which was raw information. The study also considered selected determinants of and not all the factors affecting financial performance of commercial banks mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous

and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

This study focused on mobile money innovations and financial performance of commercial banks in Kenya and depended on secondary data. A research study where data collection depends on primary data i.e. in depth questionnaires and interviews covering all the 42 commercial banks registered with the Central Bank of Kenya is recommended so as to compliment this research.

The study was not exhaustive of the independent variables affecting financial performance of commercial banks in Kenya and it's recommended that further studies be carried out to incorporate other variables like management efficiency, growth opportunities, industry practices, age of the firm, political stability and other macro-economic variables. Establishing the effect of each variable on financial performance will enable policy makers know what tool to use when controlling the financial performance.

The study concentrated on the last five years since it was the most recent data available. Future studies may use a range of many years e.g. from 2000 to date and this can be help confirm or disapprove this study's results. The study limited itself by focusing on financial institutions. The recommendations of this study are that further studies be conducted on other non-financial institutions operating in Kenya. Finally, due to the inadequacies of the regression models, other models like the Vector Error

Correction Model (VECM) can be applies in explaining the different associations between the variables.

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APPENDICES

Appendix I: List of Commercial Banks in Kenya as at 31st December 2017

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 (K) Ltd.
15. Dubai Bank Kenya Ltd.
16. Ecobank Kenya Ltd
17. Equatorial Commercial Bank Ltd.
18. Equity Bank Ltd.
19. Family Bank Ltd
20. Fidelity Commercial Bank Ltd
21. First community Bank Limited
22. Giro Commercial Bank Ltd.
23. GTB Ltd

24. Guardian Bank Ltd

25. Gulf African Bank Limited

26. Habib Bank A.G Zurich

27. Habib Bank Ltd.

28. Housing Finance

29. Imperial Bank Ltd

30. Investment & Mortgages Bank Ltd

31. Jamii Bora Bank.

32. Kenya Commercial Bank Ltd

33. Middle East Bank (K) Ltd

34. National Bank of Kenya Ltd

35. NIC BANK

36. Oriental Commercial Bank Ltd

37. Paramount Universal Bank Ltd

38. Prime Bank Ltd

39. Sidian Bank Ltd

40. Standard Chartered Bank (K) Ltd

41. Trans-National Bank Ltd

42. UBA Kenya Bank.