EFFECTS OF MOBILE BANKING ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING SACCOS IN KENYA

BY

BAHATI MORAA JULIET

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

NOVEMBER 2018
DECLARATION

This project is my original work and has never been presented to any other university for a degree award.

Signature…………………… Date……………………

Bahati Moraa Juliet,

D61/87941/2016.

This project has been submitted for presentation with my approval as a university supervisor.

Signature…………………… Date……………………

Dr. Kennedy Okiro,

Department of Finance and Accounting,

School of Business, University of Nairobi.
ACKNOWLEDGEMENT

I want to first thank the Almighty God for giving me life. This work would not have been successful for not for Him. I would also like to acknowledge and sincerely thank my Supervisor, Dr. Kennedy Okiro for his time, patience and guidance through this entire project. It would not have been a success if it wasn’t for his mentorship too.

I want to also appreciate my family, more so my mother, for her continued support and love. Also to the rest of my family who encouraged me to keep going I also want to thank you.
DEDICATION

I would wish to dedicate this project to my Mother, for her love and support has kept me going through this period and many more.
# TABLE OF CONTENTS

DECLARATION .................................................................................................................. ii
ACKNOWLEDGEMENT ................................................................................................. iii
DEDICATION .................................................................................................................... iv
LIST OF ABBREVIATIONS ............................................................................................... v
ABSTRACT ....................................................................................................................... vi
CHAPTER ONE .................................................................................................................. 1
   1.1 Background of the Study .......................................................................................... 1
      1.1.1 Mobile Banking ............................................................................................... 2
      1.1.2 Financial Performance .................................................................................... 4
      1.1.3 Mobile Banking and Financial Performance .................................................. 6
      1.1.4 Saccos in Kenya ............................................................................................. 8
   1.2 Research Problem .................................................................................................... 9
   1.3 Research Objective .................................................................................................. 9
   1.4 Value of the Study .................................................................................................. 10

CHAPTER TWO .............................................................................................................. 11
LITERATURE REVIEW ..................................................................................................... 11
   2.1 Introduction ............................................................................................................. 11
   2.2 Theoretical Review ............................................................................................... 11
      2.2.1 Theory of Financial Intermediation ................................................................ 11
      2.2.2 Innovation Diffusion Theory ......................................................................... 13
      2.2.3 Modern Economics Theory ............................................................................ 16
   2.3 Factors Influencing Mobile Banking ..................................................................... 18
      2.3.1. Easy Accessibility, Convenience ................................................................. 18
      2.3.1.2 Security ..................................................................................................... 18
      2.3.1.3 less costly and much faster....................................................................... 18
   2.4 Determinants of Financial Performance ............................................................... 19
      2.4.1 Value Added Intellectual Coefficient (VAIC) and Financial Performance ....... 19
      2.4.2 Human Capital and Performance .................................................................. 20
      2.4.3 Structure of the Organization and Performance ............................................ 21
      2.4.4 Financial Capital and Performance ............................................................... 22
   2.5 Empirical Evidence ............................................................................................... 22
      2.5.2 International Studies ...................................................................................... 23
      2.5.1 Local Studies .................................................................................................. 24
LIST OF ABBREVIATIONS

CBK – Central Bank of Kenya

MFI – Microfinance Institution

SACCO - Savings and Credit Cooperative Organization

SASRA - Sacco Societies Regulatory Authority

SPSS - Statistical Package for Social Sciences

ANOVA – Analysis of Variances

ROE – Return on Equity

ROA – Return on Asset

IT – Information Technology

LOB - Line of Business

FOSA – Front Office Service Activity

BOSA – Back Office Service Activity

RTGS - Real Time Gross Settlement

EFT – Electronic Fund Transfer
ABSTRACT

In Kenya, mobile banking has been widely adapted and embraced in the recent years. It has enabled the transfer of money from one location or account easy and convenient. With this, financial institutions, among which include banks, deposit taking Saccos, normal Saccos and even microfinance banks have adopted the use of mobile banking to convey services to their clients. Mobile banking requires complex infrastructures that this institutions have put in place to ensure proper functioning of the system. The research therefore was aimed to investigate if the investment of this structures in deposit taking have in way contributed to their financial performance.

The research employed a descriptive research design where from a population of 164 deposit taking Saccos in Kenya, a sample of 20 was used to collect data. Secondary data of the number of customers that transact using mobile banking and amounts transacted annually were collected from the samples for the past 5 years. Data was analyzed and the findings indicated that there is indeed a positive relationship between mobile banking and financial performance in deposit taking Saccos in Kenya. Tests like regression analysis and correlation coefficient were used to determine the relationship between the variables.

From the study various conclusions were derived among which, the deposit taking Saccos should invest more on the mobile banking so as to increase the amount of money people can transact using mobile banking. The government and the mobile banking providers should reduce the transaction costs involved so as to encourage more customers’ to use mobile banking as it easy and convenient for the clients.
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study.
Technology has taken over the world today. The world has been made a global village with the use of technology and internet. Communication has been made more and more effective and faster. The banking sector has also advanced as they make use of the mobile and internet banking. The essence of mobile banking is to reduce the hustle associated with going to the bank to conduct transactions. When you are connected to the bank through the mobile, you are able to receive banking service using your phone at any place and time. You can be able to transfer money to other accounts, pay bills using your phone, do account inquiries from the same device and also withdraw funds from your account to the mobile phone or even in an agent near you (Firpo, 2009). In Kenya, we have seen the growth of mobile banking, especially with the growth of M-Pesa, a product developed by Safaricom to enhance mobile money transfer. Banks and other financial institutions have a come together with the mobile banking providers so that they could be able to provide mobile banking to their clients.

According to UN-HABITAT, they term a Sacco to be an organization that helps their members mobilize funds and provide them with loans for various reasons. The Sacco acts as an intermediary between those who have more fund looking for a place to invest and those who have project that need money to be accomplished (UN-HABITAT, 2010). A Sacco is a formal MFI that is regulated and licensed by CBK and SASRA. A Sacco aims to improve the lives of their members. This is through ensuring that the members are well compensated for the funds they have invested to the Saccos in form of interest on Sacco deposits. They also ensure that they can be able to provide loans when needed at an affordable rate to the members (Essays, 2015). Saccos are of different nature in Kenya. Some are deposit taking while others are not. One things that all this types of Saccos have in common is that they receive deposits from members and thus they need to be licensed to do so and governed o how to handle this deposits. The bodies that play this regulatory and supervisory duties are; the Central Bank of Kenya and the Sacco Societies Regulatory Authority (SASRA). Saccos are financial providing institutions that have come up so that they could be able to provide financial products and services to their members especially services like savings and credit. Some Saccos have also gone an extra mile so that they can provide other services like money transfer.
services, insurance services (especially for health and motor vehicle insurance), Indemnity covers among others.

In order to better provide this service, Saccos generally have also employed the use of telecommunication to improve their services through mobile banking and internet banking so that they can be able to provide their members with convenient and easy payment methods. Internet banking is a web-based service that allows clients of financial institutions to transact online. Members are able to make payment and receive funds when need be by the use of mobile banking and internet banking especially when it comes to making payment for their savings and repayment of their loans. As technology has advanced, also banks have advanced to offer online banking as they use internet and technology. The use of online banking has ensured that transactions are real time which has led to banking services being faster and easier (Cadwell, 2017). With internet and mobile banking, one can access information anywhere that they want to access from as long as they are connected to the Internet. With the use of mobile banking, life has been become simply convenient and easy to operate.

Many research documents have been conducted especially in Kenya to determine how mobile banking affects financial performance of financial institutions. Kithaka, 2014 did a study to investigate how financial performance of commercial banks in the country are affected by the use of mobile banking. Other researchers with similar studies include Mutua, 2018 and Kathuo 2015. Saccos are also financial proving institutions that have employed mobile banking on a large scale and it is thus important to be able to study what are the effects in terms of financial performance that have risen due to the usage of mobile banking by Saccos in Kenya.

With this, it is important to be able to evaluate and measure which benefits have financial institutions gained from employing mobile banking. Thus research helps us better understand the impact of mobile banking on the financial performance of Saccos in Kenya.

1.1.1 Mobile Banking
Mobile banking can be termed as an internet based facility that is provided by financial institutions such as banks, to enable their clients conduct bank transactions, via mobile devices (Surbhi, 2017). Clients are able to execute transactions like; money transfer, saving, borrowing and even buy goods and services using mobile banking. Anyone with
a mobile or tablet device can be able to transfer money and use other mobile banking services. Mobile banking in Kenya has seen tremendous transformation over the years. It has evolved from just transfer of money from one point to another to even enhancing lending like for M-Shwari and providing savings like M-Shwari Savings. We can really see that M-Pesa in Kenya has transformed life tremendously. Money transfer has been made easy and faster unlike how they use to be a couple of years ago. It can be termed as a Cinderella story where something unimaginable happens and all transactions can be done without even doing paper transfer (Bolumar, Esteve, & Garcia, 2012).

When M-PESA was developed, they did not know that it was going to be a basic commodity to the ordinary Kenyan. It was deployed to help the microfinance institutions be able to improve their businesses like collection of loan repayments and deposits at a lower cost and maybe reduce the interest rates. Handling cash was a bit hard as it had its own challenges including theft. M-Pesa thus was aimed at reducing such costs of handling cash where M-Pesa money goes directly to the bank. (T, 2015). Some of the advantages that are associated with mobile banking include; saves time when it comes to money transfer, it provides contingency as one can do the payments or send money from anywhere and at any time, thus can be said to bring comfort. Mobile banking has enhanced financial inclusion by making the un-bankable bankable. M-Pesa also has numerous agents across the world which thus provided ease to access to mobile banking services. Safaricom has partnered with many organizations like banks, retail shops etc. so as to be able to make payments easy for their clients. Individuals no longer need to carry money around in order to pay for goods and services. This has not only increased efficiency but also theft has gone down as people no longer walk around with hard cash.

Saccos in Kenya have also not been left behind. They have also partnered with Safaricom and other mobile banking service providers like Airtel to be able to provide better services to their clients. Members are able to make payments (deposits and loan repayments) through the use of M-Pesa. The service has not only improved collection from members, it has also reduced irregularities like theft that was previously experienced when members use to pay cash to tellers. The use of M-Pesa has seen a lot of business malpractices be reduced. This is because mobile banking has been able to increase transparency in transactions. Money is does not exchange hands as they are
done through transfer from one account to another. M-Pesa has also reduced the processes involved in dealing with paper work, thus can be said it has reduced bureaucracy and other time wasting factors (Kidula, 2015).

1.1.2 Financial Performance

A company should always prioritize its financial performance as it is crucial for raising the market value. It is also necessary to acknowledge that financial performance is important as it contributes to the development of any sector in the economy especially the financial sector which help in streamlining the operations in the market. When there is a good financial system, things like interest rates and inflation can be able to stabilize and other market variables can move smoothly. We can thus say financial performance is a key aspect in any economy in stabilizing the functions and operation of that given market (Khan, Nouman, & Imran, 2005).

Financial institutions are profit making institutions. They need to make profits so as to be able to not only run the operations of the institution, but also to compensate savers for their money, i.e. the stockholders and stakeholders at large. To be able to determine the profitability of any financial institution, we ought to look at their performance. Various indicators are used to measure performance of any institution. When we are specifically talking about financial performance, we try to see how an organization is performing in those specific indicators as compared to either a well performing company in the market or the aggregate performance of the market in general. In finance, various ratios are used to be able to measure the financial performance of any company. Among those indicators include; Price-to-earnings ratios, the firm’s stock beta and alpha, Tobin’s q-ratios among others. This indicators are used to assess both the short and long term financial health of the organization. When we are analyzing the Tobin’s q of an organization, we are trying to analyze how attractive is it for people to want to invest in it. We usually try to determine the market value and the replacement cost for this organizations for their financial performance evaluation (Harker & Zenios, 2000).

When we talk about financial performance generally, it is termed as the extent to which financial objectives are being achieved and is a crucial aspect of finance risk management (Verma, 2017). We can also term financial performance as the process of monitoring and evaluating the results of a firm's policies against their operations in
money terms. Financial performance is used to assess the overall financial health of a firm over a given period and can be used to analyze the performance of the firm with that of similar firms across the same industry or compare industries or sectors in aggregation (Verma, 2017). The stakeholders of the organizations, i.e.; Managers, employees, investors, the government etc. are interested in the financial performance of the organization over time and the financial position of the organization as at a particular point in time. A firm to be successful it has to be an all-round entity in various elements like the customer service they deliver. They have to know their customers well and provide best service so that the customers can be fully satisfied. The organization has to also assess its financial status and how it is performing in the markets. It has to assess if it is getting profits and worthy returns for their investments. When focusing at the market, it has to take into consideration their share price as that is how the market perceive its net worth. The organization need to also look into their human personnel matters. It has to ensure that the employees are well remunerated and motivated to do their jobs well. The organization should not forget to also train and develop their employees as they are their key assets. Lastly an organization needs to always be competitive through their continuous innovations and new business ventures. An organization should always look for new avenues to tap their market segment and in doing so, they always need to come up with new products and services or new ways to make the customer service more efficient and reliable (Kithaka, 2014).

It is important for firms to always manage their performance as it is crucial for its survival. Performance can be driven by strategy of the company, how the strategy is executed and most importantly the environment under which the organization is operating. Good performance will ensure that the company makes enough profits which will helps them to; pay dividends to their members, run the day to day operations of the organization, embark on projects that will generate future cash flows to the organization, be able to pay taxes to the government etc. It is therefore important that the organization keep in mind their obligations to the stakeholders and how well it can be able to survive in this competitive market. Saccos are no exception, as they do have obligations that they owe their members and also have employees to pay salaries. They thus need to be able to manage this for dimensions in order to remain relevant in the environment, gain competitive advantage and retain a good image to their members.
In an organization, the business’s Key Performance Indicators (KPIs) are used as tools of monitoring and evaluating progress in the key areas of company performance. The KPIs do give the organization a general view of the financial sanity of the business. Getting an in-depth provided by these indicators enables the management to be proactive in making necessary changes in underperforming business units or arrears so as to prevent a potential serious lose that may occur. In conclusion, the indicators allow the organization and any business at large to gauge the effectiveness of any efforts employed by the employees. With doing this, the business will definitely sure a long model that will ensure its growth, sustainability and survival in this dynamic environment. The organization will also be able to think outside its scope and invest more in profit making ventures thus increasing its business value (Gerber, 2018).

It is necessary when determining the financial performance of any organization, one needs to first identify and understand the overall impact that the various financial realities represented by the KPI numbers that are used in the organization. Once you have identified indicators, the organization is able to best put in place corrective measures that will be able to enable the organization realize its financial success. Various aspects like how the product should be, branding the organization, putting in place better processes that will reduce bureaucracy and streamline activities and policies that are favourable to the organization, are among the corrective measures an organization should employ (Gerber, 2018). When assessing the financial health of the organization, it is important to also look at individual elements of financial generation and disbursement. Among them include looking through the inventory management, managing the debt and the cash and cash equivalents, assessing the capital and the revenues that the organization generates, monitoring the companies expenses against the incomes and many more. All this are usually analyzed through ratios that the companies should manage through their financial and management accounting processes.

1.1.3 Mobile Banking and Financial Performance

Mobile banking is the process by which financial institutions provide financial products and services with the help telecommunication devices like mobile phones. The scope of offered services may include facilities to conduct bank and stock market transactions, administer accounts and to access customized information. Mobile banking promises
to increase the efficiency and outreach of microfinance loans in developing countries. What makes microfinance institution different or why they came into existence is so as to be able to provide their clients with financial services like loans at any time and place which are timely (Gant, 2012). Mobile banking could be a solution to reach poorer people and more people living in the rural areas. The main aim of mobile banking is to generally bring efficiency in banking services like repayment collection and loan disbursement. In bringing efficiency, the transacting costs should also be at the minimum so that the clients are not straining in using this products but rather are getting value for their money. Clients should also be able to get reminders of when their payments are due so that they can better plan and their financial obligations and not to fall into bad debt category with their financial providers (Gant, 2012).

Mobile Banking has provided millions of people with financial solutions especially in this dynamic environment. People have been able to access financial services faster and this has also led to growth of other business that has made use of mobile banking. Transactions have been made easier as one can pay for goods and services with just a touch of a button. Over the years in Kenya, we have seen how mobile banking has grown from being just a product of microfinance institutions to a day to day product even in an average mine life. We can thus positively say that mobile banking indeed presents an opportunity to the banks in Kenya as it will sure or has we have seen has transformed their services (Linington, 2018). This is because financial providing institutions can be able to transfer and collect funds through mobile banking. It has led to profit making as it has reduced the costs associated with bank transfers, and also has reduced cases of corruption and embezzlement of funds by employees. In addition, mobile banking is a 24 hour system thus providing convenience to clients who cannot access banks during normal banking hours. This has led to improved financial performance as organizations are able to collect more and make more profits due to reduced costs.

Mobile banking has also provided competitive advantage to banks and Saccos as it has taken advantage of the technology provided by mobile banking providers. This has led to reduction of paper work thus saving on expenditures and improving their incomes.
1.1.4 Saccos in Kenya

First and foremost, like any other financial institution, Saccos in Kenya act as intermediaries between the borrowers and the savers. Saccos are financial institutions that offer savings and credit services to their members at an affordable interest rate. Saccos in Kenya offer various credit like the emergency loans, development loan, education loans among others. Usually, this loans are secured by member deposits or they look for guarantors from the fellow Sacco members. Unlike banks, the old model of Saccos never use to secure their loans through collaterals. They use to use other alternative collaterals like home equipment to secure the loans. But has times have changes, also Saccos have changed. Nowadays Saccos use collateral like title deeds and the chattels mortgage to secure the loans. This was necessary due to the high default that was being experienced.

In Kenya we have two types of Saccos; some operate as FOSA Saccos While others operate as BOSA Saccos. For the front office Saccos (FOSA) they are allowed to undertake deposit taking. This means that they are licensed and regulated by the central bank and operate like normal banks. The back office Saccos usually are not mandated to undertake deposit taking. They do not have walk in cashiers where members go to deposit or withdraw funds over the counter. Members can walk in and deposit or withdraw funds from the cashier. They are able to mobile finances from those with surpluses and offer with those with investment opportunities to be able to develop themselves. This process helps money to follow in the economy and the borrowers are required to pay interest for the borrowed amounts while the savers usually anticipate returns at the end of the period for their savings.

Saccos in Kenya also has helped in financial inclusion and financial deepening. This has been achieved through offering financial solutions to members of the society who cannot be able to be banked with commercial banks due to their formalities. Saccos in Kenya has over the years’ transformed people in the economy by empowering them and giving them an alternative banking solution to that of commercial banks. Saccos are able to reward their members through dividends and interest earnings on their savings annually which encourages people to save more.
1.2 Research Problem
Mobile banking has really transformed lives and organizations in Kenya. Many businesses have been able to also come up due to the introduction of mobile banking in Kenya. Members of financial institutions are able to receive and make payments through mobile banking, check their current balances through mobile banking, borrow etc. Many research documents have been done to determine the how the use of mobile banking has impacted the performance of Commercial banks in Kenya especially in terms of growth and profitability. One of the researchers, Monyoncho (2015) conducted a research where he tried to examine the relationship between banking technologies and financial performance of commercial banks in Kenya. In her study, she concluded that Mobile banking is most likely have a big effect on the banks profitability under study as their operations are normally streamlined and smoothened by the convenience provided by mobile banking and how it helps customize services’ needs (Monyoncho, 2015).

Saccos are also financial institutions in Kenya. They also offer financial services like savings and credit to their members. Some Saccos have gone an extra mile to provide other services like investments and insurances to their members like Kenya Medical Association Sacco, that is a Sacco for doctors and do offer insurance solutions to their members through the Tiba agency. Saccos generally have also employed the use of mobile banking through the use of M-pesa to facilitate collection of payments and savings from the members. Saccos have also started using mobile banking services to be able to offer mini statements to their clients and also disburse small amounts of loans through these services. It is thus important to investigate if the use of this mobile banking has had any effects in their performance and more so financial performance. The research therefore wants to establish if there is truly an impact in the profitability of deposit taking Saccos due to the use of mobile banking.

1.3 Research Objective
The research objective for this research is to establish if there is an effect in the financial performance of deposit taking Saccos in Kenya due to the employment of mobile banking in this institutions.
1.4 Value of the Study
The study will be useful for Saccos in Kenya in that it will provide a clearer picture of the impact mobile banking has had to their financial performance. This will help the Saccos to be able to engage more in mobile banking and if possible educate their members on the importance of mobile banking.

The study will also provide knowledge to future scholars who may want to do a research on similar topic. The research will have filled a gap but may also open up another gap that may necessitate a research to be conducted so as to fill the gap. The research will also contribute to more knowledge to those who may wish to have a better understanding of how Saccos in Kenya operate and how Mobile banking has helped transform the industry.

The government of Kenya and various government agencies can be able to benefit from this research in policy making and implementations. The past few years, the country has seen various changes in policies and laws when it comes to mobile banking, especially in the tax category. The government can be able to use this research to enable it make more favorable policies for both the financial institutions and the mobile banking users.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter, literature review, it discusses the relevant information that have been researched and documented which is similar to the topic under study. It summarizes all the key literature that have been done by other authors either of the same field as this study or that of a different field and for different purposes. The specific areas that will be discussed include summarizing all relevant theories that support this study, the empirical review from other authors and a conceptual framework that will help show the linkage of the variables under investigation.

2.2 Theoretical Review
This chapter aims to discuss the relevant theories that are going to guide the study. Discussions on theories that govern the operation and performance of financial institutions will be elaborated in this section. In particular, we shall focus on financial intermediation theory, which tries to look at how financial institutions act as intermediaries between the units with surplus and the deficit units so as to be able balance the economy and bring stability. The chapter also aims to also discuss the modern economics theory which negates that for businesses to remain relevant and make profits, they have to comply with modern. The chapter also tried to discuss the diffusion innovation theory that explains what causes an idea to be easily adopted and diffuses in a certain environment or within specific group of people.

2.2.1 Theory of Financial Intermediation
This theory was developed around the 20th century with the works of Gurley and Shaw of 1960. Financial intermediation came as a result of aiming to reduce costs that are associated in finding the consumers. The theory rides on the fact that the agents a that are now the intermediaries have an edge in terms of information of who does what the products or service, where and what time. In financial intermediation we thus say that there is an agent between the suppliers and the consumers that have more information about the two and is willing and able to link them but at a cost, which more often is incurred by the consumers (Andries, 2009). Financial intermediation has developed, and more sub theories have also emerged among them include the modern theory of financial intermediation. The modern financial intermediation tries to explain the
various factors that exist in the market and how they affect demand and supply in the economy. They also explain how various government policies in one way or another affect how intermediation in the market works (Andries, 2009). When we look at the term intermediation generally is the process of linking the buyers and sellers of various products and services. Financial intermediation on the other hand, we are looking how investors of capital and the people with money in surplus can be linked together i.e. how many can be channeled from those with excess to those in the economy who are having a deficit but need money to run projects that will in turn generate returns (Hester, May, 1994). So we can say is how financial institutions provides a link between the individuals with surplus money and those with deficits.

Various authors have discussed and elaborated more on this theory. Andries (2009) conducted a thorough survey where he wanted to investigate the two theories of financial intermediaries and financial intermediation. From his research, he found out that when we are looking at modern theory of financial intermediation, we try to investigate at what are the functions of this intermediaries in the market and how they contribute to the economy in terms of their linkages. Modern financial intermediation also tries to explain the role of the government in the economy, and its effects in the forces of demand and supply (Andries, 2009). Financial intermediation theory has greatly helped in defining and explaining what financial intermediaries do in the market and how they help achieve a durable and sustainable growth in the economy. The theory also tries to explain the role of the central bank through its intermediation and the controls it has in the market (Andries, 2009). Financial intermediation generally in the economy has led to reduced costs that are associated with transactions and acquiring information about the lenders and the borrowers. The costs that are associated with transactions used to be high because of the information asymmetry that existed between those with surplus and those with deficit, or between the institutions and the consumers of their products (Chumba, 2015). Other than reduction of these costs, financial intermediation assists in attaining market efficiency function, helps in provision of liquidity and also in diversification of risk in assets.

Another author who has extensively done a research on financial intermediation is Mitchell (2005). She conducted a study of how in a structured market, how financial intermediation can affect the value of an organization. From her study, she argues that
in a market where one party has more information than the other, people are willing to invest and get greater return and also share risks. This is typical especially where banks have more information on how to generate revenue than ordinary people. They can thus encourage people to save and the banks to lend money to those who do not have and in return get enough profits for themselves and enough to compensate the savers. But if this information asymmetry was not there, individuals will opt to invest in their own ventures and incur risks themselves (Mitchell, 2005). She concluded that in order for an organization to be able to create value, they need to combine various securities that may be able to generate profits. Combination of securities occurs when an organization invests in a portfolio. Not all assets may be profitable but they can be able to cancel each other’s loses which will in return generate revenue. Organization should better understand their type of clients and tailor make or customize the products to better suit the clients’ needs. They should also understand their business operations and invest in a portfolio that can also meet their needs (Mitchell, 2005).

Financial intermediation helps in transfer of money to investors who in turn generate revenue through interest accrued for the institutions and the savers are able to be compensated in form of interest earned. Finance has seen two phases of financial intermediation, which is the traditional and the modern financial intermediation theories. This theories have their own arguments as for the traditional intermediation theory, it tries to explain how we have information asymmetry in the market which lead to high transaction costs. This theory is best suited for those organization that deal with insurance policies and deposit taking like for the deposit taking Saccos in Kenya, but we have seen that this theory cannot be relied on in the recent years as times have changed (Allen & Santomero, 1996). Over the years, it is true that we have seen a remarkable decline in the costs that are associated with transaction, but this is because there has been an increase in intermediation in our markets and even in the financial institutions. An example is how in the insurance sector, the number of agents that help link the insurance product providers and the insurance cover consumers.

2.2.2 Innovation Diffusion Theory
One of the oldest social theory is that of the “Diffusion of Innovation Theory” (DOU) that was initiated and widely researched in 1962 by E.M. Rogers. The theory was develop to be able to discuss how an idea can be able to be generated and over time the
idea can be adopted and spread to a certain system or a population. In time, through diffusion, the idea can be adopted by people or the population and make it as part of their (LaMorte W. W., 2016). When we talk about adoption, it generally means the act of getting used to using or doing something over time, for example, in Kenya, 10 years ago, when M-Pesa was launched, it was foreign and people had to take time to get used to it. 10 years later, M-Pesa is part of our day to day life, all transactions we do, three quota of it involve M-Pesa. The major key to adaptability or adoption of any idea is that people need to take to get used of the idea, know how it works and how it impacts their lives. That is when adoption can be able to occur, only through a process can diffusion be.

In any environment, we need to understand that a new idea or product or a behavior in some instances, takes time to be able to be accepted by a set of people. There is a process where people go through to bring themselves to accept and adapt those new ideas (LaMorte W. W., 2016). People do experience a culture shock when they are exposed to new processes, sometimes, people even resist the change that the new things bring to them. Through the study of people, we have come to appreciate that people adopt new ideas at different stages depending on the characteristics that they possess, for example; the people who will adopt an idea at initial stages and those that will adopt it at later stages have different characteristics. Hence, it is important for the organization that are planning to adopt any idea or innovation to take time and understand the kind of clients and people they have as customers so that they can be able to better initiate and complete the adoption process successfully. Lack of such an understanding from the organizations side will hinder the takeoff of any innovation which in return may cause loose of customers and money in general. From literature, we have five categories of how a population can embrace and fully accept an innovation. Through statistics, generally, majority of the people tend to lie in the middle so it is important as an organization or a developer to understand what characteristics this population have and create a product or innovate a product that will target the majority of the population (LaMorte W. W., 2016). During any innovation process, we need to acknowledge that different strategies can be employed so as to bring on board the different customers that adopt ideas at different stages.
Some authors have elaborated more on this theory. Dearing, 2009 did a research on how intervention development can apply diffusion of innovation theory. He reviewed “diffusion theory and focus on seven concepts—intervention attributes, intervention clusters, demonstration projects, societal sectors, reinforcing contextual conditions, opinion leadership, and intervention adaptation—with potential for accelerating the spread of evidence-based practices, programs, and policies in the field of social work” (Dearing, 2009). LaMorte (2016) did a discussion of this theory where he also elaborated the stages which one undergoes when adopting an idea. From his research he concluded that in a person is to accept an idea and make it as a way of life, he need to be made aware of the importance of that innovation and what benefit it may derive to him or her if he/she does use the idea. It also means that a consumer needs to take time and appreciate the merits that are present in an innovation before they can accept or reject an innovation (LaMorte W. W., 2016). We have seen numerous companies before they launch a product they does take an initiative to sample the products and give them as samples for consumers to test them before they launch them into the market

The research also tried to analyze the various factors that will be able to accelerate or deter the adoption of any new innovation. Among the factors that he also discussed is how compatible is the innovation with the needs or lives of the users. Any innovation should take into account if the innovation will be able to meet the existing needs of the consumers. The innovation should also have a relative advantage against what the consumers are using. For people to adapt new ideas, it should either make their work easier or add value to them, if it meets any of the two criteria’s that is when they can see the need of adopting the new idea. The innovation should also be simple to understand and comprehend by the users. Naturally, human beings tend to avoid things that may create a level of stress in their lives. This means that the innovation should not be too complex to make the consumers avoid using it. The innovation should also but in a piloting phase to see how receptive the consumers are. Last but not least, the innovation should always undergo numerous maintenances and upgrades to be able to remain relevant in this dynamic environment.

Despite the extensive use of the DOI in the field of social sciences and that of the health sciences, the theory is still with lots of critics refuting the theory. Lundblad (2003) did
a review of this theory on his research where he did a critic of the innovation theory, looking how it is perceived to be against what organizations actually do. From his research, he concluded that there is a gap between what is actually thought or what is in paper and what actually is conducted by the organization. The research was based on different findings that were deducted from various researches that had been conducted by different academicians. From their discovery, in practice, people actually need an incentive before they can actually engage in the consumption or adoption of any innovation. They noted that just a mere belief that an innovation is important is not enough, consumers need to actually see it working and see the impact first had before they can adopt an idea which in the end does lead to diffusion (Lundblad, 2003).

2.2.3 Modern Economics Theory
Earlier theories of like the classical economic theory, gave emphasis on production and the invisible hand which is the government and how it runs the economy and achieves the levels of demand and supply. As for the modern economic theory it separates itself from such ideology (Vitez, 2018). Modern Economics does try to find out what is the role of demand and money supply in the market and its effects on monetarism and free trade at large. Modern Economics can be looks as a theory that studies macroeconomics in one economy (Vitez, 2018). From his study he appreciated that indeed economics changes over time, and all the stages of economics have built the next stages. He indicated that modern economics is just a type of economics that emerged after the classical economy was no longer relevant, but its concepts were important for there to be modern economics (Vitez, 2018). It is important to note that the two economic school of thoughts have a distinct relationship.

Classical economics tends to focus on production of goods and services and how different interests in the market try to mobilize resources and direct them to areas that will yield them great interests i.e. through investments. Various studies were conducted during the 19th century as they tried to analyze how best resources can be utilized in the given economies. Some of the studies that were being conducted included the investigation of how collective people would allocate and utilize resources as opposed to how an individual would. Adam Smith did a study of how people are individualistic in nature and if they knew they could benefit more in isolation they would so as opposed
to doing things in groups. From this studies, it open up a gap on modern economics that people would do research on.

One of the most popular and well known modern Economics theory is the theory of Keynesianism even though it has its benefits and shortcomings, the author focused on investigating the role of demand and supply; i.e. what happens to the economy when there is excess of supply or undersupply of resources. Initially, Keynes thought the government ought to step in and help the market run so as to initiate or rejuvenate economic movement. By this, he had the intention that the companies that are already grown and profitable as they continue their natural course will remain so and the young infant companies will also grow too. However in his ideology, Keynes did not take into consideration the employment of a certain population, and did not give a clear logic if indeed full employment could be achieved in this scenario.

Another branch that did emerge from the modern economics theory is money supply economics. In money supply economics focuses on how the central bank can manage the interest rates charged by the financial institutions in the market and the amount of monies in supply in the economy in general. This theory is crucial and applicable as it helps in growth of the economy and manage the inflation to a manageable rate for the consumers or maintain it at bear minimum. This also helps cap the rates that can be charged in the economy that is the lower and upper limits which inflation and interests can reach so as not to burden the market participants.

In economics, we also have the free trades and open markets that exists between countries. This have also been studies and classified as forms of modern economic theories. For any country to prosper and have an economic niche when compared with other countries, it has to involve itself with trade with this other countries. As they are involving themselves with trade, they should ensure that they balance their imports against their exports so as to have a balance in payments. Excess in one has an effect in their trade positions, strength of their currencies against the foreign currencies and also their debt management. A country that can be able to find balance between imports and the exports, achieves various benefits among which includes growth of the local markets and a stable economy in general. We can say that there is no one concept of modern economic theory that has the best results, one needs to combine several in order to accomplish what is best and beneficial for the country.
2.3 Factors Influencing Mobile Banking
Mobile banking has grown tremendously in Kenya over the past decade. This has increased due to the undeniable benefits that are being enjoyed by not only the mobile banking service providers but also the customers. Some of the benefits or what has made the use of mobile banking grow include factors like, Accessibility, Convenience, Security, Cost and the Speeds that are provided by mobile banking.

2.3.1. Easy Accessibility, Convenience
Mobile banking has made accessibility of financial services both convenient and easy. The designs used in making mobile banking and the instructions applies are easily understood by the users, thus we can say that mobile banking is customer friendly. A person can do bank transactions from any part of the country provided they have access to a phone and have linked mobile banking to their phones. Clients need not to go to a bank in order to withdraw or deposit funds or even transfer monies to other parties. All this can be done with a touch of a button at the comfort of their home.

2.3.1.2 Security
Security in banking is one the most important factor that banks needs to assure their clients. In the recent past, security has been an issue as numerous clients have lost their money through scum and other fraud techniques. With the advancement in technology, security also has proven to be a tough challenge to deal with. Even with this, it is safe to say that mobile banking has provided some form of security for members. It has also improved because clients need not carry money around when they want to do other transactions like shopping or even pay for commodities like food. They can always do it using their phone. An example is the use of “Lipa na Mpesa” a service provided by customers so that clients can be able to transfer their money using mobile phones.

2.3.1.3 less costly and much faster
Mobile banking is indeed less costly. Clients are able to transfer funds at an affordable rate when you compare those transactions by the bank. In the bank, doing an RTGS does take 24 hours and the cost is very high. For an EFT the transaction takes a minimum of 48 hours to reflect in the other account but also there is a cost that is attached to it and the time it takes is also quite long. For mobile banking the transactions are usually instant, once you transfer money, it reflects to other persons account instantly or they receive an M-Pesa message instantly. It is thus true to say that the
mobile banking is faster and is less costly when compared to going to the bank to make the same transaction.

2.4 Determinants of Financial Performance

The process that institution especially those that deal with banking service, are able to meet its financial objectives by accomplishing all relevant financial needs the institutions needs as it also takes into consideration of managing financial risks is called financial management. It can also be termed as the process of evaluating the firm’s financial performance by analyzing how they manage their policies and operations and quantifying the results in monetary terms. When we analyze the financial performance of any organization, we are simply trying to investigate how healthy are they in financial terms while considering a time frame or period,, and also comparing their financials with those of other companies either cross sectional or those that are the benchmarks.; the factors we consider include

2.4.1 Value Added Intellectual Coefficient (VAIC) and Financial Performance

For any business to be termed as a successful business, it has to add value to its investors. In any organization, performance is a key and they measure this performance by assessing the value that has generally been created (Nawaz & Haniffa, 2017). An organization needs to assess itself and see what value it has to the consumers as well as also assess the employee’s value creation to the organization. In the banking sector where it is a knowledge intensive business, the value that is created is derived from both the Intellectual Coefficient(IC) and the physical assets possessed by the institution. For Saccos, values can be explained from the services provided to the clients and the costs associated to those services. Employment of mobile banking can add value to the clients by making the services easily accessible at affordable rates.

IC can be of two kinds, the Human IC and the Structural IC. In order to understand performance is driven by IC, it is necessary to investigate in general how the organization is in terms of their intellectual coefficient before we decide to focus on specific units of the organization. It is said that if a firm has a high score in the value added, the more its value and also this gives it a competitive advantage over other companies that are in the same line of business. Value added intelligence coefficient can be used to determine the return on asset of an institution, for the ROA to be high, the VAIC also needs to be high (Nawaz & Haniffa, 2017).
2.4.2 Human Capital and Performance

Human capital is a term used to measure of the human resource available in the organization. The employees who work in an organization are a source of capital to the institution as they do render services to the institution which enables the organization to generate revenues. This therefore means that the employees are a type of asset that an organization possess. The organization through the human resource should employ employees who have gone through proper training and possess the right knowledge, skills and attitude to be able to undertake tasks in the organization. The employees to be able to find the motivation to work, they also need to be properly motivated and mentored by the organization.

Human capital enables an organization to be able to compete with other firm both in local and global markets. Human capital is determined through the level of knowledge and skills that the employees possess in an organization. When an organization has individuals with great human intellectual capacity (CI), they are more likely to be more innovative and entrepreneurial thus like to better financial performance of the organization. In an organization, we can say that an organization has a high human intellectual capacity if the employees have continuously accumulated relevant information, skills and knowledge over time. This three elements helps them to be able to make good decisions in the work environment which will reduce mistakes being done at the work environment. This leads to increase in performance which gives the organization a competitive edge in the market (Nawaz & Haniffa, 2017). When we narrow the scope to banking sectors, we need personnel who are able to better understand the needs of the clients and translate to the services they provide. Thus developers of mobile banking should be able to develop systems that can be easily understood and used by the ordinary customers.

Some theorist believed that when in an organization we increase attributes like abilities, knowledge and skills of workers, the performance will also increase. Some of this theorists include Becker (1964) and Schultz (1961). Employers should be able to better develop their employees in this three areas. As it also translates to personal growth for the employees who in return will end up being motivated to work and provide better results for the organization. In the case of Saccos more so the deposit taking Saccos, the employees need to have better knowledge and skills of their job descriptions, which
is also the convectional knowledge and specifications and also have better understanding of the clients they deal with. The employees should have a good knowledge the environment, legal and other regulations governing the financial sector, so that they can be able to maintain proper records with the law so as to enhance the reputation and credibility of the institution in the market place.

2.4.3 Structure of the Organization and Performance

When we define the structure of the organization, we simply mean how activities are organized in the organization. The main reason why organizations need to develop a good structure is so that they can be able to streamline their operations in a way that can help them realize their goals and help them grow as they head into the future (Friend, 2018). This therefore means that the type of organizational structure an institution adopt, helps to define its growth and also how it is going to perform. The structure an organization adopts also helps to define the hierarchies that exists in the organization. Who reports to how and how during decision making, how the information flows. For example if the structure is decentralized, usually information flow is faster and decision making also is faster thus promoting faster response to the clients and faster adoption of a service or a product that needs to be launched.

The organization should be able to take into account various factors that affect them so that they can be able to put in place a proper structure that will enable them compete properly with other industries and firms. Such kind of factors include the type of clients they serve and the environment they are working. Clients generally have different characteristics depending on their needs and other demographic features. The organization should be able to study and understand who they serve as clients and what are their expectations before putting in place any kind of structure. The environment is also ever changing and various elements of the environment are also not constant. The organization should thus analyze the environment and understand which elements affect them and what how they affect the kind of structure an organization should have.

Organizations need to understand their mission, vision and generally its operations so that it may be able to develop an appropriate structure to help its growth and performance. When an organization has a good structure they are better equipped to leverage knowledge, as this will enable the stakeholders to have more confidence in the organization and they can be able to manage their risks. An organization should provide
a good culture and environment to enable its employees grow and develop themselves. A good organization culture should support their employees through various ways like, offering them trainings, encouraging furthering studies and many other ways so that the staff can acquire new (Nawaz & Haniffa, 2017). For the deposit taking Saccos it is necessary for them to be able to put in place proper structures that can be able to help them maintain and keep tract of their records which include those of clients’ transactions and their creditors’ records too. For this to happen, the deposit taking Saccos need to put in place structural process that may affect their firm performance, in terms of collection of interests and the principal amounts paid by the clients. The structures of the organization should be able to support technological changes in the organization.

2.4.4 Financial Capital and Performance
For anything to be contextualized in an organization, resources must be employed. Resources can be in terms of human resource or financial resources. Organizations need to have a financial muscle to be able to effects and execute operations in the organization. As for our study, financial institutions need to employ the use of mobile banking. This mobile banking has to be launched by the organization. The organization has to use resources in terms of money to be able to install it and maintain the system when it is in operation. It has to also employ employees that understand how mobile banking works so that they can continuously operate the mobile banking systems. An organization should be able to budget their resources and invest others so as to get generate returns which will enable them manage both their day to day operations and the long term commitments that they have. This will help maintain the operations of the business and play interests and dividends to their stakeholders, i.e.; the investors of capital and creditors. We can thus say that capital is a necessity in an business, and that the managers and employees should be able to know how best they can utilize this resources so as to generate more revenues for the organization so as to ensure its sustainability and survival in the market environment.

2.5 Empirical Evidence
Under this topic we shall discuss similar research that has been conducted by various authors on similar topics. We shall discuss research done both local locally and internationally so as to be able to better understand where the gap in our research is.
2.5.2 International Studies

Shazida (2017) conducted a similar research which aimed at analyzing how financial performance of banks which are in Nigeria are affected by mobile banking which they have employed to ease customer transaction. So as to be able to know if indeed the the commercial banks in Nigeria have benefited from the use of mobile banking, the researcher employed simple random techniques in selecting 22 commercial banks that were under study. For data collection questionnaire was prepared and employed to collect relevant data that was used to derive the conclusion of the research. The researcher made use of the descriptive statistics to present the data where he used simple graphs and charts to analyze and present the findings of the study. From the study, conclusions that where made is that for sure the financial performance had improve since the deployment of mobile banking in their system. The study recommended that more financial institutions should embrace mobile banking. This is because through mobile banking, more clients can be able to be served and it will lead to financial inclusion of more numbers who may not be able to go to banks. Also when we factor in that majority of the population has access to mobile phones, mobile banking becomes more convenient and easily accessible to many.

Chiinze (2017) conducted a study in Zimbabwe which aimed at analyzing the financial performance of Central Africa Building Society (CABS) after adapting mobile banking. The research aimed at investigate what impact does mobile banking have on financial performance, using CABS a case. In order to establish the relationship between financial performance and usage of mobile banking, it was necessary to look into the specific risks that are involved in using mobile banking. Looking into the specific factors that affect performance both internal and external was another research objective for the study (Tinotenda, 2017). The advantages that are associated with the use of mobile banking in CABS was also investigated so as to determine if it has any positive impact to performance. The research employed a descriptive research design to collect and analyze the data from the sample size. As for the sample size, he selected 28 participants from the population of 40 participants from finance, internal audit and electronic banking departments in CABS. From the study, results derived were that the adoption of mobile banking affects the performance positively and that the risks that affect mobile banking the most are fraud and money laundering. The study had recommendations for CABS to increase their investment in mobile banking. CABS
should make a more active effort to educate its clients about the benefits of mobile banking and hence the stand to benefit much more from the adoption of mobile banking (Tinotenda, 2017).

2.5.1 Local Studies
Kithaka (2014) did a research on how financial performance of commercial banks in Kenya is affected by the employment of mobile banking. The author did a cross sectional descriptive survey so as to be able to investigate the relationship that exist between this two variables. The study adopted a census, where they sampled all commercial banks in Kenya that have employed mobile banking. The study used secondary data where it considered all audited financial statements for the various commercial banks. The data that was collected was analyzed by the use of SPSS and also the ANOVA. After the study, the author concluded that mobile banking positively and significantly affects the financial performance of commercial banks in Kenya.

Amanda (2012) in Kenya did a study which aimed at focusing on the microfinance institutions and how positive has the use of mobile banking been in their financial performance. The population for the study which was also the sample was the microfinance banks that are there in Kenya. Microfinance institutions in Kenya have come up in the recent years and they have greatly helped in increasing both financial inclusion and deepening. The research conducted a regression analysis so as to be able to determine if indeed there is any improvement in terms of financial performance for this microfinance institutions as they make use of mobile banking to better serve their clientele. An ordinary squares regressions analysis was employed on the research to determine the effect that the use of mobile banking has on this institutions in Kenya. Based on the findings, Amanda made suggestions on how mobile banking has zero significant on the effect of loan repayment. However, the results did show that statistically, mobile banking has a significant effects in that it raises the cost of personnel and of operating MFIs. Mobile banking and Microfinance institutions have both positively contributed to the financial deepening and inclusion in Kenya.

Monyoncho (2015) did a study which aimed at determine if there any connection between the use of E-banking technologies and the financial performance of commercial banks (Dzombo, Kilika, & Maingi, 2018). The research objectives for the study was to determine how the use of ATMs in commercial banks affect their financial
performance, to assess the effect of debit and credit cards on the banks outputs, to investigate the how mobile banking has impacted the return on equity of the commercial banks and to determine the impact of internet banking on the return on assets of the commercial banks. For the study, they all the 44 commercial banks that are licensed and regulated by the central bank were under study. The research made use of secondary data by analyzing the financial statements of the commercial banks for a period of five. For data analysis and presentation, a descriptive research design was used where data that was collected was sorted and analyzed using SPSS. Pearson moment correlation was also used to determine the linear relationship that exist between the study variables. Regression analysis also conducted so as to determine the nature of the relationship. We can without doubt say that ATMs have also evolved generally over the years. They have been equipped with relevant and new technologies that have transformed them to become customer relationship management tool from just being a tool that dispenses money. With improved technology that help customers happy and satisfied, they are able to remain loyal to their banks and other financial institutions. Another conclusion made was that if commercial banks that have employed the use of mobile banking, had seen a major transformation in terms of their profitability, and also mobile banking had streamlined their operations. Internet banking had also provided a convenient platform where their clients could be able to get banking services on the internet. With internet banking, clients could be able to do transactions at any time of day and do transfers to any geographical location and even over different. In conclusion, use of mobile banking and internet banking has brought great improvement in the accessibility of banking services. Commercial banks should continue investing in innovations that help the clients get banking services at whatever time they so please and at an affordable cost. Other technologies like use of ATMs should also be improved as they have greatly transformed the banking sectors.

2.6 Conceptual Framework
The reason for the conceptual framework is to shows which kind of relationship exist between the dependent variable and independent variable that are under study. In this study, the concept of mobile banking used in deposit taking Saccos is the independent variable while how the financial performance is affected in the deposit taking Saccos is the dependent variable. The deposit taking institutions are usually regulated by a body called Sasra in Kenya.
2.7 Summary of the Literature Review

From the literature review, it is clear that mobile banking has improved the performance of financial institutions in Kenya among which include Saccos and other financial institutions like commercial banks in Kenya. Some of the benefits that have been able to be derived from the employment of mobile banking include; convenience, faster transactions in terms of instant money transfer and faster loan disbursement. Accessibility is another factor that has allowed majority of mobile banking users have also enjoyed in terms of one just needs to have a mobile phone for them to be able to use mobile banking.

In Kenya technology has also facilitated the growth of mobile banking. Telecommunication service providers like Safaricom have heavily invested in technology improvement. The improvement of this service has greatly help reach those individuals who have been unable to be banked before. For Saccos in Kenya this is a great, mobile banking has provided a platform where they can provide improved and better services to their clients.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction
The chapter gives a summary of the research methodology used for this research. The design used for this research is discussed first, then followed by the explanation of the target population for the study. This chapter discusses the sampling design used to sample from the population, giving a clear review on which research instruments were used to collect data and gave a description of data collection procedures that were used. The chapter also discusses the description of data analysis procedure that were used for analyzing the data.

3.2 Research Design
A research design is a tool that is used to answer the research questions. We can also say it is a blueprint or plan that is used to be able to collect data to the set out research objectives and to provide control on the variance (Dulock, 1993). For our study, we used a descriptive research design for the Saccos in Kenya. A descriptive research design helped us to discover the associations or relationship between or among selected variables (Dulock, 1993). The research had two variables, that is; the mobile banking and financial performance of Saccos. It is thus important for us to discover if it has a positive or negative relationship among these two variables. We used data for the past five years, (2010-2017) to analyze how the financial performance of deposit taking Saccos in Kenya is affected by the mobile banking systems they have invested in.

3.3 Population and Sample
According to SASRA, In Kenya, we have 164 licensed Saccos in Kenya. The Saccos are both regulated and licensed by the CBK to take savings from members and provide credit. The population was the 164 deposit taking Saccos registered by SASRA. Due to the huge number, a sampling technique to select a sample was employed. Due to the restricted time, we choose a sample on the basis of which deposit taking Saccos where convenient to access. This type of sampling technique is called convenient sampling. In a convenience sampling, usually a sample is selected from the population according to what is near to the researcher or convenient to the researcher. It is a non-probability sampling, which does not depend on what is really random but rather what is convenient and easy to access (Stephanie, 2015).
3.4 Data Collection
For this study, the data that was used to derive on the findings was from secondary sources which were extracted from archives of different sources. Among the sources where data was retrieved was the central bank website and records of the deposit taking Saccos. This data was also sourced from other data bases of this 20 Saccos that were selected to for the study. The secondary data included the financial performance of the Saccos. Data for the past 5 years for the selected Saccos was studied so as to determine how many transactions were made through Mobile banking services on monthly basis. Return on Equity (ROE) for the past 5 years was also determined.

3.5 Data Analysis and Presentation
The research was intended for investigating what effect do mobile banking have on the performance of deposit taking Saccos in Kenya; that is; to investigating if the usage mobile banking had a positive or negative relationship to profits for Saccos in Kenya. Data was analyzed for this study entailed the returns on assets for this Saccos, m-banking transactions/customers and investment in m-banking for the Saccos that were offering m-banking during the period of study. The study made use of both inferential statistics and descriptive in examining the data. After collecting and sorting data for the deposit taking Saccos, the use of excel and SPSS was used to analysis the data.

The research employed various tests which helped in determining the relationship that exists between the study variables, among the tests done include Pearson Product-Moment Correlation Coefficient and regression analysis. This tests helped in quantifying the association between financial performance and mobile banking for this organizations. The relations was explored with the use of Pearson’s correlation coefficient. Pearson’s correlation coefficient calculated a relationship between two variables. In statistics, correlation co-efficient is used to analyze the relationship that exists between the variables, i.e. what is the strength of their connection. In the study, to be able to measure the financial performance of this institutions, return on equity as measure, this was achieved by taking the overall operating costs to be the independent variables. The ANOVA analysis was also conducted so as to be able to determine the association that exists between the two variables under study

\[ Y = B_0 + B_1X_1 + B_2X_2 + \epsilon \]
Where $Y =$ the financial Performance of Saccos

$X_1 =$ the annual value moved through mobile banking

$X_2 =$ the number of users of mobile banking

$\varepsilon =$ the error term

$B_0 =$ Constant

$B_1 =$ Coefficient $X_1$

$B_2 =$ Coefficient $X_2$
CHAPTER FOUR  
DATA ANALYSIS, RESULTS AND INTERPRETATION  

4.1 Introduction  
This chapter gives a summary of the analysis and findings of the topic under study as described out in the objectives and the methodology in the previous chapters. The study findings are a presentation of how mobile banking affects the financial performance of deposit taking Saccos in Kenya. The data that was collected was purely from the secondary source which included the records from the Central Bank of Kenya, and the sampled deposit taking Saccos themselves.

4.2. Number of mobile Banking Users  
The study aimed at establish how many clients of this institutions do their transactions through mobile banking for the last 5 years that is 2013-2017. The findings are as shown below in the figure.

![Figure 4.1: Number of Mobile banking Users](image)

From the analysis, for the past 5 years, that is 2013 through 2014, 2015, 2016 to 2017, the number of mobile banking users have been declining but not in a significant rate. 2013 saw 117,000 thousand users use mobile banking to do transactions to their deposit taking Saccos. The number declined in 2014 to 115,000 users for the 20 deposit taking Saccos under study. For 2015 and 2016 the number of users were 106,000 and 108,000 respectively. This indicates that there was a slight increase in 2016 from 2015. For 2017, the number of users declined to 98,000 users.
From the above results, it is clear that the number of users has been declining through this 5 years. This can be explained by the high inflation that has been experienced in the country through the recent years. Also it is true that the rate of cybercrimes have increased in this period. 2015 and 2016 saw a great number of cases arise through mobile transactions. This could also be the cause why a number of users did shy away from using mobile banking to do their transactions.

4.3 Annual Values transacted through Mobile Banking

The research aimed at establishing the annual value transacted electronically through mobile banking during the study period under study, which is 2013-2017. The findings were as indicated in the figure 4.2 below and appendix III

**Figure 4.2: Annual Values Transacted through Mobile banking**

From the data collection of the 20 deposit taking, the amount of money collected through mobile banking has been increasing steadily from 2013 to 2015 the declined in 2016 and 2017. This could was due to the prevailing economic conditions prevailing in the country through the past 5 years. 2013 through 2014 to 2015, the amount of money transacted to deposit taking Saccos was 0.4 billion, 0.5 billion and 0.6 billion respectively. The collection the dropped to 0.535 billion and 0.530 billion respectively for 2015 and 2016 respectively. 2016 and 2017 in Kenya inflation had gone high and also the citizen where preparing for elections for 2018. The number of deposits did go down as well as the number of defaulted loans also going high due to the economic crisis and the future uncertainties.
4.4 Financial Performance of Deposit-Taking Saccos
The research did analyze the consolidated financial performance of the deposit-taking Saccos during the period under study. The outcomes are as shown in the figure 4.3 below:

**Figure 4.3: Return on Equity**

![ROE Graph](image)

From the findings above, the return on equity has been increasing through the years 2013, 2014 and 2015 with a ROE of 27.94, 28.08 and 30.72 respectively. The return on equity then significantly declined in 2016 to 24.93. This significant drop could be attributed to many macroeconomic factors which are out of scope for this study. The return on equity the increased in 2017 to 26.5. Various factors do affect the return on equity, and further research may be conducted to determine what other factors could have led to the decline of ROE for the 2016 period.

4.5 Regression Analysis
So as to ascertain the existing relationship between financial performance of deposit taking Saccos and mobile banking, a regression analysis was conducted and the findings are as below;

**Table 4.1: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error of Estimation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.506</td>
<td>0.256</td>
<td>0.008</td>
<td>2.135</td>
</tr>
</tbody>
</table>
The regression analysis tries to analyze the how a change in one variable can be explained by a change in the other variable. In other words, we it tries to analyze how a change in the dependent variable can also be elaborately explained by the change in the independent variable. In this study, the independent variable that was analyzed, it explained the 25.6% of the change in the financial performance of deposit taking Saccos in Kenya as represented by R square which is a coefficient of multiple determination. The study also indicates that there is definitely a positive correlation between the financial performance of the deposit taking Saccos and mobile banking.

Table 4.2. The ANOVA Table

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2</td>
<td>7.291604</td>
<td>3.645802</td>
<td>0.657641</td>
<td>0.603267</td>
</tr>
<tr>
<td>Residual</td>
<td>2</td>
<td>11.08752</td>
<td>5.543758</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>18.37912</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the ANOVA table, there is a probability value of 0.603 which indicates that the regression was not significant in determining how the use of mobile banking impact the financial performance of deposit-taking Saccos in the country. The F critical which is at a 5% level of significance was 0.6576 and when calculated is it less compared to the F critical. Value is 2.317.

For the study, regression analysis was used so as to determine the relationship between the dependent and the independent variable. The independent variable was the use of mobile banking in deposit-taking Saccos whereas the dependent variable was financial performance for this institutions. The regression equation used was as below:

\[ Y = B_0 + B_1X_1 + B_2X_2 + \epsilon \]

Where by \( Y \) represented the financial performance for the deposit taking Saccos, \( X_1 \) represented the number of users of mobile banking and \( X_2 \) represented the amount per annum that was being transacted via mobile banking to this institutions.

\[ Y = 4.613 + 2.303X_1 + 9.749X_2 \]

The interpretation for this linear equation is that, if all other factors are held constant, the factors, associated with mobile banking that is; the number of people transacting through mobile banking and the amounts being transacted through mobile banking, they
contribute to 4.613% of the financial performance seen in the deposit taking Saccos. The analysis also showed that if all other variables are to remain constant, an increase in a unit of users of mobile banking services, the deposit taking financial performance will rise by 2.303% whereas if a unit of money transacted by mobile banking do increase by a unit, the financial performance of Saccos will also increase by 9.749%. It is thus true to deduct that mobile indeed has a positively impacted the performance of deposit taking Saccos in Kenya.

4.6 Interpretation of the findings
From the research there is clear evidence proving that mobile banking has been widely adopted by the deposit taking Saccos in Kenya and it has also had a great impact on the performance of the Saccos financially. The rate of people using mobile banking to do transactions to the Saccos inform of loan repayment or just to make their monthly contributions to the Saccos has gone high. The performance of Saccos has been seen to increase in the amount of money being transferred to the deposit taking Saccos through the use of mobile banking. Mobile banking has been widely adopted due to not only its costs and speed, but also the convenience it does provide to both the deposit taking Saccos and the clients.

The number of users and the amounts transacted declined in 2015 and 2016 due to a number of reasons like increase in insecurities relating to mobile banking, hard economic conditions like rise in inflation and increase in mobile banking charges. But that has not hindered the clients from using mobile banking as an alternative of banking services as the increase has been positive. When we consider the deposit taking Saccos performance, it has also gone up as it is evident from the research that the rate of financial performance associated with mobile banking is at 4.613%.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction
This chapter tends to discuss the summary of the key findings and analysis of the study. This section also suggests a few recommendations for the institutions under study and other bodies that may benefit from this research including the policy makers and the academic researchers.

5.2 Summary
For the any financial institution to be able to provide better services to their clients, it is better for them to understand the kind of clients they are dealing with and their expectations, keeping in mind the environment. For deposit taking Saccos, they have employed technology to be able to better serve their clients and remain relevant as they also grow. That is why they have employed mobile banking as a way to be able to better access their clients and also give their clients a proper avenue where they can do their transactions using mobile banking at the comfort of their homes. As a result of employing mobile banking, the deposit taking have been able to grow as well as perform better in terms of profits and enhancing more collections. This is evident by the 4.613% financial performance that have experienced as a result of employing mobile banking.

It is also important to note that technology has also advanced in the county. 80% of the population have access to mobile phones which they can use to do transfers. More telecommunication networks have launched mobile money transfers and they are partnering with the various financial institutions to be able to offer mobile banking services. For example, Safaricom has provided services like the pay-bills where institutions can use for easy money remittance of clients. With the increased number of mobile banking users, the amount collect also increases which in returns improves the performance of this financial institutions.

5.3 Conclusion
In conclusion, mobile banking has greatly brought a positive impact on the performance of deposit taking institutions in Kenya. Other financial institutions like banks and non-deposit taking Saccos have also employed mobile banking and their financial performance has greatly improved. More financial providing institutions should employ
mobile banking as an avenue where their clients can access their services. Mobile banking is also affected by various factors like changes in policies and economic factors such as inflation. When the rates increase for transactions, people shy away from transacting through mobile banking. Generally mobile banking is both easy, easy to use and convenient as it provides avenue for one to transact even past bank operating hours or even when not physically at the financial institutions.

5.4 Recommendations
As it is clear that mobile banking is both convenient to the deposit-taking Saccos, the mobile banking providers should negotiate affordable rates for the clients so that the charges incurred when one transacts by mobile banking are reasonably low. The mobile banking providers usually have a monopoly in the market and at times they usually increase prices which end up impacting the consumer. They should get into partnership with this financial institutions so that they can share the costs and in return the rates of mobile banking to go down.

The policy makers should also take into consideration the consumers of mobile banking. One of the big challenge facing Kenya is heavy taxation that is bone by the consumers. This is because the policy makers especially the ones who make decisions impacting tax usually don’t take into consideration the impact tax has to the final consumer. I would therefore recommend that the policy makers should be able to make policies regarding mobile banking that are favorable to the consumer and not once that adversely affect them when tax is shifted to this consumers.

5.4 Suggestions for further
In Kenya, many businesses have resorted to the use of mobile banking due to the various advantages that it provides. Mobile banking does provide the service providers with security and also it has reduced the cases of theft and corruption in the institutions. With this it is important that more research can be done to investigate if the performance of this institutions and what other benefits has the use of mobile banking provided to this institutions. Among the institutions that have employed this services include hospitals like Kenyatta National Hospital where all the bills are usually done through the use of M-Pesa.
REFERENCES


## APPENDICES

### Appendix I: Amount Transacted Annually

<table>
<thead>
<tr>
<th>Sacco Name</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afya Sacco</td>
<td>36,480,000.00</td>
<td>38,748,200.00</td>
<td>40,820,000.00</td>
<td>47,650,000.00</td>
<td>46,853,000.00</td>
</tr>
<tr>
<td>Elimu Sacco</td>
<td>24,960,000.00</td>
<td>25,960,000.00</td>
<td>26,120,000.00</td>
<td>28,546,000.00</td>
<td>24,960,000.00</td>
</tr>
<tr>
<td>Chai Sacco</td>
<td>12,300,500.00</td>
<td>13,562,000.00</td>
<td>15,560,000.00</td>
<td>18,676,600.00</td>
<td>12,300,500.00</td>
</tr>
<tr>
<td>Harambee Sacco</td>
<td>72,590,000.00</td>
<td>74,540,600.00</td>
<td>75,650,000.00</td>
<td>73,630,000.00</td>
<td>72,590,000.00</td>
</tr>
<tr>
<td>Hazina Sacco</td>
<td>13,489,000.00</td>
<td>14,863,050.00</td>
<td>18,657,000.00</td>
<td>18,865,000.00</td>
<td>13,489,000.00</td>
</tr>
<tr>
<td>Jamii Sacco</td>
<td>36,480,000.00</td>
<td>37,900,600.00</td>
<td>40,586,000.00</td>
<td>42,653,000.00</td>
<td>36,480,000.00</td>
</tr>
<tr>
<td>Kenya Police Sacco</td>
<td>16,862,330.00</td>
<td>18,500,000.00</td>
<td>19,650,600.00</td>
<td>20,957,600.00</td>
<td>16,862,330.00</td>
</tr>
<tr>
<td>Safaricom Sacco</td>
<td>34,255,800.00</td>
<td>35,200,000.00</td>
<td>38,657,000.00</td>
<td>39,254,600.00</td>
<td>34,255,800.00</td>
</tr>
<tr>
<td>Magereza Sacco</td>
<td>14,005,110.00</td>
<td>16,876,000.00</td>
<td>15,996,000.00</td>
<td>16,784,000.00</td>
<td>15,005,110.00</td>
</tr>
<tr>
<td>Sheria Sacco</td>
<td>8,260,000.00</td>
<td>11,856,000.00</td>
<td>14,586,030.00</td>
<td>15,876,000.00</td>
<td>18,260,000.00</td>
</tr>
<tr>
<td>Stima Sacco</td>
<td>26,480,000.00</td>
<td>29,950,500.00</td>
<td>30,005,600.00</td>
<td>26,480,000.00</td>
<td>26,480,000.00</td>
</tr>
<tr>
<td>Ukulima Saco</td>
<td>24,479,730.00</td>
<td>27,598,000.00</td>
<td>28,476,200.00</td>
<td>26,167,600.00</td>
<td>24,479,730.00</td>
</tr>
<tr>
<td>Unaitas Sacco</td>
<td>25,000,010.00</td>
<td>30,100,500.00</td>
<td>32,586,000.00</td>
<td>25,000,010.00</td>
<td>25,000,010.00</td>
</tr>
<tr>
<td>Waumini Sacco</td>
<td>9,682,480.00</td>
<td>11,600,200.00</td>
<td>13,560,000.00</td>
<td>12,628,000.00</td>
<td>12,587,360.00</td>
</tr>
<tr>
<td>Wakenya Pamoja Sacco</td>
<td>8,260,000.00</td>
<td>10,200,000.00</td>
<td>12,680,600.00</td>
<td>13,587,000.00</td>
<td>13,522,100.00</td>
</tr>
<tr>
<td>Ufanisi Sacco</td>
<td>9,682,480.00</td>
<td>10,520,000.00</td>
<td>12,682,300.00</td>
<td>12,260,300.00</td>
<td>12,964,250.00</td>
</tr>
<tr>
<td>Boresha Sacco</td>
<td>11,900,000.00</td>
<td>11,950,000.00</td>
<td>13,596,400.00</td>
<td>12,900,000.00</td>
<td>11,966,000.00</td>
</tr>
<tr>
<td>Kenya Achievas Sacco</td>
<td>36,480,000.00</td>
<td>35,460,000.00</td>
<td>36,480,000.00</td>
<td>35,854,000.00</td>
<td>36,480,000.00</td>
</tr>
<tr>
<td>Kenya Bankers Sacco</td>
<td>26,010,000.00</td>
<td>35,019,000.00</td>
<td>34,650,000.00</td>
<td>34,486,000.00</td>
<td>35,664,100.00</td>
</tr>
<tr>
<td>Enea Sacco</td>
<td>8,260,000.00</td>
<td>12,500,000.00</td>
<td>12,856,000.00</td>
<td>12,128,000.00</td>
<td>11,684,381.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>455,919,453.00</strong></td>
<td><strong>502,906,664.00</strong></td>
<td><strong>533,857,745.00</strong></td>
<td><strong>534,385,726.00</strong></td>
<td><strong>501,885,688.00</strong></td>
</tr>
</tbody>
</table>
# Appendix II: Number of Users Annually

<table>
<thead>
<tr>
<th>SACCO NAME</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afya Sacco</td>
<td>2930</td>
<td>2005</td>
<td>1996</td>
<td>2015</td>
<td>1833</td>
</tr>
<tr>
<td>Elimu Sacco</td>
<td>1963</td>
<td>1782</td>
<td>1863</td>
<td>2410</td>
<td>2163</td>
</tr>
<tr>
<td>Chai Sacco</td>
<td>5380</td>
<td>5621</td>
<td>6782</td>
<td>6231</td>
<td>6156</td>
</tr>
<tr>
<td>Harambee Sacco</td>
<td>8641</td>
<td>8647</td>
<td>8546</td>
<td>7641</td>
<td>7066</td>
</tr>
<tr>
<td>Hazina Sacco</td>
<td>7610</td>
<td>7641</td>
<td>7156</td>
<td>6882</td>
<td>6032</td>
</tr>
<tr>
<td>Jamii Sacco</td>
<td>2864</td>
<td>2633</td>
<td>2613</td>
<td>2813</td>
<td>2315</td>
</tr>
<tr>
<td>Kenya Police Sacco</td>
<td>5783</td>
<td>6002</td>
<td>6241</td>
<td>5792</td>
<td>5177</td>
</tr>
<tr>
<td>Safaricom Sacco</td>
<td>6132</td>
<td>6542</td>
<td>6398</td>
<td>5976</td>
<td>5463</td>
</tr>
<tr>
<td>Magereza Sacco</td>
<td>7631</td>
<td>7123</td>
<td>6855</td>
<td>6387</td>
<td>6143</td>
</tr>
<tr>
<td>Shirea Sacco</td>
<td>7631</td>
<td>6871</td>
<td>7231</td>
<td>5971</td>
<td>5187</td>
</tr>
<tr>
<td>Stima Sacco</td>
<td>9648</td>
<td>8367</td>
<td>7863</td>
<td>6571</td>
<td>6088</td>
</tr>
<tr>
<td>Ukulima Saco</td>
<td>4365</td>
<td>4620</td>
<td>4388</td>
<td>4097</td>
<td>4136</td>
</tr>
<tr>
<td>Unaitas Sacco</td>
<td>7685</td>
<td>7125</td>
<td>7462</td>
<td>7154</td>
<td>6992</td>
</tr>
<tr>
<td>Waumini Sacco</td>
<td>7428</td>
<td>7587</td>
<td>7468</td>
<td>6543</td>
<td>5811</td>
</tr>
<tr>
<td>Wakenya Pamoja Sacco</td>
<td>6432</td>
<td>6254</td>
<td>6357</td>
<td>5871</td>
<td>5023</td>
</tr>
<tr>
<td>Ufanisi Sacco</td>
<td>2387</td>
<td>2786</td>
<td>2688</td>
<td>2884</td>
<td>2436</td>
</tr>
<tr>
<td>Boresha Sacco</td>
<td>2687</td>
<td>3014</td>
<td>3158</td>
<td>2746</td>
<td>2311</td>
</tr>
<tr>
<td>Kenya Achievas Sacco</td>
<td>5876</td>
<td>6874</td>
<td>6437</td>
<td>5814</td>
<td>5163</td>
</tr>
<tr>
<td>Kenya Bankers Sacco</td>
<td>8760</td>
<td>8064</td>
<td>7991</td>
<td>7153</td>
<td>7040</td>
</tr>
<tr>
<td>Enea Sacco</td>
<td>5631</td>
<td>5877</td>
<td>6217</td>
<td>6171</td>
<td>5833</td>
</tr>
</tbody>
</table>