THE EFFECT OF ELECTRONIC BANKING ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN KENYA

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DECLARATION

This research project is my unique work and has not been presented for the honour of a degree in any other institution of higher education or learning institution for examination purpose.

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D61/79475/2015

APPROVAL

This project has been issued for assessment with my consent as a university supervisor.

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DEDICATION

I dedicate this project to God who has been a resilient pillar, my foundation of motivation, wisdom, information and understanding. I also bestow this work to my cousin; Francis Musebe Murabula and Joseph Ogonda Murabula who have stimulated me all the way and whose inspiration has made sure that I give it all it takes to get to this point. To my employer Nafisa Alibhai and Mr. Arshad Alibhai who have been influenced in every way imaginable by this expedition. Thank you. My love for you all can by no means be measured. God bless you.

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LIST OF ABBREVIATIONS

ATM   Automated Teller Machine

CBA   Commercial Bank of Africa

CBK   Central Bank of Kenya

DTM   Deposit Taking Micro-Finance Institutions

E-Banking   Electronic Banking

EFT   Electronic Fund Transfer

FOSA   Front Office Services Activity

FSAs   Financial services associations

ICT   Information, Communication & Technology

IT   Information Technology

KCB   Kenya Commercial Bank

M-banking   Mobile Banking

MFI   Micro-Finance Institutions

PDA   Personal Digital Assistant

RBV   Resource Based View

ROA   Return on Asset

ROAA   Return on average assets

ROE   Return on Equity

SACCO   Savings and Credit Cooperative

ABSTRACT

The impact of IT investments in banking is not always positive but heterogeneous. It's also noted that a DTMFIs adoption of e-banking strategy may have an impact on an organization based on whether it is software or hardware based, whether it's in-house or outsourced. The main aim of this research was to establish the effect of electronic banking on financial performance of DTMFIs in Kenya. The study examined the adoption of automated teller machines, mobile banking, and the use of personal computers and how they affect the fiscal efficiency of DTMFIs in Kenya. Financial performance was assessed using Return on Assets. The study assumed a descriptive design where inferential statistics were used in analysing the data. The study population as composed of thirteen registered DTMFIs in Kenya as at August 2016. The primary data was collected through the management of questionnaires to the staff of these DTMFIs. Both descriptive and inferential statistics including mean and frequencies was used and data was analysed using linear regression model. The study established that microfinance institutions that take deposits had embraced e-banking technologies and that there is an optimistic link amongst electric banking and fiscal performance of DTMFIs in Kenya. The study concludes that DTMFs performance as measured by performance determinants namely Management efficiency mean, capital adequacy, profitability, liquidity management, asset quality, market share of DTMFI and while macro-economic factors is explained by investment in ICT and internet banking. The study endorses that DTMFIs in Kenya should adopt the utilization of mobile banking in their activities due to the sum of people who own mobile devices is increasing significantly. Additionally, the union of mobile phones and microfinance institutions in Kenya that take deposits has revolutionized the microfinance institutions operations.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The financial sector in Kenya has gone through challenges and transformations during its short time in existence. As a result, the financial institutions have been subjected to re-invent and position themselves to ensure that they retain their market share and enhance their ability to tap in emerging markets. The need for the changes has been influenced by the need to grow and survive. Electronic banking entails the utilization of telecommunication and electronic networks with the intent of delivering an extensive variety of worth added services and products to the bank clients (Steven, 2002). The utilization of data technology in the banking processes is referred to as electronic banking. Ovia (2001) stated that Electronic banking is produce of e-commerce in banking and monetary services fields. It is a term that is used in reference to the process that a customer may engage in banking dealings without going to the banking institution (FinCen, 2000).

Fincen (2000) posits that 'Electronic banking has been developed into two major platforms namely the Mobile Banking (m-banking) and the Internet Banking. Mobile Banking is the platform that individuals can use to access their bank accounts directly from their mobile phones or Personal Digital Assistant (PDA). Individuals can use mobile banking services to buy phone airtime, withdraw cash, deposits, payments, transfers or even access customized information." "Mobile banking is increasingly becoming a necessity" (Mwangi, 2015). Internet banking on the other hand is a service that licenses clients to access their bank accounts virtually anywhere anytime through an internet connection access. This means that you can access banking services from your

house, at the airport, in the hotel, at school, in your office, and anywhere else provided you have admittance to the internet and a computer.

1.1.1 Electronic Banking

Electronic banking entails the utilization of electric and telecommunication systems to distribute a worth added products and amenities to clients (Steven, 2002). According to Epstein (2004), the phrase e-banking refers to the practice by which a client may execute banking dealings by electronic means without going to brick and mortar organization and its logistical systems. Several terminologies denote a form of electric banking: Computer banking, online banking, internet or mobile banking (Atavachi, 2013)

According to Joseph et al (2015), E-banking entails banking business conducted via the web as opposed to a physical bank location. With this strategy, users check their accounts, settle bills online, transfer funds and acquire loans electronically. Banks can offer e-banking either as a web enabled physical entity offering internet banking to its users above the traditional banking channels or establish simulated. These types of banks engage in online-based banking activities that are majorly focused in stock trading over and above the traditional banking activities (King et al, 2008).

According to Ngango (2015), e-banking services are accessed through electronic devices like PCs, PDAs, ATMs, kiosk, or mobile phones. Being a multi-channel delivery model, there exists various forms of e-banking. These include; mobile banking, agency banking, internet banking, telephone banking among others.

E-banking has been adopted globally for various reasons these include; as a competitive strategy, Saunders & Cornet (2011), saving of time and money for users, cost efficiency

and an opportunity for enhancing market share as wider customer base including those remotely acquired either within a country or internationally is gained (Peng, 2009). Furst et al (2015), posed reasons for banks in adopting internet banking in the USA. Key factors identified include holding company membership, urban location, efficiency, higher fixed cost to net operating income and non-interest income among others.

E-banking strategy is used by commercial banks in Kenya and globally as a strategy for achieving various goals such firm growth, profitability, cost minimization, among others. Electronic banking strategy can be viewed as a product related geographical diversification strategy, defined by Peng (2009), where a firm enters existing market with new products markets or processes. Ngango (2015) identifies types of electronic banking strategy platforms used namely ATMs, online banking, telephone banking, mobile banking and electronic cards.

In Kenya, agency banking is also used to support this strategy. E- Banking is anticipated to grow over time, less in tandem with proliferating electronic commerce growth. According to Jenkins (2006), e-banking in developing countries takes place at a slower pace than their developed economies counterparts due to higher convenience of computers and easy entree to the internet.

Fox & Beier (2006) are of the view that those with more disposable income are more likely to take advantage of the perks of online banking. With the advent of increased mobile usage, e-banking and specifically mobile banking is becoming more popular. This is also the case with small businesses, educated middle class and those with greater disposable income

1.1.2 Financial Performance

Studies have established that varying businesses in varying regions highlight on the diverse performance measurement. The studies suggest financial profits and the growth as a common measure of organizational performance (Doyle, 1994).

Nash (1993), guaranteed that lucrativeness is the best pointer to distinguish whether a company is effective and consequently lucrativeness can be utilized as the essential proportion of organization achievement. Besides, Doyle (1994) pointed profit as the most widely recognized proportion of execution in western organizations. Overall revenue, return on assets, equity, and return on deals are viewed as the normal proportions of economic lucrativeness discovered deals; deals development, net benefit and gross benefit were among the fiscal estimates favored by the Malaysian assembling firms.

Traditional performance measurement systems view microfinance profitability as the ability of a microfinance institution to create income in overabundance of expense, in connection to its capital base. A sound and beneficial banking industry is superior ready to endure negative stuns and add to the strength of the monetary organization (Athanasoglou, Brissimis and Delis, 2005). Profitability can be estimated in a few different ways. The rate of profit for normal assets (net salary/normal aggregate assets) takes into account correlation of one bank to another. The arrival overall assets (ROAA) is the key proportion in assessing the nature of bank management, since it tells how much benefit bank management can produce with a given measure of assets. Another measure for profitability is the rate of profit for normal equity (net pay/normal equity capital). Profit for normal equity (ROAE) tells the bank proprietors how management has

performed for their benefit – the measure of benefit in connection to their capital commitment to the firm (Kidwell et al, 2007).

1.1.3 Electronic-banking and Financial Performance

Microfinance Institutions are cognizant about innovative advancements and require items and administrations that meet their exact and distinct needs (Koduk, 2015). Innovation selection in the ongoing past eras has assisted financial foundations to successfully react to this test (Gitau, 2011). This is exceptionally indispensable as any company's capacity to implement well fiscally is so basic to its reality and sustain-ability in the short and long run (Aduda and Kingoo, 2012). Ombudo (2009), noticed that automated banking administrations empower Saccos to cut expenses forcefully and consequently, they enhance the nature of administrations.

Bloch et al (1996) noted that e-commerce can offer a myriad of aids to an organization, these include; improving promotion of products, newer channels for first hand savings, reduction in time required for marketing, delivering to customer demands improved image of the firm and goods and services Other benefits include technical and structural learning, new product competences and a new business model. All these can lead to organizational performance improvement.

Numerous studies have reflected on the possible outcomes of e- banking and their impact on performance. According to King et al (2008), use of electronic transactions boosts efficiency through several methods therefore increasing market size and also improving product positioning in comparison with its alternatives. According to Ngango (2015), e-

banking can provide strong tools for strategies and tactics which when appropriately applied creates an environment for gaining strength in competitiveness

According to PWC (2016), in the recent periods, Kenyan banking sector has experienced growth in asset base, deposit taking, profits and offering of products. They note that that this has been made possible by banking industry pursuing strategies for expansion within the country and EAC at large. Also indeed are automating activities for numerous bank services. Other factors are attributed to complexity in customer desires as opposed to the usual "off-the-shelf" banking products.

1.1.4 Deposit Taking Microfinance Institutions in Kenya

The World Bank describes Microfinance Institutions (MFIs) as establishments that participate in generally little financial exchanges utilizing different strategies to serve low pay family units, microenterprises, little scale agriculturists, and other people who need access to conventional banking administrations. The key aim of MFIs is to deliver micro credit and additional financial facilities like investments to less fortunate individuals and contribute to ease poverty (Dondo, 2003).

Microfinance has been documented as one of the most significant tools for scarceness aggravation (KWFT PILLAR, 2005). The Kenya Microfinance sector encompasses of an expansive number of competing fundamentals which fluctuate in practice, corporate introduction, polished methodology, perceivability, measure and geological inclusion. These institutions cover from casual administrations; pivoting funds and credit associations, financial administrations associations, Savings and credit co-agent social orders, NGOs, to corporate banks that are down scaling (CBK, 2017).

There are thirteen store taking microfinance organizations authorized by the CBK through the Microfinance Regulations of 2008 and the Microfinance Act of 2006 allotted there under which sets out the lawful, administrative and administrative system for the microfinance business in Kenya. The Act empowers.

The shift from conservative branch banking to mobile banking has made DTMFIs additionally thought of actions to draw in more clients and hold present ones. The longing to lessen both working, regulatory expenditure and rivalry has determined banks to receive mobile banking. In any case, cost decrease is just practicable with a growth in client appropriation (Bradley and Stewart, 2003). Mechanical headways in the territory of broadcast communications and data innovations have kept on changing the financial industry (AMFI, 2015).

In Kenyan, the microfinance sector is a standout amongst the most dynamic in Sub Saharan Africa. It incorporates a difference of organizational structures as well as genuinely extensive branch network system in serving poor people. Be that as it may, microfinance exercises have been controlled in Kenya just since 2006. The non appearance of control has enabled advancements to happen: organizations were set up effectively with no obstructions, for example, least capital prerequisites. The microfinance business has flourished in this condition (Nyaga, 2008).

In the 1990s, banks concentrated on microfinance penetrated the market through a green handling procedure (such as Co-Agent Bank), others through institutional change approach - Equity and Family Banks transformed from building societies while K-Rep Bank transformed from a MFI NGO. The organizations offer completely saving money

administrations as well as miniaturized scale customers. Similarly, numbers of MFIs NGOs are additionally targeting a similar market section. On the other hand, NGO MFIs considered different conceivable outcomes for extending their organizations nevertheless were not permitted to gather stores and along these lines needed to depend either on costly subsidizing sources (borrowings) or untrustworthy appropriations and gifts.

The MFI Act of the year 2006 and the steady DTM Regulations of the year 2008 have both indeed brought an institutional change in Kenya. In association with the Financial Sector Deepening (FSD) Kenya, KWFT and Faulu Kenya occupied with a procedure which prompted the authorizing as the first DTMs in Kenya. The changes were indeed fruitful and have helped both firms to keep up their key situating in the DTM market.

For the two cases, the procedure factored a greater number of assets and took any longer than anticipated. Furthermore, the changes rose more noteworthy than foreseen hierarchical difficulties. By early 2009 when KWFT was set out to change into a store taking organization vigorously, was then the biggest non-bank MFI establishment in Kenya with over 250,000 ladies just as clients. By May 2017, nine microfinance foundations had been issued with a permit by the Central bank of Kenya, these foundations offer store taking and gathering loaning model administrations. These are the Kenya Women Finance Trust (KWFT), Faulu Kenya, UWEZO DTM limited, Rafiki DTM, SUMAC DTM Limited, SMEP DTM, Remu DTM Limited, Century DTM limited, and U&I DTM Limited. It is these nine MFIs that framed the sample of this study

1.2 Research Problem

The concept of e-banking strategy and its influence on performance of DTMFIs has received varied interpretations and findings among various authors, researchers and academia. Findings indicate that the impact of IT investments in banking is not always positive but heterogeneous. It's also noted that a DTMFIs adoption of e-banking strategy may have an influence on an organization based on whether it is software or hardware based, whether it's in-house or outsourced as noted by, Beccalli (2007). There are also indications that there are factors that may affect effectiveness of e-banking strategy on the performance of an organization as pointed out by Ngango (2015).

Due to the rapid fluctuations in technology, businesses and individuals need to be up to date with the e-banking technology changes. In Kenya, the DTMFIs exhibits smaller market orientation and has a penchant of fulfilling customer needs with little consideration to their interests. Consumers in Kenya experience long queues, transaction errors, and insecurity as well as network failures (Joseph, Mcclure, & Joseph, 1999). These concerns have greatly lowered the perception of the consumers on the quality of the service rendered by the banks, hence reducing their credibility, which in turn impacts on profitability. The appearance of new technologies and rivals put a demand on the banks to align themselves with the skills necessary to keep them relevant and competitive in the market (Joseph et al., 1999).

In spite of the potential compensations of ICT and online business, there is banter about whether and how their appropriation enhances financial execution. A few endeavors have been had to explore the effect of electronic banking on execution. An examination contemplate completed by Kamesam (2001), discovered that innovation progression

brought about expanding the dimension of profitability and efficiency of banks. He set up that those banks with high profit growth are bound to utilize more prominent amounts of cutting edge ICTs. He inferred that e-banking stimulates higher aids however in long haul yet not in present moment due to high ICT scheme cost and furthermore with the end goal to lessen offences, security review should be conducted which will be beneficial in improving client benefit, increment systematic productivity and in this way extended profitability. This study did not include DTMFIs.

Internationally, studies relating to electronic banking and financial performance have been carried out. Stoica, Mehdian & Sargu (2015) concluded that e-banking provides efficient and lower cost services which increase banks' performance. Kolodinsky et al (2004) in their study explored e-banking adoption factors and their variability over time in the US economy. Usage of e-banking changed over time. However, there was no change on factors impacting the adoption of e-banking

Related studies have also been done locally. Aduda et al. (2012) assessed the link amongst commercial banks in e-banking and fiscal performance in Kenya. The study found that there exists a robust optimistic connection between the two considered variables. Njogu (2014) assessed the effect of electronic banking on lucrativeness of Kenyan Commercial Banks and found out that there exists a strong positive connection. Kombe & Wafula (2015) wanted to establish whether e-banking has settled that e-banking enables cheaper services with round the clock accessibility; Kimingi (2010) conducted a research on the influences of technical innovation on the fiscal performance of commercial banks in Kenya, Kariuki (2010) examined the association between fiscal innovation and financial performance of commercial banks in Kenya and recommended

replication in Microfinance institutions, Balagizi (2011) evaluated the influence of innovative changes on the fiscal performance of private and non-profit making organization with focus to selected organizations in Kenya and Nyawira (2011) conducted a study on the affiliation among the level of technical invention and performance of banking institutions.

Numerous studies that have focused on how e-banking affect bank performance have been restricted to specific points in time and place identified by the researchers. These studies have been country or regional specific or specifically case studies for the chosen years of study. Therefore, the study addressed the following research question: what is the impact of e-banking on financial performance of commercial banks in Kenya?

1.3 Research Objective

The aim of this study is to assess the effect of electronic banking on financial performance of DTMFIs in Kenya.

1.4 Value of the Study

The endorsements and outcomes of this study will support DTMFIs in Kenya establish and assess the effects of electronic banking implementation and also assess the growth and development of Electronic banking. Additionally, The MFIs will have the awareness of electrical banking as a consequence of automated commercial with a view to settling on key choices. The examination will likewise add to the assortment of learning and to extra data in the banking business. Researchers will utilize the investigation for position and research dependent on discoveries of study. In this way, the investigation will draw

out the distinctions emerging from various natural and organizational variables one of a kind to the bank pertinent for effective E-banking.

Regulators will achieve an enhanced indulgent of the e-banking technology under their policy. It would be valuable for them to use this familiarity gained to tailor guidelines to protect the welfares of customers while still giving enough room for the market players to profitably carry out their actions. E-banking administrators – to enhance and grow their administrations in a way that encourages financial strengthening to every one of the gatherings included. They will pick up a more profound comprehension of the administrations that purchasers like to work under. The data will in this way be utilized to tailor the supplier's administrations to suit the clients' needs and desires and subsequently picking up an upper hand.

Consumers and business owners- to educate themselves on the many avenues and platforms that e-banking affords to them. They will thus understand the needs of their customer's with regards to the technology. Business proprietors may opt to utilize e-banking approaches in their businesses based on their understanding their customer base.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The Chapter presents an evaluation of the prevailing literature on the effect of electronic banking on lucrativeness of DTMFIs.

2.2 Theoretical Review

There are numerous theories in existence that examine and demonstrate the influence of electronic banking on the financial performance.

2.2.1 Constraint-Induced Financial Innovation Theory

The theory was progressed by Silber (1983). This theory called devotion to that the inspiration behind advantage boost of fiscal organizations is the key motive of financial progression. There are a few limitations throughout the time spent looking for after benefit expansion. Despite the fact that these confinements not just ensure the security of administration, they diminish the productivity of financial organization, so financial organizations endeavor toward throwing them off.

The theory supports the argument that financial innovations are as a result of constraints facing Microfinance institutions. It discusses fiscal improvement from microeconomics, so it is instigated and illustrative. But it emphasizes "innovation in hardship" disproportionately. Constraint-induced innovation hypothesis perceives digital strategy from microeconomics, so it is representative. It however stresses development in difficulty circumstances and neglects to acknowledge the role of increased advancement in liberal finance.

2.2.2 Resource Based View

According to Wernefelt (1984), Resource based view advanced the awareness that strategy of an organization is a role of the compliment of the possessions held. Organizations are practical to emerging sole capabilities thus resultant benefit can be continued due to nonexistence of replacement and mock by the company's participants. Competitive benefit eventually can be credited to possession of appreciated resources that empower the company to achieve its goals. Organizational competences are distinct based on the varying mixture of assets, people and practices that businesses use to alter inputs into outputs. The nature of RBV ensures; inimitability, sturdiness, appropriability, substitutability and competitive advantage.

According to Dimitris (1987), bank management is being challenged more than ever before. They need not only to adopt to services which were render, but also to the relation of the bank to its environment. Due to continuously changing conditions, the pressure comes from two ends: one is the markets themselves and the competitive situation; the other is the rapid evolution of computers and communications technology. Porter, (1985) introduced three broad policies namely: Cost leadership is the determination to be the bottommost cost worker in the field. To be a cost leader, investment is vital in "state of the art production technology and high quality staff. Cost leadership organizations are wiry form with small chain of command, large spans of control, operative autonomy, small procedures and excellent salaries and terms and conditions of employment. Focus concentrated on a forte and taking steps to be vital.

The purpose of resource based view is to set up a long haul and thought business association with particular clients, in view of product certainty, large amounts of value,

express unwavering quality and the capacity to create and convey the important volumes of product to clients when required. Separation implies offering homogenous products based on making a solid picture or way of life as illustrated before. Doorman contends that the normal factor in every single effective technique is clearness and that this stems from embracing one of these positions (Peteraf, 2013).

Banks increasingly search expansive scale data and communication centers. They mastered a surge of data developing every day; dealt with a regularly expanding number of business exchanges in the briefest conceivable time; and do as such with aggregate dependability. The omnipresent competition gives rise to the steady growth of new services and banking products-which must be not only be developed but also understood and digested. A financial institution is no longer considered to be a simple service organization divided in front-and back office (logistics) operations. The modern bank is a network. What it does and what it does not is influenced in many ways by fast expanding business activities, many of them of an international nature. If the bank is an information system, the banker is an information manager (Dimitris, 1987)

To serve these clients, the banker has to accomplish a myriad of requests. His/her expertise is challenged daily; he/she has to be a specialist and a generalist at the same time. Dimitris (1987), notes that financial institutions which undertake universal banking business and work on a global basis face the greatest challenge the banking industry has ever had. They have the task of determining the relative importance electronic banking will play in their business strategy. They have the mission of evaluating the role 24-hour banking should play for growth and survival.

2.2.3 Diffusions of Innovation Theory

Robinson (2009) states that diffusion of innovation looks to illuminate how they occur within a population. Diffusion of development proposes five characteristics that impact the reception of some random innovation to be specific: relative favorable position, similarity with existing qualities and practices, straightforwardness and convenience, preliminary capacity, and recognizable outcomes. Relative preferred standpoint is how much a progress is seen superior to anything the thought it supplants by a specific collecting of clients estimated in phrasing that issue to those clients, as financial favorable position, social eminence, accommodation, or fulfillment. The more prominent the apparent relative favorable position of a development, the faster its degree of collection is probably going to be. There are no supreme standards for what establishes "relative favorable position". It relies upon the precise discernments and requirements of the client gathering (Kaminski, 2011).

Compatibility with prevailing potentials and practices is how much a progression is seen as being dependable with the qualities, past meetings, and requirements of probable adopters. A thought that is incongruent with person's qualities, values or practices won't be received as fast as an expansion that is perfect. Openness and usability - is how much a growth is seen as hard to comprehend and use. Modern technologies are less complex to fathom are embraced more hurriedly than inventions that need the adopter to advance new abilities and indulgences. Preliminary capacity is how much a growth can be tried different things with on a forced premise. Discernible outcomes allude to how less challenging it is for people to see the significances of a progression, the almost certain

they are to hold it. Unmistakable outcomes bring down vulnerability and furthermore invigorate peer dialog of the advancement (Lyytinen & Damsgaard, 2012)

With regard to modern banking specifically e-banking, this theory cannot be ignored. Critical issues that establish the implementation of an invention at the general level are the following: comparative benefit (how better it is compared to the competition); compatibility (dependability with present values, earlier familiarities and needs); complexity (ability to comprehend and use); trialability (ability to experiment); observability (provision of evident results).

Different adopter groups are recognised as: early adopters, innovators, ate majority, early majority, and land laggards. This study tried to compare DTMs who may be at diverse classes of embracing and how the adoption affects the organisation's fiscal performance.

2.3 Determinants of Financial Performance

Financial performance depicts a sign of what banks nets on the shareholders' stock. Karkrah and Ameyaw (2010) established that many scholars have depicted on ROA as a suitable assessment of bank lucrativeness. However, Kinde (2012) and Ganka (2010), identified several possible determinants of financial performance of MFIs. These factors include: scope of outreach, cost per debtor, capital/financial configuration and staff efficiency.

2.3.1 Capital Adequacy

Capital is a bank element that impacts the dimension of bank lucrativeness. Capital is the sum of possess subsidize accessible to help the bank's matter of fact and go about as a support if there should arise an incidence of unfavorable state. Banks capital makes

liquescency for the bank because of the way that stores are most elusive and persuaded to bank runs. As designated by Dang (2011), the competence of capital is made a decision based on capital competence proportion (CAR). CAR validates the internal quality of the bank to endure calamities amid emergency. Capital competence amount is straightforwardly comparative to the flexibility of the bank to emergency conditions. It has a direct influence on the lucrativeness of banks by establishing its growth to dangerous yet gainful endeavors or zones (Sangmi & Nazir, 2010).

In a study of deposit-taking MFIs in Kenya Mwaniki (2012), it was asserted that optimization of working capital balances is interpreted to mean reducing the working capital requirements and exploiting possible revenues. In other words, it is observed that efficient WCM enhances a company's free cash flow. As a result, surges a company's development chances and return to stockholders. It was posited that the cash flow issues of many small enterprises are aggravated by poor fiscal management, particularly, the lack of organization requisite cash necessities (Jarvis, 1996). It is argued that in Kenya, the current squeeze on cash and credit is threatening the survival of several MFIs both deposit-taking and non-deposit-taking. It is further acknowledged that MFIs cannot operate without working capital. In this light, MFIs are recommended to appreciate the fact that WCM is necessary in making short-term decisions in working capital.

It should also be ensured that every MFI has the capacity to continue its operations with adequate cash flow for payments of both maturing short-term debt and impending operation expenses. The study's findings concurred with findings of a previous study (Raheman, Talat, Qayyum & Mohmood, 2010), that enhances cash alteration cycle is bound to minimize the profitability of a firm.

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2.3.2 Asset Quality

The bank's asset quality is another bank precise adaptable that influences the lucrativeness of a bank. They incorporates current asset, credit collection, fixed asset, and different investments. As a general rule the loan of a bank is the significant asset that creates the real offer of the business banks salary. The nature of loan group decides the lucrativeness of banks. The loan portfolio quality along these lines has an immediate behavior on bank profitability (Dang, 2011).

Microfinance Institutions must limit surplus default in loan reimbursement or postponement in reimbursement of loans and a high level of non-acquiring Resources as this negatively affects an association's profit, for example, a Saccos income on the grounds that these Resources are not gaining pay. Wrongdoing must be precise or kept to a base. Wellsprings of Resources of a Saccos that have a fiscal cost, for example, reserve funds stores should be put resources into productive Resources that will gain an arrival more noteworthy than the expense of resources.

2.3.3 Management Efficiency

Management competence is signified by diverse financial ratios like overall Resource growth, loan development rate and remunerations growing rate. The competence of the administration to organize its Resources proficiently for income expansion is dignified by financial ratios. The management is critical to the disappointment or accomplishment of any organization. The financial ratios utilized to evaluate management value is functioning turnover to revenue ratio. The advanced the working profit to income, the more the effectiveness is the management regarding working proficiency, income

accumulation and Resource usage. Njiru (2014) noticed that it is hard to assess management effectiveness using financial ratios.

2.3.4 Liquidity Management

Liquidity is used in reference to a banks ability to achieve its duties of depositors. Dang (2011) states that satisfactory dimension of liquidity is decidedly linked with bank lucrativeness. The most widely recognized financial ratios that mirror the liquidness position of a bank are client store to add up to Resource and aggregate loan to client stores.

The key yardstick in surveying the liquidity of a firm incorporate accessibility of Resources to pay creditors, money streams forecasts, creative current possessions and legitimate obligation structure. In assurance of liquidity position of a firm, a survey of financing costs, chance affectability and introduction, dependable wellsprings of Resources are crucial. Appraisal of accessibility of momentary Resources to promptly be changed over into money in relations to Resource risk management is extremely imperative (Dang, 2011).

2.3.5 Macro-Economic Factors

The macro-economic, GDP, inflation, interest rate, policy stability, and administrative unpredictability are the macroeconomic factors that influence the banks performance. For instance, the pattern of GDP impacts the interest for banks Resource. Amid the deteriorating GDP development, the interest for credit falls which thusly obstinately influence the lucrativeness of banks. It is evident that the interest gained for credit is high in growing economies that are composed of a positive GDP. This is due to the notion of

the business cycle. Amid blast the interest for credit is high equated with subsidence. (Sangmi & Nazir, 2010)

2.4 Empirical Literature Review

Various studies have been undertaken in different countries and economies on performance of MFIs and affiliation between electronic banking and financial performance. This section discusses a sum of studies that have voted for out on connection between electronic banking and financial performance of MFIs.

Simpson (2002), endorses that e.-banking is determined generally by the projections of operational expenses reduction and working incomes increase. In the Kenyan case, there are few studies undertaken in relation to MFIs. Most studies in Kenya have focused much on organizational sustainability dealing with issues such as factors inhibiting innovation and commercialization of MFIs (Kanyiri & Kiweu, 2009). Therefore, the objectives of the proposed study are different from previous studies in Kenya, and this guarantees its value for study.

DeYoung et al. (2006), watched the alteration in monetary performance of web network banks in U.S. amid 1999-2001. The outcomes established that web appropriation enhanced network banks' effectiveness, especially through prolonged profits from store benefit charges. Web reception was likewise linked with progresses of stores from financial archives to currency promote store accounts, prolonged use of accelerated stores and higher normal wage tariffs for bank workers.

Bogan et al. (2007), using data from more than three hundred MFIs reporting their financial data to the Microfinance Information Exchange (MIX) market, examines

whether capital structure affect the financial sustainability of MFIs based on the life cycle stages. The results from the study reveal that various issues other than life cycle seem to be related with sustainability. Notably, it found that an MFI's capital structure is linked with financial sustainability of MFIs. In addition, Bogan (2009), using panel data establishes a connection between capital organization and key measures of MFI success. The study reveals fundamental proof ancillary the allegation that an augmented use of grants by large MFIs reduces working self-sufficiency.

Kinde (2012), after a quantitative methodology utilizing a decent board informational collection of 126 perceptions from 14 MFIs working in Ethiopia between 2002-2010, uncovers that microfinance broadness of effort, profundity of effort, reliance ration and cost per debtor influence the monetary sustain.-ability of microfinance institutes in Ethiopia. Be that as it may, the microfinance capital organization and staff efficiency have immaterial effect on fiscal sustain.-ability of MFIs in Ethiopia for the examination time frames. A few examinations demonstrate that online bankers are more profitable sections to banks (Robinson and Nyangosi, 2006). Electronic banking in this manner offers many returns to banks and also to clients.

Be that as it may, in worldwide terms the greater part of private bankers are still not utilizing electronic banking channel. There are different explanations behind this. Premier, clients need an entrance to the web with the intent of using administration. Moreover, new online clients are required to establish how to utilize the administration. Also, nonusers regularly grumble that automated banking has no social assessment, i.e. you are not aided in the manner in which you are in an up close and personal circumstance at branch (Mattila et al., 2003). At last, clients have been hesitant about

security matters (Sathye, 1999). Be that as it may, this circumstance is shifting as the electronic banking network has turned out to be sheltered to utilize and no abuse has been accounted for by the media in Finland.

As indicated by Aduda et al. (2012), investigations set up whether there is a connection amongst ward mutable as estimated by ROA. The investigation uncovered that e-banking has a hugeness minimal influence on ROA in the Kenyan business. Along these lines there occurs positive link among e-banking and bank performance.

Mbogo and Ashika (2011) studied the aspects that affect product modernization in micro finance institutions in Kenya they found out that technology advancement further fueled financial innovations in microfinance industry by collecting of information and management, its transmission and investigation, profiting through decreased costs or win additional incomes, similar to ATMs, debit cards, IT exchanges. The investigation suggests that MFIs ought to break down the market request at that point develop to meet these market needs. To a substantial degree, they locate that financial development is showcase driven, where dissimilar market fragment needs manage pioneers impact to take advantage of various markets and the more assorted populace of potential speculator running from little scale and present moment to vast scale and long haul financial specialists.

Mugo (2012) on his part studied the influence of fiscal innovation on the development of micro-finance organizations in Kenya using descriptive design. The study found that MFIs in Kenya had embraced financial innovation with at least 60% having developed a new product hence widening their product range. The findings proved that financial

innovation added to the expansion of the MFIs market share, number of clients and earnings.

Balagizi (2011) assessed the influence of innovative changes on the fiscal performance of private and non-profit making organization with focus to selected organizations in Kenya. This leaves a wide knowledge gap that the current research is aimed to bridge by investigating the influence of Electronic.-banking on micro-finance institutions.

Ogare (2013) surveyed the association amid e-banking and performance of Kenyan commercial banks. Performance was dignified by yield once tax has been deducted and the e-banking variables consisted of number of POS terminals, ATMS, debits and credit cards delivered and the level of practice of internet banking, mobile banking and EFT. The results showed that as electronic banking usage rose, so did the performance of the banks. Okiro and Ndungu (2013) studied the Influence of financial institutions in Kenya. Their study leaves a wide information hole that the current examination plans to connect by exploring the influence of automated taking miniaturized scale back organizations in Kenya.

2.5 Conceptual Framework

```
┌─────────────────────────────┐
│ Asset Quality               │
│                             │
│  • Non performing loans     │────────┐
│  • Gross loans              │        │
└─────────────────────────────┘        │
                                       │
┌─────────────────────────────┐        │
│ Management Efficiency       │        │         ┌──────────────────────────┐
│                             │        │         │ Financial performance    │
│  • Total Equity             │────────┤         │                          │
│  • Total Asset              │        ├────────▶│  • Return on equity      │
└─────────────────────────────┘        │         │  • Return on assets      │
                                       │         └──────────────────────────┘
┌─────────────────────────────┐        │
│ Liquidity Management        │        │
│                             │        │
│  • Liquid assets            │────────┤
│  • Deposits                 │        │
└─────────────────────────────┘        │
                                       │
┌─────────────────────────────┐        │
│     Capital adequacy        │        │
│                             │        │
│  • Total Equity             │────────┘
│  • Total Asset              │
└─────────────────────────────┘
```
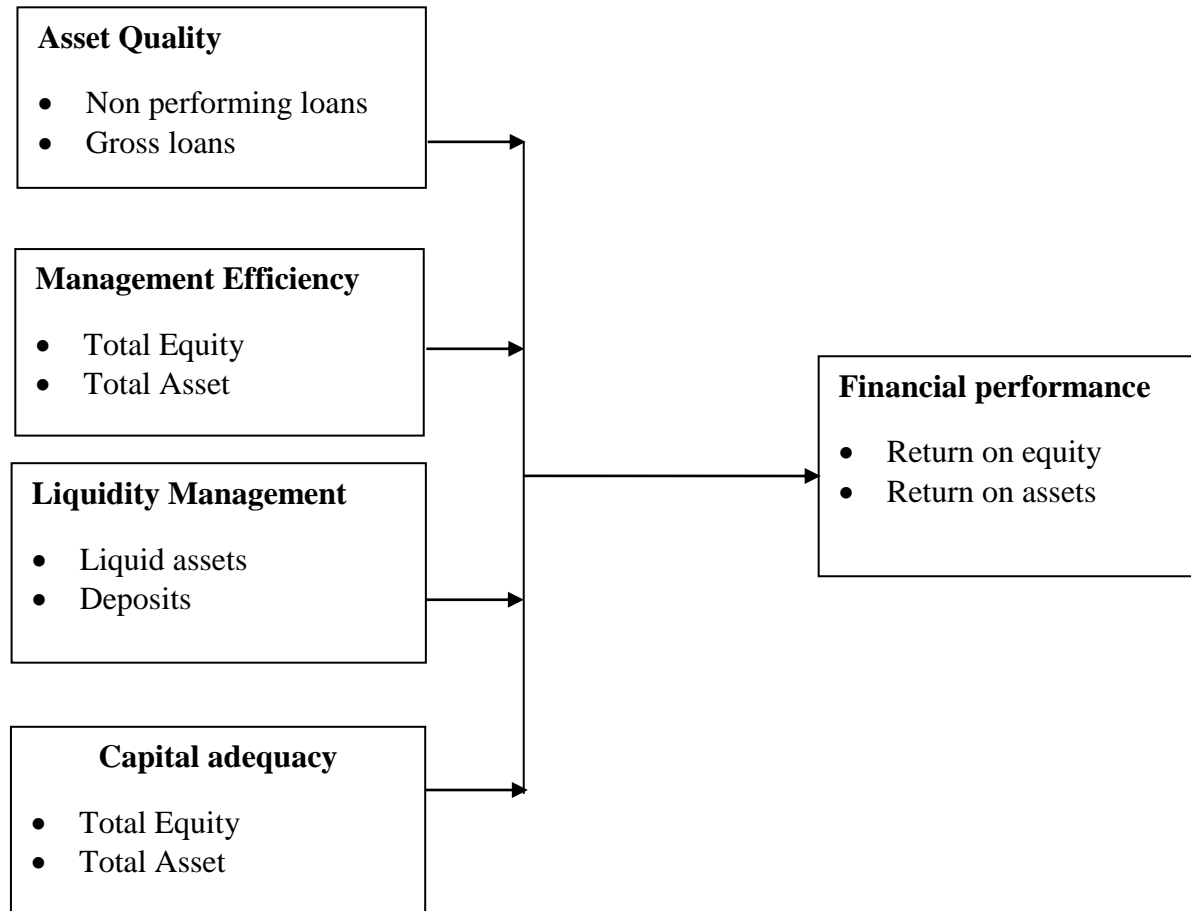
Independent Variable   **Dependent Variable**

Figure 2.1: Conceptual Framework

From the Conceptual framework above, the implementation of electronic banking in the DTMFIs will lead to improved Resource quality, liquidity management, management efficiency, and capital competence which in turn will determine the financial presentation of the DTMFIs.

2.6 Summary of Literature Review

The literature influence of electronic banking on financial performance has been reviewed. It is evident that there is varied sign on the influence of electronic banking on financial performance of DTMs in Kenya. Varying Institutions have assessed e-banking

using diverse strictures and the outcomes gathered vary. With the passing of the Microfinance Act (2006), many DTMs have been established and they offer services similar to commercial banks to the marginalized customers. Many of these DTMs have adopted some form of e-banking whose success is yet to be known; hence need to carry out research and evaluate whether e-banking has helped to expand the financial performance of these organisations.

As indicated by the standard web based bank plan of action, low overhead costs and access to bigger geographic markets ought to enable automated banks to provide better costs (higher store rates, bring down loan rates) than stretching banks, become quicker than spreading banks, and make profits.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter will present the methodology that will be utilized to engage in the study.

3.2 Research Design

The current study, in carrying out the surveys, implemented a descriptive survey research design. Descriptive study is aimed at establishing what is happening, or what is instigating a certain happening to occur Kothari, (2008). Descriptive studies are, moreover, argued to be popular in business research due to their versatility across disciplines. On the other hand, surveys are more often cross-sectional in nature and as such their rationale, as exemplified in this study, was to collect data and carry out a study at a specific point in time and to use it to define existing conditions.

3.3 Population of the Study

Population is a total group of persons, events or objects exhibiting similar noticeable appearances (Mugenda & Mugenda (2003). In this case, the population was comprised of DTMFIs Kenya. There are thirteen DTMs in Kenya as at August 2018 (CBK, 2018). Thus the study will conduct a census review due to the minor number of DTMs in Kenya. The population in the study comprised of all MFIs classified as retail and DTMs in Kenya who are members of the AMFI.

3.4 Data Collection

The researcher collected primary where regulated questionnaire was utilized to amass data from the respondents from each of the selected DTM. The questionnaire was organized to incorporate both shut, open-finished and network questions to permit

assortment. The organized questions are regularly close ended with choices to guide the respondent to answer (Mugenda and Mugenda, 2003). Unstructured questions are open-finished and present the respondent with the chance to give their very own answers. These sorts of questions are anything but difficult to define and enable the respondent to display their emotions on the topic empowering a more noteworthy profundity of response (Mugenda and Mugenda, 2003).

Network questions were additionally used. This kind of questions present the respondent with a scope of questions against which they are required to react dependent on a foreordained rating scale. The most usually utilized is the likert scale. These kinds of scales are utilized to quantify discernments, dispositions, qualities and conduct (Cooper and Schinder, 2007). These sorts of questions are famous with the respondents and analysts as they are anything but difficult to fill in, practical and give simple likeness. The respondents of this study will be senior, middle low level managers in, finance department, product development departments, IT departments and operation departments in each DTM while two (2) respondents in each department will be targeted contributing to 72 respondents. Both primary and secondary data were incorporated in the study. Primary data will be basically demographic data while secondary data will be based on the financial declarations of purposively selected MFIs in Kenya that voluntarily disclose their financial information through MIX web portal.

3.5 Data Analysis

The data was cleaned, organized and checked for completeness and constancy after collection. It was then analysed by descriptive statistics utilizing statistical package for the social sciences (SPSS). Descriptive statistics entails standard deviation, frequency,

mean, and percentages to profile sample features and key patterns from the data. A multiple linear regression model was then utilized to estimate the connections among the variables.

3.5.1 Analytical Model

The regression model was as follows;

$$Y_{bt} = \alpha_o + \beta_1 ATM_{it} + \beta_2 I_{it} + \beta_3 ET_{it} + \varepsilon$$

Where;

Y_{bt} was financial performance represented by ROA of bank b in year t. This will be obtained from the financial statements

α_o was the estimated value of Y that captures time t invariant influences explicit to microfinance institution b

β was the estimated value of Y that captures time t invariant influences explicit to microfinance institution b

ATM represented the value of transactions effected through automated teller machines by the b microfinance institution's customers. This was derived from the financial statements and CBK periodic reports.

I was the value of transactions effected through internet banking as obtained from the banks' financial statements and CBK reports.

ET was the value of expenditure in ICT measured in Kenya Shillings which was derived from the financial statements and CBK periodic reports.

ε was the error term

To find the value of α and β, the multivariate regression model was employed. The individual beta estimate reliability was then tested by the p-value in the ANOVA table.

The regression model's significance was tested at 95% assurance interim and 5% level of meaning.

3.5.2 Diagnostic Test

Data collected was subjected to normality test to ensure that it`s normally distributed. To make sure that the data within the given period of time has some correlation, that is a connection between current variable and the past variables, lagging test was done. The statistical errors identified in the analysis were checked by performing diagnostic tests. The study used normality, multicollinearity, homogeneity of variance and pre-regression analysis to test the statistical errors. This was to regulate if the data set was well modelled.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter details the outcomes of the assessment. The study was designed with the aim of achieving the objective of establishing the influence of e-banking on Microfinance organisations in Kenya.

This study targeted all the 13 DTMFIs in Kenya. Out of the 13 were distributed 12 were filled and returned which constituted a return rate of 92.4%. The table below exemplifies the response rate

Table 4.1: Response Rate

	Frequency	Percentage
Distributed	13	100
Returned	12	92.4

Table 4.1 illustrates that out of the 13 questionnaires that were distributed 12 (representing 92.4%) were correctly filled and returned

4.2 Descriptive Statistics

This study carried out descriptive statistics' for the main variables of the study. The table below presents the findings.

Table 4.5: Descriptive Statistics

	N	Mean	Std. Deviation
Net profit	12	5.7312	6.80201
Number of ATMs installed	12	9.54	4.605
Number of customers using Mpesa service	12	2510.23	1716.874
Expenditure on ICT infrastructure	12	7591.56	13833.105
Number of customers using internet banking	12	13550.53	42784.130
Total Resources	12	1.17E8	2.792E8

According to Table 4.5 expenditure on ICT infrastructure had a mean of 7591.56 with a standard deviation of 13833.105. The number of customers using Mpesa service was an average 2510.23 when the combined customer base stood at a mean 13550.53 with a corresponding standard deviation of 42784.130. The net profit was an average 5.7312 with an average six standard deviations above the mean. The high standard deviation implies that it not only one variable that affected the performance of the DTMFIs

4.3 Tests for Statistical Assumptions

Statistical procedures using association, regression, t-test analysis and assessment of variance are based on the notion that there is a normal supply in the data. The statistical errors identified in the analysis were checked by performing diagnostic tests. The study used normality, multicollinearity, homogeneity of variance and pre-regression analysis to test the statistical errors. This is to determine if the data set was well modelled.

4.3.1 Tests of Normality

Techniques of statistical nature requires supposition of normality to be tested. It will assist the graphical tests to be achieved in connection to the data normality and also

enables the skewness and kurtosis coefficients to be tested. It authorizes whether a normal dissemination is monitored by data or not. If the normality is not attained, the regression analysis for goodness of fit, the findings may not portray the true picture association amongst variables. The central limit theorem (CTL) asserts that if the sample data are roughly normal, then the sampling distribution will be normal (Krishman, 2006). In the study the normalcy was verified using the Shapiro- Wilk Test. Shapiro-Wilk Test is more appropriate or most influential normality test (Razali and Wah, 2011). It is a more reliable test for creating skewness and kurtosis values of normality. If it is below 0.05, the data meaningfully diverge from a standard distribution. Results for the test of normality are presented in Table 4.1.

Table 4.2: Shapiro-Wilk Test of Normality

Variables	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Automated teller machines	.747	250	.401
Internet banking	.656	250	.401
Expenditure in ICT	.742	250	.401
Financial performance	.703	250	.401

The results were (0.401) higher than 0.05 checking that there was normality in data. This suggests that since the p-value is superior to the selected alpha level of 0.05 then we fail to cast-off the assumption influenced the facts came from a typically dispersed population. The outcomes of the experiments are thus generally dispersed populace.

4.3.2 Multicollinearity Test

Multicollinearity refers to unwanted situation where the independent variables correlation is high. It upsurges the factors` standard errors by applying data with collinearity hence getting variance inflation factor (VIF) and lenience. The quantity of variance in independent variable not defined by the other independent variable is referred to as tolerance. VIF is a measure of how much variance the regression coefficient is overstated by multicollinearity, thus deceptively expanding standard errors. The tolerance minimum cut off value is characteristically (0.10) (Keith, 2006). When there is no difficult with multicollinearity tolerance, value ought to be less than (0.10) while VIF value should be additional than (10).

The VIF was also functional to asses' multicollinearity. The values should not surpass 10 and the acceptance ideals should not be less than 0.10 (Keith, 2006). The maximum satisfactory VIF cut off value is (10). Where there are no two variables which are correlated, then all VIFS will be 1. Where the VIF for one variable is ≥ 5, then there exist collinearity interrelated with that variable.

Table 4.3: Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.272	.350		3.636	.000		
Automated teller machines	.198	.063	.188	3.126	.002	.780	1.281
Internet banking	.096	.066	.107	1.451	.148	.512	1.954
Expenditure in ICT	.325	.073	.349	4.481	.000	.463	2.162
Financial performance	.174	.070	.145	2.463	.014	.815	1.228

A variance inflation factors (VIF) of less than 10 is shown in the table 4.2 results: Automated teller machines (1.281), Internet banking (1.954), Expenditure in ICT (2.162), while financial performance had (1.228). This suggests that there was no collinearity with the variables.

4.3.3 Tests of Independence

Durbin-Watson test measured the independence of error terms which shows independence of comments. The test check that there was no correlation in the residuals of the models. This is because its part of regression analysis rudimentary hypotheses. Scores between 1.5 and 2.5 designate independent observations (Garson, 2012).

Table 4.4: Tests of Independence

	Durbin Watson
Automated teller machines	1.795
Internet banking	2.063
Expenditure in ICT	2.245
Financial performance	2.731

4.4 Regression Analysis

The study utilizes regression to assess the model with net profit as the reliant variable and determinants of performance as the autonomous variables. The aim of the model is to deliver a valuation of the influence of e-banking on performance.

As depicted in table 4.6 below

Table 4.6: Regression Analysis

Model	R	R Square	Adj R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df2	Sig. F Change
1	.463ᵃ	.214	.127	6.35532	.214	2.455	5.E1	.047
a. Predictors: (Constant), Number of customers using Mpesa service, Total Resources, Number of customers using the internet-banking, expenditure on ICT infrastructure, Number of ATMs installed								

According to the model summary there is a statistically progressive correlation among the independent and dependent variables R=0.463. According to the analysis R^2 the coefficient of determination is R^2= 0.214 implying that 21.4% of the variation in explanatory power has been done by the model while 78.6% of disparities in financial performance of the DTMFIs is clarified by distinctions in the self-governing variables

that consist of Number of customers using Mpesa service, Total Resources, Number of customers using the internet-banking, expenditure on ICT infrastructure, Number of ATMs installed by the DTMFI. The adjusted R Square of 0.127 imply that up to 99.873% of disparities in DTMFI financial performance is clarified by other issues not comprised in the current model. The model provides a p-value of 0.047 since p >than 0.5% at 95% confidence, this finding settles that there is a noteworthy association among e-banking and fiscal performance of DTMFIs.

4.5 Analysis of Variance

Table 4.7: Analysis of Variance

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	495.813	5	99.163	2.455	.047[a]
	Residual	1817.553	45	40.390		
	Total	2313.366	50			
a. Predictors: (Constant), Number of customers using Mpesa service, Total Resources, Number of customers using the internet -banking, expenditure on ICT infrastructure, Number of ATMs installed						
b. Dependent Variable: Net profit						

The ANOVA table above shows that the coefficient of was F= 2.455 implying that 24.55% of the variation in explanatory power has been done by the model while 75.45% of variations in net profit is due to other factors. The model provides a p-value of 0.047 since p >than 0.5% at 95% confidence, this finding concludes that there is a significant link amongst Electronic banking and financial performance of the DTMFIs.

Table 4.8: Coefficients

<table>
<tr><td colspan="7" align="center">Coefficients^a</td></tr>
<tr><td rowspan="3">Model</td><td colspan="2">Unstandardized Coefficients</td><td>Standardized Coefficients</td><td rowspan="3">t</td><td rowspan="3">Sig.</td></tr>
<tr><td>B</td><td>Std. Error</td><td>Beta</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>1 (Constant)</td><td>2.037</td><td>2.641</td><td></td><td>.772</td><td>.444</td></tr>
<tr><td>Expenditure on ICT infrastructure</td><td>-7.116E-5</td><td>.000</td><td>-.145</td><td>-1.074</td><td>.288</td></tr>
<tr><td>Number of ATMs installed</td><td>.395</td><td>.205</td><td>.268</td><td>1.926</td><td>.006</td></tr>
<tr><td>Total Resources</td><td>3.503E-9</td><td>.000</td><td>.144</td><td>1.044</td><td>.302</td></tr>
<tr><td>Number of customers using internet banking</td><td>4.857E-5</td><td>.000</td><td>.393</td><td>2.906</td><td>.006</td></tr>
<tr><td>Number of customers using Mpesa service</td><td>.000</td><td>.001</td><td>-.094</td><td>-.689</td><td>.494</td></tr>
<tr><td colspan="7">a. Dependent Variable: Net profit</td></tr>
</table>

Using the model $Y= \beta_0 X_1 + \beta_I X_I + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + E$ in the above regression, it becomes:

$Y = 0.395\,X_2 + 4.857\text{E-}5\,X_4 + E$

Therefore, it may therefore be interpreted that for every two units of (2.037) net profit experienced by the DTMFIs expenditure on ICT infrastructure -7.116E-5 units decrease in growth while the Number of ATMs installed will rise by a paltry 0 .395% and a corresponding rise by 3.5% in total Resources while the number of customers using internet banking standing at 48% and none in Mpesa implying that there is no difference between the two categories of customers

4.6 Summary and Interpretation of Findings

From the results, the coefficient ATMs is high at *9.54*. This suggests that ATMs are good at clarifying the net profit. The relationship between net profit and expenditure on ICT is negative. This suggest that increase in expenditure rate reduces the net profit and vice versa. In line with the study findings, Nader (2011), examined the profit competence of the Commercial banks in Saudi Arabia from 1998-2007. The outcomes of this investigation established that user-friendliness of telephone keeping money, number of ATMs and number of branches clearly influenced profit proficiency of Saudi banks. In the Kenyan case, there are few studies undertaken in relation to MFIs. Most studies in Kenya have focused much on organizational sustainability dealing with issues such as factors inhibiting innovation and commercialization of MFIs (Kanyiri & Kiweu, 2009). Therefore, the objectives of the proposed study are different from previous studies in Kenya, and this guarantees its value for study.

The R-squared statistic gauging the achievement of the regression in forecasting the values of the dependent variable within the sample specify that only 21.4% of what is occuring in the DTMFIs can be illuminated by ICT variable. A typical finding in time arrangement relapses is that the residuals are correlated with their own slacked qualities. This sequential relationship damages the standard suspicion of relapse hypothesis that unsettling influences are not correlated with different aggravations.

The model provides a p-value of 0.047 since p >than 0.5% at 95% confidence, this finding settles a noteworthy connection among electronic banking and financial performance of DTMFIs. This is in line with Mallat, Rossi and Tuunainen (2004) who states that portable administrations are one of the most recent administrations that the

banks offer. Through this administration, the customers get messages on the cell phone when exchanges that include the customers, for example, those identifying with the records or the cards happen. This lessens the hazard that the record or the cards are being utilized by someone else and not the customer. This associates with Dabholkar (2009) web managing an account enables customers to perform assignments at once and in a place advantageous to them. Coordinate contact with such innovation additionally gives customers a sentiment of more noteworthy control.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter reflects on a summary of the key fundamentals of the study, discussion of major key and clarification of the outcomes. The chapter further depicts the conclusions drawn from the study results as well as sanctions for enhancement and proposals for additional research.

5.2 Summary of Findings

The study was intended at instituting the consequence of electronic banking on financial performance of DTMFIs in Kenya. The study entailed the assembly of data through the use of questionnaires which were managed through drop and pick basis. This study targeted all the 13 DTMFIs in Kenya.

From the descriptive results, products provided by the DTMFIs were treasury bills, money transfer services and corporate bonds and travelers cheques. The distribution of the products indicates that the DTMFs were well placed to provide e-banking services. An analysis of the variables led to the conclusion e-banking had noteworthy influence on the banks operations. The findings therefore conclude that use of electronic banking led to an growth in performance. These findings are consistent with Njogu (2014) who conclude that electronic banking was a tool for increasing bank performance.

A regression enquiry was piloted with the aim of determining the link among automated banking and fiscal performance of the DTMFIs. The study found that there is a statistically progressive connection between the self-governing and reliant variables

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R=0.463. According to the analysis R^2 the coefficient of determination is $R^2=0.214$ implying that 21.4 9% of the variation in explanatory power has been done by the model while 78.6 percent of disparities. According to the model summary, there is a statistically positive correspondence among the independent and dependent variables R=0. .463. According to the analysis R^2 the coefficient of determination is $R^2=0.214$ implying that 21.4% of the variation in explanatory power has been done by the model while 78.6% of disparities in financial performance of the DTMFIs is clarified by differences in the independent variables that comprise of Number of customers using Mpesa service, Total Resources, Number of customers using the internet-banking, expenditure on ICT infrastructure, Number of ATMs installed by the DTMFI. The adjusted R Square of 0.127 imply that up to 99.873% of variations in DTMFI financial performance is clarified by factors that are not part of the current model. The model provides a p-value of 0.001 since p >than 0.5% at 95% confidence which shows affiliation between e-banking and financial performance of DTMFIs.

5.3 Conclusions

The research was steered by the aim; to evaluate the weight of e-banking on financial performance by the microfinance institutions. The results indicated that DTMFs performance as measured by performance determinants namely Management efficiency mean, capital adequacy, profitability, liquidity management, Resource quality, market share of DTMFI and while macro-economic factors is explained by investment in ICT and internet banking. This indicates that there occurs an undesirable link amongst e-banking and financial performance.

The findings of statistically significant positive relationships amongst embracing of electronic banking and financial performance of the DTMFIs attributes to the inference that application of innovative approaches enhances financial inclusivity and subsequently financial performance of financial institutions. It therefore supports the financial innovations theory and the Technology acceptance models.

The study settles that electronic banking has funded positively to the fiscal performance of the institutions as documented in the variables where the sum of workers and annual transfers had an optimistic and noteworthy effect to financial performance of credit taking microfinance associations in Kenya. It is evident that the use of ATM cards have influenced the financial show of DTMFIs in Kenya. Additionally, internet banking positively influence the performance of microfinance institutions that take deposits.

Electronic banking has a noteworthy marginal influence on the performance of DTMFIs as there is an improvement in customers' access to banking activities with the click of a button and without restrictions related to time and location. Efficiency, accessibility and a larger market reach increases the number and volume of transactions, increases the number of debit card and credit charges, interest on loans, increased deposits (a source of funding for banking business and investment).These factors contribute positively towards income position and subsequently financial performance.

5.4 Recommendations

The study endorses that strategy makers deliberate electronic banking in their design of policies due to technical growths and the anticipated a move from branch banking networks to technologically reinforced DTMFIs services.

Electronic managing an account is being utilized to enhance money related tasks in business banks. The banks have set up measures to wind up more aggressive via preparing staff, putting resources into innovative work of innovation. It is recommended that microfinance institutions in Kenya should continue embracing and utilizing versatile keeping money in their activities on the grounds that the quantity of individuals with access to a portable handset is expanding each day. Also, the intermingling of cell phones and deposit-taking microfinance foundations in Kenya has altered the saving money tasks. For instance, Safaricom constrained related to Commercial Bank of Africa propelled M-Shwari administrations which give enrolled individuals a chance to get cash from the bank and reimburse advantageously. This has presented another point of view that is probably going to reform the saving money activities for expanded profitability

The study further recommends that DTMFIs in Kenya managing an account is being utilized to enhance money related tasks in business banks. The banks have set up measures to wind up more aggressive via preparing staff, putting resources into innovative work of innovation. Over the long haul, electronic managing an account is probably going to impactsly affect the profitability of continue embracing and utilizing versatile keeping money in their activities on the grounds that the quantity of individuals with access to a portable handset is expanding each day. Also, the intermingling of cell phones and deposit-taking microfinance foundations in Kenya has altered the saving money tasks. For instance, Safaricom constrained related to Commercial Bank of Africa propelled M-Shwari administrations which give enrolled individuals a chance to get cash from the bank and reimburse advantageously. This has presented another point of view that is probably going to reform the saving money activities for expanded profitability.

Following the findings above, it is this study's recommendation that DTMFIs increase their efforts towards adoption of e-banking to automate their service delivery to clients. This trails the affirmative influence that e-banking usage has on the fiscal performance of DTMFIs as noted through the study.

The DTMFIs policy makers and officials also need to cogitate on e-banking as a key input when crafting strategies to control the industry. As the country continues to take on developing partners to accentuate its technological capacity, banks will continue to increasingly leverage on technology to improve their performance notwithstanding the risks associated.

The study further recommends that DTMFIs should continue grasping the utilization of mobile banking in their everyday tasks in relations to inhabitants in individuals with access to a wireless continues swelling each day. The banks should continue working couple with mobile network companies to craft innovative services that are tailored to their targeted market. Examples of such partnerships include M-Shwari service by Commercial Bank of Africa and Safaricom Limited which supports the convenient borrowing and repayment of money from the bank by registered members. With sustained growth in technology, this will certainly transform the banking processes for better effectiveness.

Profitability is also crucial to shareholders and the market is as well paying attention on the profitability of establishments. In this approach, any responsible and ethical effort to enhance profitability of a company will receive heartfelt appreciation from the shareholders. In retrospect, DTMFIs, therefore, ought to continue adopting new

technologies to help in improving their margins, hence their profitability in order to attract more investors.

Based on the finding there is a significant necessity for the parties in the banking industries to implement electronic banking as this will allow them have a wide analysis, elasticity, and better convenience linked to predictable banking. DTMFIs therefore, need to invest heavily in technology, as this will highly have a bearing on the commercial banks' financial performance. The CBK, which is the regulator of the deposit-taking microfinance institutions, also needs to monitor keenly the banks operations to ensure they are as par the set standards. The deposit-taking microfinance institutions systems should be very secure to reduce chances of fraud occurring.

Great emphasis should be placed on seeking alternative funding on the e-banking infrastructure as it is expensive to purchase and maintain. The management can seek avenues such as joint investment in e-banking infrastructure that can be shared by all microfinance institutions in Kenya that take deposits at a fraction of the original cost while tailor making them to suit their needs.

The management can also invest in continuous innovation of e-banking strategies while ensuring continuous training and sensitization of both their clients and staff as e-banking exists in turbulent technological environment. Lastly, top management involvement would contribute towards the effectiveness of e-banking by engaging at all levels from e-banking planning to implementation and also evaluation

5.5 Limitations of the Study

The study was imperfect by shortfalls in financial statements. Past financial performance, good or bad, is not essentially a precise forecaster of future performance. Financial declarations do not reveal the firms' future forecasts or the customers' recent decision to enter or exit from DTMs. The audited statements do not guarantee accuracy because they are subject to a degree of manipulation. Moreover, the fact that financial performance of DTMs is gradually growing, there was no clear justification that deposits held by DTMs is the cause of growth. Other features influencing fiscal performance were not measured.

The study was limited to the influence of electronic banking on financial performance of DTMFIs in Kenya. There are other issues that affect the fiscal performance of DTMFIs such as competitiveness of the DTMFIs, monetary policies, CBK liquidity ratio, unemployment, banking crises, CBK regulations, other products offered by the bank, number and type of customers as well as the market share of the bank. For instance, the type of clientele can determine how much cash a bank has. A bank that has a high population of low income earners could be less liquid compared to another that has few clients but with large deposits.

The study was limited to establishing the relationship among electronic banking and financial performance among DTMFIs. For this reason, other financial institutions could not be incorporated in the study. The study presumed a linear relationship which could turn out to be other types of relationships.

5.6 Recommendations for Further Study

Since the present study was only based on DTMFs, upcoming studies should pursue to improve on the findings of this study by expanding the population to include other MFIs like SACCOs. These institutions are involved in bringing financial services to the poor or marginalized areas and the idea of a virtual branch would be an area of interest to other researchers. Additionally, future studies should be focused on other factors that affect performance.

Another study will be conducted in other financial institutions and other performance parameters including service quality, efficiency and sustainability could be included.

The study proposes that additional studies can be led on classifying the financial institutions in categories including early adopters and later adopters of electronic banking channels. Such a study should incorporate the associated costs of implementing electronic banking including training and outreach for the SACCO member users.

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APPENDICES

Appendix I: Questionnaire

This questionnaire is meant to collect data on the effects of e-banking on organizational performance of Deposit taking Micro-finance institutions in Kenya.

Kindly take a moment to complete this questionnaire. Your honesty will be anonymous. However, your views are crucial to this research. The exercise will only take about 2o minutes. Your participation will be valued.

SECTION A: Demographic Information

(Please tick one box for each of the questions)

1. Kindly indicate the name of DTMFI..

2. How many years has your DTMFI been in operation?

Less than 5 years   [ ] 6-10 years [ ]   11-15 years [ ]   Over 15 years [ ]

3. Has your DTMFI adopted electronic form of banking?

Yes [ ]   No [ ]

4. The following are general financial products and services. Indicate whether the eservice / Product is available electronically in your DTMFI

Cash deposit and withdrawal [ ]   Bankers cheques   [ ]

Finance Bank guarantees   [ ]   Electronic Money transfer Services   [ ]

Treasury bills and bounds   [ ]   Corporate bounds   [ ]

Travelers cheques   [ ]

Please indicate the expenditure on ICT infrastructure (e-banking) for the past years

SECTION D: DETERMINANTS OF FINANCIAL PERFORMANCE

Below are presumed determinants of financial performance

Expenditure on ICT infrastructure (e-banking)

period	2010	2011	2012	2013	2014	2015
Expenditure on ICT infrastructure						

Please indicate the number of ATMs installed by the DTM as below.

Number of ATMs installed by the DTM

period	2010	2011	2012	2013	2014	2015
Number of ATMs installed by the DTM						

Please indicate the total Resources of the DTM as at reporting quarter

Total Resources of the DTM as at reporting quarter

period	2010	2011	2012	2013	2014	2015
total Resources of the DTM at reporting quarter						

Please indicate net profit of the DTM for the past 5 years or since registration

Net profit of the DTM

period	2010	2011	2012	2013	2014	2015
net profit of the DTM						

Indicate the number of customers using the internet service.

Number of customers using the service

period	2010	2011	2012	2013	2014	2015

Mobile banking applications such as MPESA and mobile banking services

Please indicate the number of customers using the M-Pesa service.

Period	2010	2011	2012	2013	2014	2015
M-pesa						

Thank you

Appendix II: List of Licensed Microfinance Banks

1. Choice Microfinance Bank Limited

2. Faulu Microfinance Bank Ltd

3. Kenya Women Microfinance Bank Ltd

4. SMEP Microfinance Bank Ltd

5. Remu Microfinance Bank Ltd

6. Rafiki Microfinance Bank Ltd

7. Uwezo Microfinance Bank Ltd

8. Century Microfinance Bank Ltd

9. Sumac Microfinance Bank Ltd

10. U&I Microfinance Bank Ltd

11. Daraja Microfinance Bank Ltd

12. Caritas Microfinance Bank Ltd

13. Maisha Microfinance Bank Limited