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ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS & ECONOMICS
DEPARTMENT OF MASTERS OF ART IN PROJECT MANAGEMENT

**Challenges of Implementing Agent Banking: Evidence from Agents
of Commercial Bank of Ethiopia**

**A Project paper submitted to graduate program of AAU in partial
fulfillment of the requirements for the degree of Masters of Art in
Project Management**

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JUNE, 2018

ADDIS ABABA, ETHIOPIA

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BY

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DECLARATION

I, Betelhem Kurabachew, declare that this work entitled “**Challenges of Implementing Agent Banking : Evidence from Agents of Commercial Bank of Ethiopia** ” is

the outcome of my own effort and study and that all sources of materials used for the study have been duly acknowledged.

I have produced it independently except for the guidance and suggestion of the Research Advisor. This study has not been submitted for any degree in this University or any other University. It is offered for the partial fulfillment of the degree of Masters of Art in Project Management.

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Appendix 1: Questionnaire

Abbreviations

ANM	Agent Network Manager
ATM	Automatic Teller Machine
CBE	Commercial Bank of Ethiopia
CGAP	Consultative Group to Assist the Poor
GDP	Gross Domestic Product
NBE	National Bank of Ethiopia
PIN	Personal Identification Number
POS	Point of Sale

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ABSTRACT

The purpose of the study was to investigate the challenges facing financial services agents in Addis Ababa. A structured closed and open-ended questionnaire administered face to face was the main instrument for data collection. The questionnaire was pre-tested through pilot study to ascertain the reliability of instrument in collecting required information for the study. The data was analyzed using descriptive and inferential statistics. On operational challenges, the researcher found that lack of float was a very important challenge Training was however not an important challenge. Most of the agents reported to having received training from the bank. In cases where agents operated multiple agency services 52.6% of the single financial service operator agents are willing to expand their business to include services from other banks while 47.4% of the agents are satisfied with operating agent services from the commercial bank of Ethiopia. Insecurity was found to be a very important challenge a relatively low percentage (28.9%) of them had fears of insecurity. Findings on the technological challenges revealed that 89.5% of the agents experienced system down times with 52.6% of them agreeing that network unavailability was a major hindrance to service delivery. The system down times were however not attributed to the gadgets used for agency banking. The findings indicated that (30 and 10%) of the agents agreed and strongly agree that the gadgets used for agency banking were reliable. From the findings, the study concluded although lack of training was not a challenge, the agents that received training for multiple financial institutions had difficulties keeping up with the trainings from different financial institutions. As a remedy to these challenges the study recommends that Commercial Bank of Ethiopia should consider revising current policies to allow a standard agency system platform. The study also recommends setting up redundant network infrastructures to improve network accessibility and reliability. Finally the study recommended taking measures to reduce operational challenge predictors (liquidity, insecurity and agency regulation) as well as reduce network hitches as this would help financial agency operators increase their monthly transactions thus improving performance and as a result contribute to the success of agent banking in Commercial Bank of Ethiopia making the goal of financial inclusion as envisioned in CBE Vision 2025 that agency banking is supposed to address achievable.

Keywords: Agent, Agent Banking, CBE Birr, Float, Liquidity, Security

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

New technologies have brought enormous changes to the banking sector. The advancement of technology makes the delivery of banking products and services more convenient and efficient than ever before. Banks are using the technology to deliver their service since it saves cost, and uses as a competitive advantage to support their service with new developments, helps them to be accessible with the unbanked population through different delivery channels. The banking sector has started giving its service through various channels like automatic teller machines (ATMs) and point of sale (POS) terminal as alternative beyond their branches. Following the development of mobile technology other delivery channels have been developed. One of the delivery channels, which are mainly focused on accessibility of the unbanked population, is agency banking.

Agent banking is an arrangement by which licensed institutions engage third parties to offer certain banking services on their behalf. Agent banking model is one in which banks provide financial services through non-bank agents such as grocery store, retail outlets, post offices, pharmacies, or lottery outlets. The national bank of Ethiopia (NBE) the supervisory body of the financial sector has issued a directive for the mobile and agent banking operation through its directive no FIS/01/2012. NBE issued the directive to strengthen the financial inclusion and widen the financial sector accessibility to the unbanked population especially the rural areas which are far distant from the areas where banking services are located. Ethiopian banks have been using electronic banking through ATMs and POS terminals to give services for their customer beyond their branches. Now, to increase accessibility and cut costs they are in a way of adopting agent banking which has been practiced in different countries. As different studies showed agent banking has been implemented in Latin America especially in Brazil and other countries have been adopted following Brazil. From Africa Kenya has a great success with regard to the implementation of agent banking (AFI, agent banking in Latin America). (Kumar, A., Nair, A., Parsons, A. & Urdapilleta. E. (2006))

Following the NBE directive agent banking considered as one of the competitive advantage by Ethiopian banks and has got a focus. The directive issued aiming the use of technology and innovative financial service delivery channels such as mobile devices and agents have significant contribution in deepening financial service accessibility to the wider section of the population at an affordable price (NBE regulation). The regulation is one factor that influences commercial banks to adopt agent banking.

The Ethiopian banking industry is in a stiff competition where using innovative financial services delivery channels such as agent banking as competitive advantage to win the competition. Agent banking also helps the banks in resource mobilization and broadens their customer base. Thus commercial banks to win the competition and become the first to adopt agent banking to deliver their product and services as alternative channel. Therefore, the study attempt to investigate challenges that facing the implementation of agent banking by Commercial bank of Ethiopia agents.

1.2 Statements of the problem

Ivatury and Timothy (2006) alluded to the benefits of agency banking which include; lower transaction cost, closer to client's home hence customers are able to withdrawal or deposit little amounts without incurring extra costs like transport to a bank branch, longer operating hours, shorter queues and easily accessible for illiterates and the very poor who might feel intimidated in branches. According to Kitaka (2001), agencies help financial institutions to divert existing customers from crowded branches providing a complementary often more convenient channel. Other financial institutions especially in developing markets use agents to reach an additional client segment or geography.

Reaching poor clients in rural areas is often prohibitively expensive for financial institutions since transaction numbers and volumes do not cover the cost of a branch. In such environments, agents lower set up and running costs and play a vital role in offering many low income people their first-time access to a range of financial services. Also, low-income clients often feel more comfortable banking at their local agent than walking into a brick and mortar bank (Adera, 1995). Rutere (2014) notes that non-convectional banking transactions offered through agency banking and alternative business channels have overtaken the transactions done at the brick and

mortar banks in Kenya. Brazil has been successful with using agents to expand access to financial services. This has been as a result of many years of experience, evolving from more restricted possibilities to less stringent licensing conditions, without loosening the monitoring capacity of the supervision authority. This important achievement has been possible because of coordination among different stakeholders, such as financial system regulators, private institutions and other governmental entities, which together supported financial inclusion with the overall goal of meeting customer's needs (Fadel & Dias, 2009).

Despite the enormous role played by financial services agents, they are affected by various challenges that act as impediment to their smooth and effective operations. In Ethiopia, there have been a number of limitations in the capacity of agents in offering the desired services due to several challenges such as inadequate network availability, liquidity, security amongst others. These challenges have constrained the widespread, adoption and the success of agent banking making the goal of financial inclusion as envisioned in Ethiopia that agency banking is supposed to address remain elusive. Even though, there are researches in the area of agency banking most of them studied factors that determine the adoption from the customer and service provider perspective, concerning the researchers knowledge there are no researches conducted on challenges that face during implementation of agency banking from the agent perspective. Therefore, this study were attempt to fill this study gap. The research designed to identify and assess the extent to which challenges have affected commercial banks agents and propose remedies to address the challenges.

1.3 Research questions

This section encompasses the questions the researcher wants to ask to shape the study.

Based on the above model the researcher wants to ask the following research questions:

1. What technological challenges face the implementation of agent banking?
2. What operational challenges face the implementation of agent banking?
3. How does those technological and operational challenges affect agents' performance?

1.4 Research objectives

1.4.1 Main objective

- The main purpose of this study was to investigate challenges of agent banking implementation from agents' perspective.

1.4.2 Specific objectives

This study has been undertaken with the following specific objectives:

1. Identify technological challenges that face during implementation of agent banking.
2. Identify the operational challenges that face during implementation of agent banking.
3. Determine the effect technological and operational challenges on agents' performance.

1.5 Significance of the study

- The study was expected to be of help in identifying the key challenges faced by agents in implementation of agent banking. The results of this study will be useful to the following stakeholders:
- The study will be beneficial to financial services agents in that in outlining the challenges they face, solutions for the challenges will be proposed to make their operations more effective enhancing their overall business success.
- The study also will be significant to the banking and mobile network operators that offer agency services in that it will help identify challenges that affect effective operations by their agents hence providing useful insights especially to decision makers involved in implementation of electronic services delivery strategies for their institutions. Necessary improvements identified could be undertaken to enhance agent banking usage.
- The findings of this study will enrich existing knowledge and hence will be of interest to both researchers and academicians who seek to explore and carry out further investigations. It will provide basis for further research.

1.6 Delimitation of the study

The study was delimited by geography carry out in Addis Ababa, Ethiopia. The study focus only **cbebirr** service provided by commercial bank of Ethiopia. Even if, there are many way of providing agent banking as provided in literature the study only focus on banking and mobile network operators that offer agency banking. The agents were recruited based on their registration who were included in the study, six months and above period of agent banking service would sampled.

1.7 Limitation of the Study

The following factors could serve as limitation during the course of writing this research;

Inadequate materials: This is another constraint to execute the work more effectively due to paucity of data such as; journals, newspaper, seminars etc.(iv)

Attitude of respondents: The attitude of the respondents to the study could not encourage and this will affect the study.

1.8 Definition of terms

1.8.1 Agent

Mean all individual or business person that is contracted to facilitate specific Finance.

1.8.2 Agent Banking

The provision of banking services by a third-party agents to customers on behalf of a licensed, prudentially-regulated financial institution, such as a bank or other deposit-taking institution (CBK, 2016). A business of performing as an agent or intermediary in the act of either accepting deposits or instalments, lending of funds or discounting notes receivables or concluding contracts of exchange transactions (Burgessy & Wong, 2005).

1.8.3 CBE Birr

Mean a CBE mobile service that provide services like mobile payment, mobile transfer and agent banking.

1.8.4 Float

This is the cash at hand and bank balances set aside by the agent for agent banking operations. (CGAP, 2011)

1.8.5 Liquidity

Mean the ability of an agent to meet customer demand cash or deposit withdrawal.

1.8.6 Security

This refers to the ability of agents to assure safety of customers' liquid cash at their disposal through use of physical security and confidentiality

1.9 Organization of the study

The study comprises of five chapters. Chapter one deals with introduction of the study, statement of the problem, objectives of the study, significance of the study, delimitation of the study, limitation of the study, organization of the study and definition of terms. A comprehensive review of the literature will presented and discussed in chapter two. The third chapter consists of methodology of the study, sample and sample techniques, methods of data collection and methods of data analysis. Presentation, analysis and interpretation of the data collected during this study will presented in chapter four. Chapter five provides summary, conclusions and recommendations of the study.

CHAPTER TWO: INTRODUCTION

2.1. Concepts of Agent Banking

A banking agent is defined as retail or postal outlet contracted by a financial institution or a mobile network operator to process clients „transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance or receive government benefits or a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices, and many more. Globally, these outlets are increasingly utilized as important distribution channels for financial institutions (Ignacio and Siedek, 2008). Ivatury et al. (2006) indicates that agency banking is a new distribution channel that allows financial institutions and other commercial actors to offer financial services outside traditional bank premises. They cite models of branchless banking other than agency banking such as Internet banking and automatic teller machines (ATMs) as modest extensions of conventional branch based banking. They further argue that branchless banking through retail agents appeals to policymakers and regulators because it has the potential to extend financial services to unbanked and marginalized communities.

Agency banking has its origins in Brazil and Kenya where the most successful cases of agency banking have been identified. The Brazilian model is driven by the larger banks, such as Caixa Federal, Bradesco, and Banco Popular, and it uses more traditional card/POS terminals. Brazil now has 39,000 agents covering every municipality in the country, with whom customers can deposit, withdraw, and electronically transfer money from their accounts. The Kenyan model is driven by mobile operator Safaricom. It uses a menu-driven application on their customers „mobile phones (in their SIM cards, more specifically) to authenticate and facilitate transactions by both customers and agents. Only two years after its launch, Safaricom,s M-PESA service now has over six million registered customers who can transact at almost eight thousand retail agents nationwide (Mas, 2009). Banks in Kenya have also embraced agency with KCB, Equity and Cooperative bank venturing into agency banking. Banking agents are usually equipped with a combination of point of sale (POS) reader, mobile phone, barcode scanner to scan bills for bill payment transactions, personal identification number (PIN) and sometimes personal computers that connect with the bank,s server using a personal dial up or other data connection. Clients that

transact at the agent use a magstripe bank card or their mobile phone to access their bank account. Identification of customers is normally done through a PIN, but could also involve biometrics. With regard to the transaction verification, authorization, and settlement platform, banking agents are similar to any other remote bank channel (Ivatury, 2006).

Still on the reason for adoption of agency banking, Tarazi and Bleroff (2011) argue that the major obstacle to financial inclusion is cost. Cost in this context refers to not only the cost incurred by banks in servicing low value accounts and extending banking infrastructure to under served, low-income areas, but also the cost incurred by poor customers (in terms of time and expense) in reaching bank branches. Achieving financial inclusion therefore requires innovative business models that dramatically reduce costs for everyone and thus pave the way to profitable extension of financial services to the world's poor. Even though agent banking has been identified as the most appropriate strategy of extending financial services to the poor and rural areas, the model has yielded different levels of results in different countries. The regulation, design, and implementation of agent banking vary across countries. These differences are evident in the variety of services offered by agents, the types of businesses acting as agents, the types of financial institutions that work through agents and the business structures employed to manage them. These differences ultimately contribute to the disparities in the extent to which agent banking is actually bridging the financial inclusion gap According to the National Banking and Securities Commission (CNBV) of Mexico and the Alliance for Financial Inclusion (2012).

2.2. The Agent Banking Mode

Agent banking, also known as correspondent banking, is a model for delivering financial services whereby a bank partners with a retail agent or correspondent in order to extend financial services to locations for which bank branches would be uneconomical. It is delivery channel that holds high potential for closing the delivery gap. Agent banking is branchless banking model that allows financial institutions to use third party retail agents and leverage on ICT to provide financial services outside the traditional brick and mortar bank premises. It is a great opportunity for the banks to reach out more people in rural areas where they cannot open branches easily being a mechanism in reducing costs and boost their deposit mobilization. Banking agents can be post offices, shops, pharmacies, micro finance institutions, retail outlets, supermarkets, petrol stations and internet/communication centers.

As many literature's show agents can extend banking services like cash deposit and withdrawal, cash disbursement and cash repayment of loans, cash payment of bills, cash payment of retirement and social benefits, transfer of funds, balance enquiry, generation and issuance of mini bank statements, collection of documents in relation to account opening, loan application, credit and debit card application, collection of debit and credit cards, agent mobile phone banking services, cheque book request and collection, collection of bank mail or any other activity as central bank may prescribe being as the agreement concluded between the agent and the bank. There are certain activities against which banking agent is prohibited and these include transacting during communication failure, failure to issue receipt or acknowledgment, charging any fees, ceasing or diminishing of initial commercial activity, guaranteeing customers, offering banking services on own account, continuing banking business in existence of a criminal record or disciplinary case, offering services not included in the contract, opening accounts, carrying out loan appraisal and approvals, cheque deposit encashment, foreign exchange transactions, agents being run by a bank's employee or associate. Agent banking presents various benefits for the banks, for the customers, for the agents and for the country in which it is practiced. First and foremost, agent banking allows financial institutions to establish physical presence in rural areas, remote areas or low population density where the cost of opening a branch may not make business sense. Secondly, it allows customers to access financial services in a more familiar way than in a branch as the unbanked are not familiar with the procedures of a traditional bank branch. Thirdly, it increases the sales from customers seeking banking services while increasing the income source for the agents through the commissions or fees they get from banks. Last but not least, agent banking contributes to a more efficient and inclusive financial system by extending financial services to a wider population (Mas & Siediek, 2008).

2.3. Operational Challenges Affecting Agents in the Financial Services

Industry

2.3.1. Training

All types of financial institutions are increasingly using agents to distribute financial services. These agents require adequate training to be able to successfully execute their mandate. In a report by George, Narain and Shukla (2012), an Agent Network Manager (ANM) received feedback from an agent supervisor that the agents were not properly trained as most of them had to go

back to the supervisors to understand how to do transactions. George et al. (2012) further note that the reason why these and other training programmes too often fail to meet expectations, and trainees rate the content as irrelevant and the training method as unsuitable is that the training needs for agent categories differ.

George et al. (2012) distinguishes three types of agents in a bid to demystify their training needs. Transaction agents are those who conduct transactions on behalf of the bank, and usually handle one or two products. For example, Eko agents in India who handle only Tatkal, an agent-to-bank account remittance service and MPESA in Kenya which is a money transfer service where most of the agents offer service transactions (deposits, withdrawals, and transfers). Transaction agents require a “products and processes” focus, plus liquidity management and security training. Full Service Agents are those that provide all services, including enrolment/account opening. They usually offer two or more products, rather than a single product. Equity Bank Kenya, agents fall under this category as they are expected to handle both account opening and servicing of accounts, in addition to managing more than five bank products and services. Full-service agents need a more comprehensive training that covers all aspects of agency banking including processes, marketing, risks, technology and relationship management. Finally there are Super agents who supervise the activities of transaction and/or full service agents under them, providing a link between the ANM and the agent. The super agent support agents in cash management and front-end operations. Super agents or agent supervisors, need training on managing the agent network under them and the processes involved.

In a study conducted by Micro Save (2011) on mobile banking agents in Bihar, India awareness levels of agents across six categories namely; Technology, Client Communication, Communication with Banks, Operations Management, Product/Process Awareness and Financial Inclusion pointed to significant gaps in the understanding of issues central to the delivery of electronic/mobile-banking services. While 64% of the agents understood the objective of providing electronic/mobile -banking banking services promoted by banks; 68% were completely unaware of the clientele they need to target. Similarly, 61% of the agents knew about the products and processes, but only 24% could handle customers’ frequently asked questions.

2.3.2. Liquidity

Cracknell (2010) explains that mobile banking works through the use of float accounts each agent is required to maintain a balance of electronic money (e-money) in their agent account. When a customer wishes to send money to someone, the customer exchanges cash for e-money through paying cash to an agent. The agent's e-money balance reduces by the amount of the transaction, and the customer's e-money value increases. The customer then transfers their e-money to their intended recipient. Correspondingly, when a customer makes a withdrawal, the agent receives e-money and pays out cash, and the agent's e-money balance increases by the amount of the transaction. The agent can continue to make transactions until their e-money balance is exhausted. At this moment the agent has effectively exchanged all their e-money for physical cash, and the agent then needs to replenish their e-money account by paying in cash to their e-money account before any further cash deposits can be made by customers. Ensuring agents have either e-money or cash when customers require it, is the critical challenge of mobile banking liquidity management. Cracknell (2010) further notes that a situation where agents run out of cash may occur when agents do not have the physical cash for customers to make significant withdrawals. Conversely when there is too much cash there may be a problem, as one cannot deposit cash into their e-money accounts.

According to CGAP (2011), the operation of an agency is such that a customer deposits at the agent meaning that the customer gives cash to the agent and the transaction is accounted by the bank through debiting the agent's account and crediting the customer's account. It is therefore not possible for an agent to receive a deposit unless the agent has sufficient credit (float) in the bank. A customer withdrawal at the agent means that the agent gives cash to the customer and the bank accounts by debiting the customer's account and crediting the agent's account. An agent then can only pay out a withdrawal if he has cash in his till at the shop. This means that the agent has to have both cash in the bank and cash in till. This is a key challenge as most agents are not able to balance the cash holding or have inadequate capital. The situation of float is even worse for agents in remote areas who have to travel far distances to the banks to replenish their deposits when balance runs low.

Afande and Mbugua (2015) refer to agents as the touch- points where the subscribers of the service can get money into and out of the system. At times there are instances where a subscriber

wishes to withdraw a large amount of money and the agent does not have enough cash to satisfy the cash-out request. This leads to the subscriber being frustrated and is one of the reasons why take-up of these systems is slower than expected (Afande and Mbugua, 2015). Erratic nature of finance services daily cash limits are also to be considered as part of anti-money laundering initiative by CBK, agents cannot transact above certain limit. Hitting this limit means the agent can only close for the day unless they have applied for higher limits. In Brazil many agents complain about downtime-POS-frozen by bank once cash limit reached, pending deposit of cash at branch, but often with a lag until POS is unfrozen (CGAP, 2011). Lehman (2010) notes that agents will not provide quality service to customers when they are not liquid.

In a study conducted by Afande and Mbugua (2015) to determine the Role of Agent Banking Services in Promotion of Financial Inclusion in Nyeri town, Kenya the researchers sought to find out the extent to which agency liquidity has affected financial inclusion by firstly examining the frequency of cash shortages at the agent banking outlets; secondly determining whether some customers avoided banking agents due to shortage of cash and finally establishing whether the parent banks monitored the liquidity of the agents to avoid cash shortages. On frequency of cash shortages at the agent banking outlets, the researchers found that majority (59%) indicated that cash shortages never occurred. This shows that lack of liquidity was not a major problem at agent banking outlets. These findings are in agreement with Musau (2013) who in a similar study found that lack of cash at cash points did not appear to be a widespread problem at the time. On determining whether some customers avoided banking agents due to shortage of cash, the researchers found that majority (73%) of the bank agents' operators disagreed that some customers avoid agents because of perennial cash shortages. This shows that liquidity was not a problem for the agency banking agents. It also shows that the vetting procedures for by the bank for agents were successful.

2.3.3. Security

Stephens and Kevin (1998) note physical security as a common concern for regulators. In Brazil, for example, agents must deposit the cash received from clients in a bank branch no more than every other business day. This intended to limit cash accumulation that can lead to robbery by third parties or even by the agents themselves. The Mexican regulator, by requiring every agent transaction to be made against the agent's account at the contracting bank, does not reduce the

risk of third- party robbery but eliminates the risk of agents misappropriating the accumulated cash, since the cash is in fact the agent's own. The simplest measure to reduce cash accumulation and its related risks may be requiring providers to set daily and monthly transaction limits for each agent and client.

Flaming, McKay and Pickens (2011) report that as agency-banking service grows, agents attract increasing interest from criminals. In Brazil, 93% of agents interviewed by CGAP report that being an agent increases the risk of being robbed while 25% say they have been robbed at least once during the past three years losing on average more than US\$500 of their own money. Agents are advised to manage their existing physical security risks to sufficient standard so as to protect their stock and cash just the same way banks do. Short- term insurance is widely available and already bought by banks to cover various risks, including loss of cash in branch or in transit due to robbery and loss of money through fraud. The banks' short term insurance also covers direct monetary loss arising from failure of electronic information systems to capture transactions in real time and accurately and loss resulting from fire, theft or damage to physical property (Regulation and Supervision of Bank Channels: Policy Options for Kenya, 2012).

According to Tarazi (2010) when damages are not easily quantified or agent behavior that is not easily monitored, this results in an unknown risk that principal service providers are not well equipped to mitigate for example, violations of data privacy. In this case, damages could be indirect and punitive and therefore quite high. And yet, a principal service provider is ill equipped to stop such agent behavior. Some would argue that this problem is easily solved by keeping the principal institution liable, which will take recourse against its own agent for any damages it is forced to pay as a result of such agent's misconduct. This would work where agents are large well- capitalized retail chains but not the simple agents such as those at 16 modest corner shops whose independent behavior is most difficult to control and whose ability to "pay back" a principal for paid damages is most limited. A principal is unlikely to take comfort that in the idea that it can sue the sole proprietor of a modest fruit stand to recover unknown liabilities.

Mobile devices lack the firewalls and other security measures that are found on computers. This makes the phone vulnerable to malicious software that tracks keystrokes and compromises sensitive personal information, user names, and passwords. These vulnerabilities demand advanced analytics that monitor mobile device usage to detect fraud. These in the Kenyan

landscape do not exist and users occasionally bear all the risk as banks and the MNOs have clauses which leave the risk to the user be it the customer or the agent and most of the times advise victims to seek police assistance which occasionally is futile (Mulwa and Ndati, 2013).

2.4. Technological Challenges Affecting Agents in the Financial Services Industry

2.4.1. System Failure

Systems failure relates to risks such as software or hardware malfunctioning, which can cause interruption of services delivery or information loss. As the technology changes rapidly, banks have been greatly affected in its operation, whereby application of the technology ensures quick and effective services to the clients. However, financial agents do not change their system as frequent often leading to system failure and the consequent delays in transaction execution (Lyman, Pickens & Porteous, 2008). This leads to customer inconvenience and trust over the security/safety of transaction lodged with agent banks. Moreover, these constant systems failure makes transactions with banking agents vulnerable to fraud. System failure related risks should be recognized, addressed and managed by financial institution such as banking agent in a prudent manner according to the fundamental characteristics and challenges of agent banking services (Chellappa, 2001). To create confidentiality to the customers the technology service provider should have proper technology infrastructure backup, disaster recovery plan and technical security infrastructure in place to ensure timely services availability to all clients (Wilmot, 2009).

2.4.2. Customer Exposure to Fraud

Appropriate customer protection against risks of fraud, loss of privacy and even loss of service is needed for establishing trust among consumers as trust and customer confidence is the single most necessary ingredient for growth of agent banking (Arora and Ferrand, 2007). To be effective, banks should implement and continuously evaluate competence and effectiveness of their customer and agent service providers in application of technology whenever they are transacting. Methods to evaluate a program's effectiveness include tracking the number of customers who report fraudulent attempts to obtain their authentication credentials such as ID/password, the number of clicks on information security links on websites and the number of inquiries (Bold, 2011). By ensuring adequacy in skills will minimize on errors and therefore

improving overall service quality, which in turn will build customer satisfaction and reliability in the service.

2.4.3. Data Security Risk

As transaction and personal data are transmitted increasingly through means such as mobile phone networks, handled more often by third parties such as agents, and accessed remotely by customers and financial institution employees, the risk of inappropriate access and usage rises. Besides the technological aspect, consumers' lack of education and lack of experience with formal financial services and technology may raise data security risks. For example, research conducted by Collins (2010) found that some MPESA clients were giving account passwords to agents, and while there is no evidence this has led to loss of funds or misuse of customer information, the risk could be significant (Ignacio and Siedek, 2008).

A majority of the attacks against web servers are through network firewalls and through the http (hypertext transfer protocol) (80) or https (443) ports (Jon, 2011). Some of the most commonly used hacking techniques include denial of service, leakage, cross-site scripting, SQL (structured query language) injection and disclosure (Jon, 2011). Data security is the biggest factor slowing down the growth of e-commerce worldwide. The issue of computer and data security is the biggest hurdle in the growth of mobile money transfer. Web servers also face this security threat. Programs that run on a server have the potential to damage databases, abnormally terminate server software or make changes in the information placed there. A number of international organizations have been formed to share information and combat security threats to computers and computer networks (Jon, 2011).

Mutong'wa and Khaemba (2014) note some potential attacks on mobile money transfer which include Back Doors and Trojan horses; viruses and worms; hackers; Eaves dropping/sniffing/snooping; Password attacks; IP address spoofing and finally Man in the middle attacks. Mutong'wa and Khaemba (2014) further demystify the potential attacks explaining that Back Doors are those hostile programs which, when run on a machine, install hidden services in order to give attackers remote access capabilities to a compromised machine while Trojan horses are those programs that appear harmless but actually have some malicious purpose. Viruses and Worms on the other hand are malicious programs that can travel between computers as

attachments on email or independently over a network. They also identify hackers as those individuals who write programs or manipulate technologies to gain unauthorized access to computers and networks or diverge data or direct computers and networks to unauthorized access. Eavesdropping/sniffing/snooping is a type of attack where a hacker has the ability to monitor network traffic using some kind of network monitoring software. For example, a hacker may install some backdoor or Trojan horse that can monitor the keystrokes of a user while typing and send the typed information to the hacker. Password attacks involve hacking to gain access to the network and gathering information such as user names, passwords etc. IP address spoofing involves seizing the control of the router, changing the IP address of the source/sender on data packets thus redirecting the destination machine to send the information to a different machine. Man in the middle attacks are those such that the attacker is able to monitor, capture and control data between sending and receiving machines (Mutong'wa and Khaemba, 2014).

2.5. Effect of Operational and Technological Challenges on Financial Agents Performance

2.5.1. Operational Challenges on Financial Agents Performance

The independent variables under investigation are likely to influence the agent performance as follows: training ,when the agent is well trained they are likely to satisfy their customer's needs who in turn gain confidence in the agent resulting in customer retention and growth in number of customers who are attached to the agent. This also has a direct relation in increasing the number of transactions translating to higher commissions. The availability of network is key to an agent performance while poor connectivity constraints the number that are handled at the agent location. Liquidity is one of agent's top concerns. Atandi (2013) in his study on Challenges of agent banking experiences in Kenya focusing on Pokot county also identifies liquidity/float related problems as a challenge on agent banking. He notes that agents have to constantly rush to the bank and replenish their accounts held with the principal institution which is time consuming thus interrupting the operations of agency. From Atandi's study an average of 7.14% of clients are not served by agents per week and hence turned away due to lack of float. Out of those turned away only 1.428% come back to find out later if the problem has been sorted so as to transact, 5.712% never return to the agent location. It is clear from the findings that float related problems affects transaction numbers at agent locations by affecting a significant 5.712% of

clients transacting at agent locations, who never transact again at the agent due to one time lack of services as a result of lack of float. Lack of float has a negative impact on the number of transactions, which also reduces performance of the agency business.

A study Conducted by Bold (2011) in Brazil found that some countries restrict the location of agents, though such restrictions are sometimes eased when regulators recognize that the regulations create obstacles to financial inclusion. For example, due to concerns that agents could threaten bank branches, Bold also found that Indian regulators initially required agents to be located within 15 kilometers of a “base branch” of the appointing bank in rural areas, and within 5 kilometers in urban areas. This policy intended to ensure adequate bank supervision of its agents, limited the use of agents by banks with only a few branches. According to the study overly restrictive location requirements can complicate the business case for viable agent-based banking and ultimately work against financial inclusion goals. In addition, the real time nature of most agent services has enabled remote supervision, thereby obviating one of the central arguments for location restrictions.

In a study to establish the reasons for commercial banks venturing into agent banking and to determine the challenges faced by the commercial banks in agent banking operations, Chitelli (2013) concluded that banks employ agent-banking operations as a competitive strategy. Control policies and procedures, technological advancement, and regulations put in place both by the agents and commercial banks have made agent-banking operations viable.

2.5.2. Technological Challenges on Financial Agents Performance

Network availability is another top concern for financial services agents (Ndungu and Njeru, 2014). In a study conducted by Ndung'u, Okibo and Nyang'au, (2015) to establish the prevalence of the aspects of network capability and the subsequent effect on the performance of banking agents; the study revealed that most agents were affected by internet connection when processing agent transactions. Kinyanjui (2011), also reports that although Kenyan financial institutions have embarked on an aggressive entry into branchless banking keen to take advantage of the cost-saving and accessibility brought about by the agency banking model, many of them are finding that agents lack capacity to handle large transactions of cash and under-spend on security measures. He further notes that identifying agents who are capable of handling cash

transactions efficiently has been a challenge for the institutions, with consumers reporting that cash is often scarce even as rising fears of security mount at the outlets. When customers sense insecurity at the outlets they are less likely to transact at the agent outlets, which lowers agent's performance.

Ndungu and Njeru (2014) in their study on Factors Influencing Adoption of Agency Banking in Kajiado North Sub County concluded that there was a significant relationship between total commissions earned against the device in use for connectivity when both the POS and the phone were in use simultaneously. The relationship was however not significant where the POS or the phone was in use alone. This bogs down to the issue of service reliability. When one device is in use alone service disruptions are devastating as no customer can be served but when the two gadgets are in use together then the agent and the customer are able to switch from one to the other with a less repercussion on the customer experience. The findings by Ndungu and Njeru (2014) indicate that where both phone and POS were in use the POS account to between 85% and 95% while the phone accounts between 5% and 15% of the total commissions. Reliability of gadgets used results in high agent's performance.

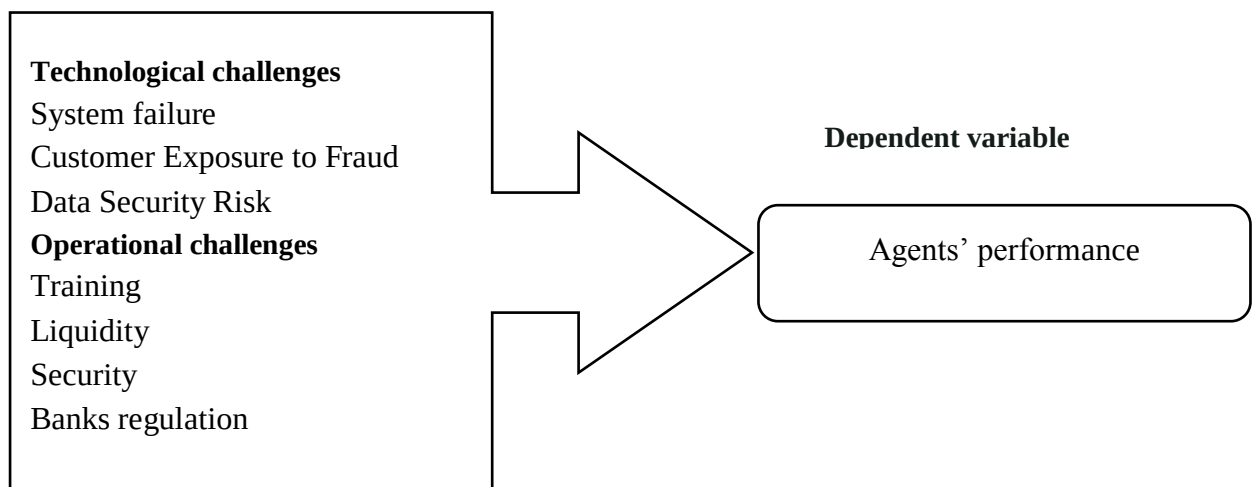
Agency banking success largely depends on reliability. Agents use point-of-sale (POS) devices and/or mobile phones and must have access to the bank's core banking system so that the clients' transactions are reflected in real time as per the CBK guidelines. One of the major measurements of reliability is the system availability (Ndungu and Njeru, 2014). In Brazil many agents complain about downtime POS frozen by bank once cash limit reached, pending deposit of cash at branch but often with a lag until POS is unfrozen and poor GPRS connection for some agents. If one is unable to transact for 2 days, monthly profit margin may cut by more than half (CGAP, 2010). By its very nature the ICT phenomenon is relatively new in the developing world. Available data, suggest that the majority of developing countries such as Kenya in Sub-Saharan Africa are lagging behind in the information revolution (Zhao and Frank, 2003). The system being the only connectivity between the customer and the bank will determine whether a customer request is frustrated or satisfied at the agent location. System safety and malfunction can frustrate the agent reconciliation or even facilitate fraud against the bank, customer or the agent.

Banks and their agents have to contend with customers complaints in cases such as, customer being debited with cash he did not receive because of incomplete withdrawal transactions, an urgent deposit hangs somewhere else other than the beneficiary account due to system failure, where the agent has erroneously entered the wrong account number or bill account. Ndungu and Njeru (2014) note that system down time affect commissions earned by agents negatively. In a study by Berry et al. (1994) with more than 1,900 customers of five large famous US corporations, they found that 32% of the respondents placed emphasis on reliability, followed by responsiveness 22%, assurance 19%, empathy 16% and tangibles 11%. Reliability is thus essential for quality service, which improves performance.

2.6. Conceptual Frame work

The conceptual framework is a system that shows relationship of independent variables in the study with the dependent variables. The independent variables in this study include: technological factors challenges, operational challenges while dependent factor is the performance of agents. While the independent factors are internal to the business there are external or intervening variables such as the political environment, economic environment and other natural conditions of the country.

Independent variable



Source: Based on the literature

Chapter Three: Research Methodology

3.1. Introduction

This chapter will discussed the research methodology used in the study. The chapter explores the research design, research approach, target population, sample size, sampling techniques, data collection methods, research procedures as well as data analysis methods used in the study.

3.2. Research design

According to Sekaran and Bougie (2013), research design is the blue print for data collection, measurement and analysis; based on the research questions of the study. Research design expresses the structure of the research problem – the framework, organization, or configuration of the relationships among variables of the study and the plan of investigation used to obtain empirical evidence on those relationships (Blumberg, Cooper & Schindler, 2014). The study employed a descriptive research design. Descriptive research involves collections of quantitative information that can be tabulated along a continuum in numerical form; it involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). Descriptive studies are aimed at finding out "what is," so observational and survey methods are frequently used to collect descriptive data (Borg & Gall, 1989). Mugenda and Mugenda (2008) also suggest that a descriptive study can be used to explain two or more variables at a given point in time. They define a survey as an attempt to collect data from the members of the population with respect to one or more variables. Descriptive studies report summary data such as measures of central tendency including the mean, median, and mode, deviance from the mean, variation, percentage, and correlation between variables. Descriptive research can include multiple variables for analysis and might employ methods of analyzing correlations between multiple variables by using tests such as Pearson's Product Moment correlation, regression, or multiple regression analysis (Earlbaum, 2001)

3.3. Research Approach

There are three approaches to conduct any research: Qualitative, Quantitative and Mixed approaches. According to Saunders *et. al.* (2009) mixed method approach is the general term for when both qualitative and quantitative data collection techniques and analysis procedures are

used in research design. In this study mixed-method approach was employed to ensure effectiveness of the research process as the findings of the qualitative data enhance the findings of quantitative one and the vice versa.

3.4. Population

A population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate and from which they can make inferences based on the sample statistics (Sekaran & Bougie, 2013). A target population according to Ngechu (2004) is the specific population about which information is desired. For this study, bank staff dedicated to agent banking agents constituted the target population.

3.5. Sampling Technique

Mugenda and Mugenda (2008) define sampling technique as the process by which individuals are selected for a study. The selection is such that it represents the larger group from which the individuals are drawn from. Sampling technique enables researchers to cut down the volume of data to be collected by considering a sample instead of the entire group due to the limited resources of time, money and the population size involved (Sekaran & Bougie, 2013). The study adopted random Sampling technique. random sampling is a probability sampling technique where the population is final subjects randomly selected.

3.6. Sample Size

A sample size is a subset of the population. According to Bryman & Bell (2011) the sample size must be carefully selected to be a representative of the population. Sampling errors should as much as possible be avoided or at worst minimized by keeping the sample size at an adequate size after considering issues such as population, sampling error, non-response bias and the extent to which sub groups in the sample will be analyzed (Gill & Johnson, 2010). Using the rule of thumb for this population size, a sample size of 50 is sufficient in line with Walliman (2011) observation that when the population (N) is beyond 1500, the population size is almost irrelevant meaning a researcher will get exact response from many respondents.

3.7. Data Collection Methods

The research adopted a structured closed and open-ended questionnaires administered face to face as the main instrument for data collection. Open-ended questions will used to solicit respondent's insight information while closed ended questions will used to standardize the responses. Close-ended questions will accompanied by a list of possible alternatives from which respondents selected the answer that best described their situations. Orodho (2005) notes that questionnaires are commonly used to obtain important information about the population especially when the respondents can be reached. The study was concerned with views, opinions, perceptions, feelings and attitudes of financial services agents regarding the challenges they face in relation to performance. The questionnaires will organized based on the research questions. Secondary data will obtained from the concerned financial institutions reports and publications. Secondary data sources were not in themselves used to answer the research questions but to complement the primary data collection. For example secondary data sources informed the population distribution of agents as well as other regulatory information specific to the financial institutions. Primary data collected through questionnaires, interviews and observations are worthwhile if and only if they are not record in accurate ways. For any measurement to be valid, it must demonstrate reliability (Frey and others, 2002).

3.8. Data Analysis Methods

Blumberg, Cooper and Schindler (2014) define data analysis as a process of gathering, modeling and transforming data with an aim of retrieving useful information, suggesting conclusions and supporting decision-making. Jackson (2009) notes that before data can be analyzed and presented it has to be organized. Organization involves putting the data into some systematic form. Data analysis software Statistical Packages for Social Sciences (SPSS) was used to aid in data analysis. Both descriptive and inferential statistics method used in the study. Descriptive statistics, including frequencies, mean, and standard deviation will used to summarize data. Inferential statistics such as correlation was used to show the relationship between both operational and technological challenges on performance.

3.9. Ethical consideration

The researcher was consider the following ethical values and approaches while collecting both primary and secondary data for conducting this thesis as presented below:

Confidentiality: The researcher was assure that the respondents were not be confused and that their response will remain confidential and used for only academic purpose.

Organizational approval: A written letter that explains the research objectives as well as a cooperation letter are written by the university and submitted to the sampled banks concerned department. The university department was also written cooperation letter to the E- payment directorate for giving the researcher necessary information and supports in the under taking of the study.

Informed consent: Cover letters explain the purpose of the questionnaire and the right to accept or refuse to participate in any time of the research activities was told and given choices to the respondents of this study while collecting data's. The researcher was also explaining the purpose of the study and also clearly stating in the introduction of each questionnaire's. In addition, the researcher was be told that the respondents are not written their name or any form of their identity about it.

CHAPTER-FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. Introduction

This chapter presents the results and findings of the study and their discussion in relevance to the objectives and past studies carried out in the same area. Presentation was done using tables, charts and graphs for easy and effective communication. Data analysis aimed to answer the following questions: What operational challenges affect agents in the financial services industry? What technological challenges affect agents in the financial services industry? and How do operational and technological challenges affect performance of financial services agents?

4.2. Response rate

The researcher administered questionnaires to 45 operators of financial services agents. Of the 45 questionnaires, issued 38 of them had errors and missing data. This accounts for a response rate of 84.4%.

4.3. Demographic information

The researcher collected background data of the operators of financial agency outlets. This was in order to establish the characteristics of the people offering these services. This was achieved by evaluating the respondents' gender, age and level of education

Table 4.1. Demographic information

Variables	Categories	Frequency	Percent
Gender	Male	29	72.5
	female	11	27.5
	Total	38	100
Age	18-25	-	-
	26-30	9	23.6
	31-35	17	44.7
	36-40	12	31.57
	41-45	-	-
	Above 46	-	-
	Total	38	100
Education level	Primary	2	5.26
	Second/preparatory	12	31.57
	Diploma	23	60.5
	Degree	8	21
	Master	1	2.6
	Above master	-	-
	Total	38	100

The researcher sought to find out the gender of the various operators of agent outlets who were the respondents in the study. Findings in above table 4.1 indicate that majority (72.5%) of the financial agency outlet operators were male. The researcher sought to find out the age of the various of agent outlets who were the respondents in the study. Findings indicate that most (44.7%) of the of financial agency outlet operators were aged between 31 and 35 years with a larger majority of 31.57% within the 36 to 40 age bracket. This shows that young people run a large part of agent banking.

The researcher sought to find out the highest academic qualifications achieved by the various operators of agent banking who were the respondents in the study. The findings in the above indicate that majority (60.5%) of the operators of agent banking had a diploma as their highest level of education while 21% of the operators of agent banking had a degree as their highest level of education. This shows that majority of financial services agent operators were well educated to understand the information sought by the study.

4.4. Agents business information

The researcher sought to establish the characteristics of the establishments that had agent-banking services as part of their operations. This was achieved by evaluating the number of years a business has been in operation, the duration in years that the business has operated a financial services agency and whether or not the agency business.

Table 4.2. Agents' business information

How long your business in running	Frequency	Percentage
Less 1 year	10	26.3
1- 5	28	73.7
Total	38	100
How long have you been an agent		
Six months and less	6	15.8
6 month – 1 year	12	31.6
More than 1 year	20	52.6
Total	38	100
Are you interested to run agent banking to multiple banks		
yes	20	52.6
no	18	47.4
Total	38	100

Source; SPSS 20 out put

The findings in table 4.2 indicate that most of the businesses offering agents had been in operation for more than 1 year to five years with the majority (73.7%) have operated. This shows that most of the establishments that offered agent-banking services complied with the government regulations.

The researcher further sought to find out the duration in which the business establishments had operated agent-banking services. Findings in table 4.2. indicate that most (52.6%) of the business establishments had operated agency services for more than a year. This can be attributed to the fact that the commercial bank of Ethiopia introduced within year in 2017.

There searcher sought to find out if they would be interested in expanding their business to offer services from other banks in future. The findings in table 4.2 indicate that 52.6% of the single financial service operator agents are willing to expand their business to include services from

other banks while 47.4% of the agents are satisfied with operating agent services from the commercial bank of Ethiopia.

4.5. Operational challenges

This section presents findings related to the objective of the study, which sought to investigate the operational challenges that affected agents in the financial services. This would be achieved by evaluating staff training, liquidity, insecurity and regulation of agency related laws.

4.5.1. Training

Researcher sought to find out whether the agents received training from the concerned financial institution, whether the training was sufficient, and their perception on ease of access to training or retraining on demand.

4.5.1.1. Agents acquisition of training and its sufficiency

The researcher sought to find out if the agents had received training from the bank. The findings indicate that 70.1% of the agents had received training. This finding contrasted with Agalla (2014) who noted in his research on challenges facing the implementation of agency banking in Kenya County that 70% of the agents had not received any training from the bank on agency banking. However, the findings are consistent with Chiteli (2013) who found that 28.9% of the agents had been trained.

Table 4.3. Agents acquisition of training and its sufficiency

Did you receive any agent training	Frequency	Percent
yes	27	70.1
no	11	29.9
Total	38	100
Was the training sufficient	Frequency	Percent
yes	16	42.1
No	22	57.9
Total	38	

Of those that received training, the researcher sought to find out if the training received was sufficient. The findings indicated that most (57.9%) of the agents not agreed that the training received was sufficient.

Agalla (2014) notes lack of training as a perceived risk due to lack of understanding the business benefits. Understanding credit, operational and compliance risks are the major worries hindering implementation of Agency banking (Mberia, 2009). The study revealed that lack of training was not an important challenge with 70.1% of the agents reporting to having received training from the concerned financial institution. This finding contrasted with Agalla (2014) who noted in his research on challenges facing the implementation of agency banking in Mombasa County that 70% of the agents had not received any training from the bank on agency banking. However, the findings are consistent with Chiteli (2013) who found that 91.2% of the agents had been trained.

4.5.1.2. Agents perception on that it is difficult to access training/retraining

From the agents that had received training, the researcher sought to find out if they had difficulties keeping up with training's from the bank. Most of the agents (42.1%) agreed to neutral that they had difficulties keeping up with the training s from the banks.



Fig. 4.1.Training sufficiency

4.5.2. Security

The researcher sought to find out if the various operators of financial agency outlets who were the respondents in the study perceived insecurity as a challenge. As such the researcher sort to find out if the agents had had fears of insecurity, whether their customers had reported fears of

insecurity, the frequency of which the security scares occurred, whether the agents had lost customers or banking equipment as a result of insecurity and the physical security measures the agents had taken to secure their business premises.

4.5.2.1. Agents and customers fear of insecurity

The researcher further sought to find out if the agents had fears of insecurity. The findings indicated that despite the agents' perception of insecurity as an important challenge, a relatively low percentage (28.9%) of them had fears of insecurity.

Table 4.4. Agents and customers fear of insecurity

Do you have fear of insecurity	Frequency	Percent
yes	27	71.1
no	11	28.9
Total	38	100
Have your customer reported fears of insecurity	Frequency	Percent
yes	15	39.5
No	23	60.5
Total	38	100
Have you lost some customers due to insecurity	Frequency	Percent
yes	23	60
no	15	40
Total	38	100
How frequently do security scares occurs	Frequency	Percent
Very often	7	20
Often	24	60
Rarely	7	20
None	-	-
Total	38	100

The researcher also sought to find out if customers of agent had reported fears of insecurity. The findings indicated that majority (60.5 %) of the customers had not reported fears of insecurity. This finding agreed with Atandi (2013) who in his study on Challenges of agent banking experiences in Pokot County found that 80% of the agents were satisfied with security within their working environment and there were no responses indicating number of robberies either on agents or on customers. The low incidents of insecurity fears by both the agents and their

customers indicated that the agents had taken sufficient measures to curb insecurity in their work premises and that most of the outlets were probably situated in relatively secure areas.

Of the agents that reported fears of insecurity associated to either themselves or their customers, the researcher sought to find out how frequent the security scares occurred. The findings indicated that security scares very often 20% and often 60% occurred.

4.5.3. Liquidity

The researcher sought to find out if the various operators of financial agency outlets who were the respondents in the study perceived having inadequate cash in agent tills (lack of float) as a challenge. As such the researcher sort to find out the most common services offered by agents, the agent's perception on customers opting for alternatives due to cash shortages.

4.5.3.1. Lack of cash for withdraw and Transfer of cash to banks

The researcher sought to find out agent's perception on customers avoiding agent outlets due to serial cash shortages. The findings indicated that most (63.2%) of the agents agreed that often some customers avoid agent banking cash shortages. This finding in line with Afande and Mbugua (2015) who in a similar study in Nyeri town found that 73% of the bank agents' operators disagreed that some customers avoid agents because of perennial cash shortages.

Table 4.5. Lack of cash for withdraw and Transfer of cash to banks

How often does the business suffer from lack of cash for withdrawals and deposits	Frequency	Percent
Very often	-	-
Often	23	60
Rarely	11	30
None	4	10
Total	38	100
How often do you have to transfer cash float to banks	Frequency	Percent
Very often	4	10
Often	15	40
Rarely	15	40
None	4	10
Total	38	100

For agents agency services the researcher sought to find out if they frequently had to transfer float to banks. The findings indicated that most (40%) of the agents that run agent banking services often transferred float to banks. In addition, 35 % of agents transfer their float to banks.

4.5.3.2. Commonly Used Agent Services

The researcher further sought to find out the most common services offered by agents. The findings in Figure 4.2 show that cash withdrawal (7.9%) and cash deposit (71.1%) are the most common services offered by agents while buying Good (21.1%) common services offered by agents. These findings are inconsistent with Afande and Mbugua (2015) who in a similar study in Nyeri town found that 57% of the banking agents indicated that cash withdrawal was the most popular banking service sought by customers at the agent banking outlets. The findings contrast with (CGAP, 2010) where a study conducted in Brazil in 2008 found that most agents specialize in receiving bill payments, which account for approximately 75% of all agency transactions. Withdrawals and deposits account for 12.6% and are nearly equally divided into savings and current accounts. The contrast between Kenya and Brazil can be attributed to the fact that in Kenya nearly all mobile money providers include Paybill services which offer much more convenience in making bill payments hence the low uptake of the service in the agent outlets.

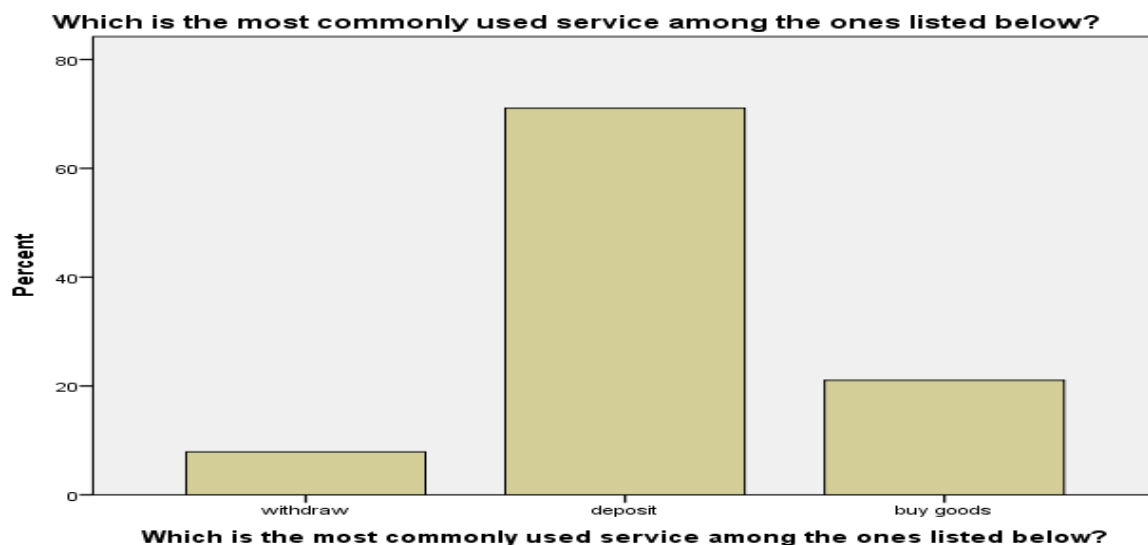


Fig. 4.2. Commonly Used Agent Services

4.5.3.3. Regulation of agency related law

The researcher sought to find out if the operators of agent banking perceived the regulation of agency related laws as a challenge. As such the researcher sort to find out the agents perception on the tediousness of the procedures of becoming an agent and their perception on the ease of starting an agency business if they were not required to seek approval from multiple institutions.

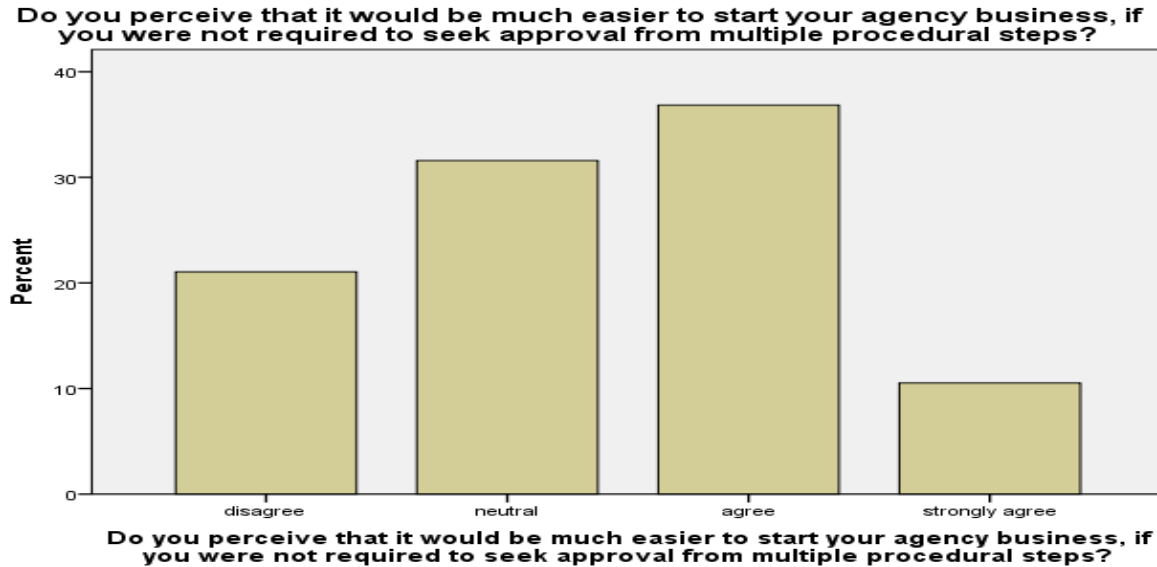


Fig. 4.3. Regulation of agency related law

These findings agreed with Agalla (2014) who in a similar study in Mombasa county found that 90% of the agents were of the opinion that the vetting procedure and due diligence was tedious with 60% agreed with confirming that document procedure took too long. This indicated that the turnaround time to set up an agency business and get it running was not business friendly thus it did not create the environment that would shorten or even encourage agency-banking implementation. The situation would even be worse for agents running multiple agency services as they are be required to seek approval from different institutions.

4.6. Technological challenges

Technology involves application of knowledge, tools and skills to solve problems and extend human capacity (Mberia, 2009). Agency banking is a modern technology, which heavily relies on good network connectivity as well as gadgets such as mobile phones and POS to operate. As

technology play, an import role in agency banking this study sought to investigate the technological challenges that affect agents in the financial services industry.

This section presents findings related to the second objective of the study, which sought to investigate the technological challenges that affected agents in the financial services. This was achieved by evaluating agent system down times experiences, network hindrances and reliability of gadgets used for agent banking.

4.6.1. System down times experiences

The researcher sought to find out if the various operators of financial agency outlets who were the respondents in the study experienced system down times. The findings indicated that most (89.5%) of the agents experienced system down times.

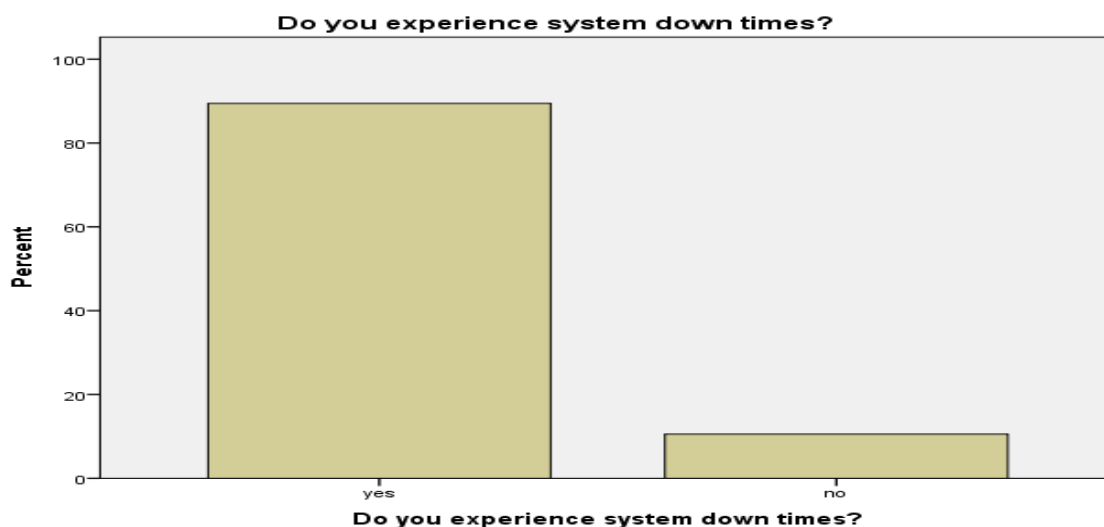


Fig. 4.4. System down times experiences

4.6.2. Network hindrances

Of the agents that experienced system down times, the researcher sought to find out if they perceived network unavailability to be a major hindrance to service delivery. The findings indicated that most with the mean value of 3.24 (52.6%) of the agents agreed that network unavailability to be a major hindrance to service delivery. This finding agreed with Atandi (2013) who in his study on Challenges of agent banking experiences in Pokot County found that

all (100%) the respondents interviewed admitted to experiencing serious network challenges, which meant that most clients were turned away due to network challenges.

Agalla (2014) also noted in a similar study in Mombasa County that 80% of the respondents were of the opinion that technical problems such as network failure, operation of the system were a major hindrance to service delivery.

Mulwa and Ndati (2012) in a study on the barriers to uptake and use of agency banking products targeting poor and marginalized populations in Kenya found that one of the disappointments users experienced was a poor network service. Sometimes it was impossible to transact as systems were totally down, other times initiated transactions could not be completed, as messages confirming whether transactions had gone through were not generated. As a result transactions remained hanging; a situation that frustrated users for the value was neither with the user nor the agent. Unsuspecting agents or users occasionally lost money when apparently transactions were completed minus messages and the receiving partners proceeded to access the money. The study recommended that users needed to have ample network coverage enjoy the services anytime everywhere.

Table 4.6. Network hindrances and gadgets reliability

	Mean	Std. Deviation
system down time	3.24	.998
network unavailability	3.45	.795

Of the agents that experienced system down times, the researcher sought to find out if they perceived the gadgets used for agency banking reliable. The findings indicated that the agents agreed that the gadgets used for agency banking were reliable with the mean value of 3.24. This finding inconsistent with Agalla (2014) who noted in his research on Challenges facing the implementation of agency banking in Mombasa County that 85% of the respondents believed that the gadgets used for agency banking were reliable.

4.7. Performance of Agents

The researcher sought to find out the monthly transactions of agents. The findings indicated that most transaction were done cash withdraw, which is on average the agent made 100-150 transactions per month. And the buying good was the second most frequently the 31 % of agent made transaction on average 100-150 transaction. Up to 39.5 % of agents made on average transaction of 100-150. On the other hand, none of the respondents' agents were made a transaction of more than 150 per month.

Table 4.7 Monthly transaction

	Below 50	50-100	101-150	151-200	201-250	above 250
With draw	12(31.6%)	10(26.3%)	16(42.1%)	-	-	-
Deposit	17(44.7%)	7(23.7%)	12(31.6%)	-	-	-
Buy goods	19(50%)	4(10.5%)	15(39.5%)	-	-	-

4.7.1. Operational challenges and performance of agents

A correlation to examine the relationship between monthly transactions and operational challenge predictors was done. The findings in table 4.8 reveal that there is a negative correlation between total transactions and untrained staff challenge, ($r=-.045$). Total monthly transactions and liquidity challenge are also negatively correlated ($r=-.006$). A positive correlation is also observed between total monthly transactions and insecurity and agency regulation challenge ($r=.126$ & $r=.060$). The findings indicated that an increase in untrained staff and liquidity challenges results in reduced monthly transactions.

Table 4.8. Correlations

	monthly transaction	untrained staff	liquidity challenges	insecurity challenges	banks regulation
monthly transaction	1				
untrained staff	-.045	1			
liquidity challenges	-.006	.323	1		
insecurity challenges	.126	-.467	.267	1	
banks regulation	.060	.508	.767	.303	1

Source; SPSS 20 out put

4.7.2. Technological challenges and performance of agents

A correlation to examine the relationship between monthly transactions and technological challenge predictors was done. The findings in table 4.9 reveal that there is a negative correlation between total monthly transactions and system down times, ($r=-.005$). Total monthly transactions and network unavailability hindrance to service delivery are also negatively correlated ($r=-.110$). The findings indicated that an increase in system down times, network unavailability results in reduced monthly transactions.

Table 4.9. Correlations

	monthly transaction	system down time	network unavailability
monthly transaction	1		
system down time	-.005	1	
network unavailability	-.110	-.171	1

Source; SPSS 20 out put

4.8. Regression

The study conducted a cross-sectional bi variate regression analysis for the independent variables and the dependent variable. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (agent's performance) that is explained by the two independent variables (operational challenge and technological challenges). As indicated in the model summery (table 10) the appropriate indicators of the variable used to identify the agents performance were explored. That is, the value of r square used to identify how much of the variance in the dependent variable (agents performance) identified by the model. The larger the value of r square, the better the model is. The overall contribution of operational challenge and technological challenges for the agents performance, accounted for 60% (adjusted $r^2 = 0.609$). The rest 39.1% represents other independent variables not included in this study. Therefore, further research should be conducted to investigate the other (39.1%) factors influencing agents performance.

Table 4.10. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896 ^a	.803	.609	.42247

a. Predictors: (Constant), TC, OC

The ANOVA statistics in Table 4.11 shows the significance of the model by the value of F-statistics ($P = .000$) and $F = 2.037$, greater than the F critical (value = 2.27), which implies that there were strong relationship between the predictors and the outcomes of the regression variables and are the best fit for the model to predict the agent's performance.

Table 4.11. ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.727	2	.363	2.037	.444 ^b
Residual	.178	1	.178		
Total	.905	3			

a. Dependent Variable: PF

b. Predictors: (Constant), TC, OC

In any regression model, the +ve or –ve sign of beta (β) shows the effect (increase or decrease) of the independent variables coefficients over the independent variable. And as shown in Table 4.12 below, beta sign of all the independent variables shows the negative effect of the predicting independent variables. That means any proportional decrease in the independent variables lead to a proportional decrease in the dependent variable.

Bivariate regression analyses were conducted to examine the effect of operational challenges and technological challenges on agents' performance. The Bivariate regression model used to predict the agents' performance would be,

$$P = \alpha + \beta * OC + \beta * TC$$

Table 4.12 Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.650	.418		1.555	.364
1 OC	-.163	.104	-.115	-1.568	.361
TC	-.539	.043	.927	12.658	.050

a. Dependent Variable: PF

Therefore, based on the coefficients of the independent variable (β sign) all the independent variables has negative relationship between the dependent variables. But based on the statistical significance s of the independent variable over the dependent variable at 5% level of significance, only technological challenges are significantly contributed for the agents performance at ($P < 0.01$) 95% level of confidence. Besides this, even if the relationships is negative the operational challenges have no significant contribution for the predicted dependent variable (agents performance) because they have a significance value of greater than 5%. The variable with the level of significance (sig) value less than 5% could make a significance unique contribution to the predicted value of the dependent variable, beyond this level of significance the variable are not making a significance contribution for the prediction of the dependent variable.

The coefficient of regression in table: 4.12 above were used in coming up with the model below:

$$P = .650 + -.163 \cdot OC + -.539 \cdot TC$$

Where; α is constant at zero, **OC** is operational challenges, **TC** is technological challenges the agents performance was 1.117. The data analyzed shows that taking all other independent variables not included in the study at zero, a unit decrease in operational challenges and technological challenges will lead to a **-.163** and **-.539** increase in agents performance respectively.

CHAPTER FIVE:CONCLUSION AND RECOMMENDATION

5.1.CONCLUSION

This research paper focuses on challenges of implementing agent banking Evidence from agent's of commercial bank of Ethiopia. The purpose of the study was to investigate the challenges facing financial services agents in Addis Ababa. In order to meet the above objective the researcher had been collected primary (questioner, interview and observation) and secondary written documents. Based on the response of customers, employees and managers and data gained from documents the following conclusions were drowning.

From the findings, the study concluded although lack of training was not a challenge the agents that received training for multiple financial institutions had difficulties keeping up with the training s from different financial institutions and perceived that receiving training on one standard agency system for all financial institutions would improve their business. Liquidity was a very important challenge with 74.6% of the agents agreeing that some customers avoid agent outlets due to serial cash shortages. Insecurity though a very important challenge. Agency regulated laws were equally a very important challenge with 81.3% of the agents agreeing that the procedures of becoming an agent were too tedious. The agents perceived that it would be much easier to start agency businesses if the regulations did not require them to seek approvals from multiple procedural document.

From the findings, the study concluded that although the gadgets used for agency banking were found to be reliable, system down times and network unavailability were a major hindrance to service delivery.

From the findings, the study concluded that there was a negative correlation between total monthly transactions and operational challenge predictors (untrained staff and liquidity). The findings indicated that an increase in the operational challenge predictors resulted in reduced monthly transactions. A multiple linear regression to predict performance (total monthly transaction) based on systems down times, network unavailability hindrance and operational challenges confirmed the correlation findings.

5.2. RECOMMENDATION

- The study recommends that Commercial Bank of Ethiopia should consider revising current training contents the way the training are given to agents. Allow a standard agent training platform for all agents. Barriers to entry of financial agency business resulting from the tedious procedures of seeking approvals from multiple procedures should be eliminated.
- The study further recommends setting up redundant network infrastructures to improve network accessibility. This will enhance network reliability drastically reducing system down times and network unavailability thus improving service delivery.
- The study recommended taking measures to reduce operational challenge predictors (liquidity, insecurity and agency regulation) as well as reduce network hitches by implementing the above stated recommendations with emphasis on the suggested standard agency system, which would help financial agency operators increase their monthly transactions thus improving performance because of reduced operational and technological challenges.
- Finally the researcher believes that this paper is not exhaustive that could provide all lists of topic researched. However, it gives a bird-eye view on topic and it is open for further discussion and/or critics.

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APPENDICES

Appendix 1: Questionnaire

Part I. Introduction

Dear Sir/Madam

This research questionnaire is prepared to collect data from the respondents in order to *assess challenges of implementing agent banking from Agents prospective in case of commercial bank of Ethiopia*. The quality of the result of this research will be based on the accuracy of the information you provided. Eventually, I promise you, the information you will provide me is going to be reported and communicated in aggregate and utmost care will be taken for its confidentiality.

Part II. A. Demographic profile

1. Gender	male		female			
2. Age	18-25		25-30		30-35	
	35-40		40-45		above 45	
3. Educational level						
Non educated		primary		secondary/preparatory		
Diploma		degree		master		above
4. Do you run agency services for more than one institution?						
Yes		No				

5. If no would you be interested to run agency services for multiple institutions?

Yes

No

6. How long has your business been in operation?

One or less

1-5

6-10

above 10

7. How long have you been an agent?

six month or less

six - 1 years

more than years

PART III. Operational challenges

1. Operational challenges

What operational challenges do you face as an agent? Please rank your opinion from S.A= strongly agree, A= agree, N= neutral, DA= disagree to S.DA= strongly disagree

	Items	S.A/5	A/4	N/3	DA/2	S.DA/1
1	Untrained staff					
2	Inadequate cash in the agents till					
3	Insecurity					
4	Regulation of agency related laws					

1.1 Training

Did you receive any agency training?

Yes

No

If yes, was the training sufficient?

Yes

No

Do you perceive that it is difficult to access training / retraining for yourself or staff members on demand?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

1.2 Security

Do you have fears of insecurity?

Yes No

Have your customers reported fears of insecurity?

Yes No

How frequent do security scares occur if any?

Very Often	Often	Rarely	None

Have you lost some customers due to insecurity?

Yes No

1.3 Liquidity

How often does the business suffer from lack of cash for withdrawals and deposits?

Very Often	Often	Rarely	None

How often do you have to transfer cash float to banks?

Very Often	Often	Rarely	None

Which is the most commonly used service among the ones listed below?

Withdraw Deposit Buy Goods

1.4 Regulation

To what extent do you agree with the statement that the procedures of becoming an agent are too tedious?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

Do you perceive that it would be much easier to start your agency business, if you were not required to seek approval from multiple procedural steps?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

2. Technological factors

Do you experience system down times?

Yes

☐

No

☐

To what extent do you agree with the statement that some network availability is a major hindrance in service delivery?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

To what extent do you agree with the statement that gadgets used for agency banking are reliable?

Strongly agree	Agree	Neutral	Disagree	Strongly disagree

3. Performance of agents

How many transactions do you conducted in a month?

Transactions	50 and below	51-100	101-150	151-200	201-250	Above 251
Withdraw						
Deposit						
Buy goods						

How many customer visits do you encounter in a month?

Transactions	50 and below	51-100	101-150	151-200	201-250	Above 251
Withdraw						
Deposit						
Buy goods						